Business Administration and Business Economics

Corporate Social Responsibility and Profitability in Nigeria Financial Services Industry

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Abstract: This study investigates the impact of Corporate Social Responsibility on profitability with particular reference to the Nigeria financial services industry. The study employed a survey research design. Primary data were collected using validated and reliable questionnaire instrument from sampled managers of Nigeria financial Services industry in Sagamu, Ogun State and were found usable. A sample size of 140 questionnaires was administered in this study. Correlation analysis was employed as a statistical technique to analyze data collected using SPSS 17.0. The results revealed that corporate social responsibility has a significant association with profitability. The study concludes that Nigeria financial Services industry should recognize the importance of corporate social responsibility for sustainable development as they perform their obligations to the society. And therefore, recommended that management of Nigeria financial Services industry should continue support CSR activities because any organization that does not invest much in corporate social responsibilities its long run existence is threaten.

Keywords: Corporate Social Responsibility (CSR); Profitability; Corporate governance; Social responsible accounting

JEL Classification: M1

1. Introduction

The concept of social responsibility suggests that a private company has responsibilities in society that outweighs profit. Strategic decisions often affect more than the company itself. Corporate Social Responsibility (CSR) activities are a small issue for the company's positive image, employee and customer satisfaction and organizational profitability. Islam (2012) states that the concept of business has changed from profitability to social welfare activities, where businesses are not only responsible to its shareholders but also to all stakeholders. The concept is therefore

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seen to be a moral and ethical issue that encompasses the decision-making and behaviour of companies; whether it has to undertake certain activities or to abstain from acting because it is beneficial or harmful to some stakeholders of the business, including the society. Social issues deserve moral consideration of their own and should lead managers to consider the social impacts of corporate activities in decision making regardless of any stakeholders' pressures.

Maigan and Ferall (2004) identified corporate social responsibility (CSR) as a means of enhancing the legitimacy of businesses in the eyes of stakeholders and developing positive social responsibility images to burn their reputation. Nicolav (2008) described CSR companies as those that make speculative business decisions, examine the full scope of environmental impacts and balance the needs of stakeholders. Socially responsible firms includes businesses that identifies stakeholder groups and integrates their needs and values into the strategic and day-to- day decision making process, thus a means of analyzing the inter- dependent relationship that exist between businesses, the economic systems and the communities within their operation.

Business' responsibility in society is changing severely. The business exists in an environment, which means that business does not exist in isolation. Organizations exist to pursue a predetermined goal. The goals of business Organizations are among others to make profits maximize wealth value and returns on capital. However, there has been an increasing question on business to be socially responsible and why they are not doing more than they are currently doing. McWilliams and Siegel (2001) described acts that seem to promote a social good beyond the business interest and what is required by law as the essence of CSR and that such actions usually constitute cost to the organization.

Although there are no evidences in the literature about the relationship between corporate social responsibility and organization performance that include financial and non-financial performance, there exist a significance gap about how corporate social responsibility improves bank profitability due to lack of documented evidence of the benefits hence the researchers focus was to find out the impact of CSR on profitability. The main objective of this paper is to assess the impact of corporate social responsibility on profitability. However, the specific objective is to identify the relationship between corporate social responsibility and profitability.

The main objective of this study is to assess the relationship between corporate social responsibility and profitability.

In view of the research objective stated above, the research question addressed in this study includes: is there any significance relationship between corporate social responsibility and profitability?

This paper sought to clarify the validity of this research by testing this hypothesis:

Ho_1: Corporate social responsibility has no significant association with profitability.

The rest of the paper is subdivided into four sections; the next section elaborated on the literature review. Section three dealt with the methodology and analysis. Section four focused on the summary, conclusion, recommendation.

2. Literature Review

2.1 Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) has been defined differently by various writers, many times reflecting their subjective opinions about the concept and its scope. These definitions also seem to be based on their background, interest, exposure, as well as values embodied in the writer's frame of reference. Corporate social responsibility is also called corporate conscience or corporate social performance, and are generally seen to be duties performed by organizations to the society in which they operate, such as protection of the environment, provision of social amenities, health and safety, and so on. Jamali and Mirshak (2006) explained that CSR is a concern for the requirement and goals of society that go beyond just economic.

The corporate social responsibility means:

- The organization responds absolutely to emerging social priority and aspirations.
- Conducting business in an ethical way and for the benefit of the outside environment.
- Balancing the interests of the shareholders with the interests of other stakeholders in society.

The idea of CSR implies how organization can manage its business procedure to produce a total positive force in the society. It also means that organizations perform ethically and contribute to the economic development of society by improving the quality of life of the local community and society at large. The CSR is a set of standards that company subscribes to in order to make positive impact on society. It also means how organization behaves ethically and contributes to economic development of society by improving the quality of life of the local community and society in universal.

2.2. Principles of Corporate Social Responsibility

Corporate Social Responsibility (CSR) includes a set of principles or ideas, ranging from corporate governance, business ethics, and sustainable development through to human rights and conservation concerns.

2.2.1. Business Ethics

Ethical businesses assess the effect of their performance, product development and other business activities on the society. Several issues are considered to have ethical colorations: human/employee rights, environmental protection, staff health and safety, marketing claims, accountability, and reporting. Business ethics deals with compliance with internal regulations and government instructions. An ethical business will also come across its own ethical practices in the practices of its business partners and suppliers. The consequentialist philosophy is one of the most used philosophies on business management.

2.2.2. Working in the Community

Businesses always have one form of relationship and interaction with communities that exist around them, usually because they employ and also sell the products locally. Many times, corporate firms spend time and money that helps local communities in different ways e.g. support for educational programs and awareness raising initiatives.

2.2.4. Supply Chain Management

Socially responsible firms review their suppliers' practices by encouraging suppliers to meet the challenges of the society if they want to continue business with them. This way, by their action, they compel their suppliers to be socially responsible as well.

2.2.5. Socially Responsible Investment (SRI)

When the SRI had formerly been developed for religious groups (Quakers, Catholics, Muslims), it is available in many different forms to attend to issues that concern people of any faith, or nobody. The increase of socially responsible or good resources has led to the creation of social indicators responsible companies.

2.3. Responsibilities of a Business/Firm

Friedman (2007) and Carroll (1999) offer two contrasting perceptions about the responsibilities of business/firms in a society.

2.3.1. Friedman's Traditional View of Business Responsibility

Encouraging a return to a laissez-faire global economy with minimal government regulation, Friedman (2007) supports the concept of social responsibility. According to him, businesses should act "responsibly" by reducing the price of the product to prevent inflation, reduce costs of pollution or recruitment of hard-core unemployed youths and spend the shareholder's money for a general social interest (Friedman, 2007). Even if the managers have the permission or encouragement of shareholders to do so, he may continue to act by other economic incentives and, in the long run, harm the very society that the firm is trying to assist. By assuming social cost, the

firm becomes less efficient; it either increases price to pay for increased costs or reduces investments in new activities and delay of research. These results are negative effect - the long-run on the efficiency of a business. Friedman (2007) therefore referred to corporate social responsibility as a "basically rebellious policy" and concludes that there is only one social responsibility of the business - to use its resources on activities designed to increase their privileges if they remain within the rules of the game, which is, involved in open and free rivalry without fraud. The social responsibility of business is to make profit.

2.3.2. Carroll's Four Responsibilities of Business

Friedman's claim that the primary objective of the business is maximizing profit is only one side of ongoing debate on Corporate Social Responsibility (CSR). According to Byron and Bryon (1982), profits are just a means to an end, and not an end in itself. Just like a person needs food to survive and grow, so a business needs profit to survive and grow. "Profits maximization is like maximizing food." Hence, they argue that profit maximization cannot be the main responsibility of business. Carroll (1999) suggested four responsibilities of business as presented below

- ***Economic*** responsibilities of the management of an organization are value of the production of goods and services for society so that firm can pay off its creditors and shareholders.
- ***Legal*** responsibilities are determined by governments in laws that the business is expected to obey.
- ***Ethical*** responsibilities of the management suggest that organization must follow the generally convinced beliefs or behavior in a society. For instance, society usually expects the firms to work with it employees and the community in arrangement for redundancies, although no law demands it. People affected by it can be upset if the management of an organization fails to act in general prevailing ethical values.
- ***Discretionary*** responsibilities are the purely voluntary commitments undertaken by a company. Examples are contributions of philanthropies, training of hard-core unemployed and childcare centers. While many expect an organization to fully fulfill ethical obligations, the same cannot be said discretionary obligations.

2.4. Benefits for the Organization with Social Responsibility

Several studies have suggested that CSR is capable of delivering many benefits to a socially responsible firm. Neal and Cochran (2008) documented a number of studies which reported that socially responsible firms are rewarded even by the financial markets. Similarly, Orlitzky, Schmidt and Rynes (2003) found a correlation between

social / environmental performance and financial performance. On their part, Maldonado-GuzmÃ, PinzÃn-Castro & Morales (2017) had reported CSR has significant positive effects on the reputation of SMEs.

Businesses are constantly making decisions that increase their benefits. Considering that CSR is a voluntary behaviour, firms have the choice: to act only responsible or socially responsible. Economics is the science of decision-making that can represent the expected benefit or the expected cost. If the expected benefits are higher than the expected cost, given that managers are rational decision makers, then they are more likely to embrace CSR.

From social responsibility, an important expected benefit is the ADD values for the company that is represented in corporate reputation and create added value. In today's and future generations, businesses have identity, conscience - they are responsible citizens - their values and principles are separated with international principles of corporate wealth maximization. Corporate social responsibility is a value asset for it firms. This social responsibility of citizen is perceived by various stakeholders and "reacting to the alleged reputation of a company and social issues in general "(Dane, 2004). Reactions could be in terms of cost benefits for the wealth of the company. In addition, Corporate Social Responsibility's behavior has positive consequences in the market, from the point of view of reputation, goodwill Also, these positive benefits extends to employees and customer loyalty. According to Mainelli (2004), corporate rewards / positive effects can be seen from two aspects: "carrots for success and exemption from the sticks. Exemption from sticks includes not being subjected to attacks by NGOs, freedom from government attacks, boycott of market areas or loss of key workers with different moral values and carrots for success can include good public relations, branding, and access to contracts. With CSR requirements, positive relationship with NGOs or attracting higher quality staff at a lower rate can be achieved.

2.5.1. Firm's Ability to Develop Solutions for Economic and Social Problems

Measuring the environmental impact of the activities of a business, particularly manufacturing concerns, is necessary and a pathway to a more sustainable business. The satisfaction of human needs by business must be wholesome. As such, managers need to ensure that by satisfying consumers need through production of goods and services, other environmental problems are not created. It is also important to build both the value of the shareholders and the corporate social responsibility. This enables the firm to demonstrate its ability to incorporate its responsibility to the society and the development of solutions for economic and social problems (Epstein & Friedman, 1994).

By offering organizational resources on social concern, it will then lead to other improvements stimulated by the multiplier effect. For example, measures to combat pollution undertaken by the business organization can lead to improved technology

and better general town climate (Ahmad & Abdul, 2002). All of these are as a result of changing public expectations. Public needs have changed and this has led to new expectations. Ahmad and Abdul (2002) observe that society has a business map for the existence of the business, and this Charter may be amended or revoked at any time the business fails to meet the expectations and needs of society.

2.5.2 Better Business Environment

Creating a better social environment benefits both society and businesses. Society wins through the best opportunities for neighborhood and employment. A cleaner and safer neighborhood on the other hand means a more stable community in which it will work (Ahmad & Abdul, 2002). Fewer unemployed people reduce the chances of social phenomena and provide additional income for the purchase of the firm products or services. Similarly, well-trained members of the community provide a more attractive labour from which to raise staff (Ahmad & Abdul, 2002).

2.6. Arguments against Social Responsibility

Involvement of business in social concerns is not without its attendant criticisms. Perhaps, the most resounding of the arguments against CSR is it presumed negative effect on profit. The primary objective of businesses is to maximize their profit by focusing strictly on economic activities in so far it remains within the rules of the game. Social concerns could reduce economic efficiency, it is argued. Again, the cost for social responsibility is ultimately is the society which has to pay for corporate social responsibility either in the form of high prices or with the company's product mix providing less consumer satisfaction. Excessive costs for businesses are usually borne by the citizens of society

Viewed from another angle, it would be realised that corporate firms have enough financial power and when they get an extra non-economic power, they may do so to increase their overall strength and durability. This can lead to a company dominating the business community. If this happens, society as a whole may be at disadvantage. More importantly, Ahmad and Abdul (2002) argue that social actions are often complex to measure. There is always the problem of comparing the potential benefits with potential cost of social action by business.

2.7. Theoretical Framework

2.7.1. Stakeholder's Theory

According to Eyre (1982), the rather simplistic view of the management objectives presented by economic theories has been questioned by sociologists and psychologists. Behavioral scientists claim that profit maximization is not and cannot be the only management goal. Thus he contends that there is a belief that the employed manager is hoping to satisfy his personal benefits through the organization. This meant that those who were burdened with the formulation of top management should take into account interest of the employer. There should be a deliberate management policy to satisfy employee's benefits. This will certainly motivate employees to achieve their goal.

From the above conclusion, it is appropriate to argue that today's concern should not only be employees, but all stakeholders of the organization. To achieve this goal, each organization must be able identify its stakeholders. This often includes, but not limited to, input suppliers, workers and trade unions, members of local communities, society in general, and government. Different stakeholders have different information rights.

To support this point, behavioral scientists are promoting stakeholder theory. This theory states that "there are some stakeholders that need to be taken into account when setting goals, too broadly expanded to include not only shareholders and managers but also other workers, consumers, suppliers and the local community "(Eyre, 1982). Eyre concluded in his report that this widespread concern means that management objectives must be included in its interests all who are likely to be touched by the firm activities.

2.7.2. Agency Theory

According to this theory, social revelation as part of the total revelation from firm is considered as the means by which managers and firms reduce the agency cost. The approach has been widely criticized. Milne (2002) argues that the bibliography on CSR based on positive theoretical accounting has so far not been offered substantive evidence to support the view that the firms administration uses social revelation pursuing their own interests. Gray, Neimark and Lehman (1995) rejected this theory of the social reporting service arguing that the central assumption that "all actions motivated by an ethically degenerated form of short-term interest is not only empirically incalculable but also very aggressive."

3. Methodology

The research design adopted for this study was the survey research design because it helps in collecting data from members of a population in order to determine their current status in this population with respects to one or more variables. Primary data was obtained for this research. The study area of was financial Services industry, Sagamu, Ogun State.

The population targeted for this research includes all employees of Nigeria financial Services industry in Sagamu, Ogun State. Five banks were chosen in Sagamu, Ogun State with the population of two hundred and fifty (250) employees. The five banks include Access Bank, FCMB, Wema Bank, United Bank for Africa (UBA) and Zenith Bank.

From the two hundred and fifty (250) employees of the banks, a total number of one hundred and forty (140) employees were selected using Taro Yamani's (1998) formula for sample size determination. According to Taro Yamani (1998), sample size can be determined using the formula below:

$$\frac{n = S}{1+S\ (\alpha)^2}$$

Where: n = sample size

S = population size

α = margin of error

i.e S = 137; α = 5% (0.05).

Well-framed and standard questionnaire was designed using the five point likert scale from 5 strongly Agree to 1 strongly Disagree was adopted for the study. Frequency tables and percentages were used under the descriptive statistics. The level of association between CSR and profitability was estimated using Pearson correlation analysis. The descriptive statistics of the data is shown below.

Table 3.1. Descriptive Statistic Data

Gender	*Male*	*Female*				
	65.7%	34.3%				
Age of Respondents	*18-25*	*26-30*	*31-35*	*36-40*	*41-45*	*45 and Above*
	1.9%	14.8%	22.2%	25.0%	27.8%	8.3%
Marital Status	*Single*	*Married*	*Others*			
	11.1%	*87.0%*	*1.9%*			
Education	*SSCE/GCE*	*OND/NCE*	*HND/BSC*	*MBA/MSC*	*Others*	
	0.0%	14.4%	36.5%	44.2%	4.8%	
Working Experience	*1-5 years*	*5-10 years*	*10-15 years*	*15 years Above*		
	22.6%	21.7%	37.7%	17.9%		

Source: Field Survey (2019)

Hypothesis Testing

Ho_1: Corporate social responsibility has no significant association with profitability.

Decision Rule:

We accept the null hypothesis if the p-value and t-value is greater (>) than 0.05 and 0.01 respectively, and reject the alternate hypothesis. We reject the null hypothesis if the p-value and t-value is less than (<) 0.05 and 0.01 respectively and accept the alternate hypothesis.

Correlations		CORPORATE SOCIAL RESPONSIBILITY HAS EFFECT ON A FIRMS PROFITABILITY	CORPORATE SOCIAL RESPONSIBILITY BRINGS ABOUT INCREASE IN MARKET SHARE OF THE FIRM	CORPORATE SOCIAL RESPONSIBILITY IS A TOOL TO ORGANIZATIONAL PROFITABILITY
CSR HAS EFFECT ON A FIRMS PROFITABILITY	Pearson Correlation	1	.696**	.028
	Sig. (1-tailed)		.000	.432
	N	140	140	140
CSR BRINGS ABOUT INCREASE IN MARKET SHARE OF THE FIRM	Pearson Correlation	.696**	1	-.086
	Sig. (1-tailed)	.000		.300
	N	140	140	140
CSR IS A TOOL FOR ORGANIZATIONAL PROFITABILITY	Pearson Correlation	.028	-.086	1
	Sig. (1-tailed)	.432	.300	
	N	140	140	140
CSR IS POSITIVELY CORRELATED WITH PROFITABILITY	Pearson Correlation	.015	.084	-.043
	Sig. (1-tailed)	.463	.302	.395
	N	140	140	140

Source: Researcher's Field Survey, 2019

Correlations		CORPORATE SOCIAL RESPONSIBILITY IS POSITIVELY ASSOCIATED WITH PROFITABILITY
CSR HAS EFFECT ON A FIRMS PROFITABILITY	Pearson Correlation	.015
	Sig. (1-tailed)	.463
	N	140
CSR BRINGS ABOUT INCREASE IN MARKET SHARE OF THE FIRM	Pearson Correlation	.084**
	Sig. (1-tailed)	.302
	N	140
CSR IS A TOOL TO ORGANIZATIONAL PROFITABILITY	Pearson Correlation	-.043
	Sig. (1-tailed)	.395
	N	140
CSR IS POSITIVELYCORRELATED TO PROFITABILITY	Pearson Correlation	1
	Sig. (1-tailed)	
	N	140

Source: Researcher's Field Survey, 2019.
***. Correlation is significant at the 0.01 level (1-tailed).*
(Note: SPSS version 17.0 has been used to calculate the tables)

As shown in Table I Statement one has a p value of .000 and a t-value of -0.086. Statement two has a p-value of .000 and a t-value of -0.043, while also the third statement has a p-value of .000 and a t-value of -0.043. It is therefore inferred from the above table that both the p-value and the t-value of the three statements are less than 0.05 and 0.01 respectively, as a result of this; we arrived at the decision of rejecting the null hypothesis and accepting the alternate hypothesis.

Decision: We reject the null hypothesis and accept the alternate hypothesis which state that; corporate social responsibility has significant impact on profitability.

From the above tested hypothesis, it was revealed that Corporate Social Responsibility has a significant impact on Profitability. The results support the stakeholder's theory of CSR and also conform to the study of Carlsson and Akerstom (2008) and the following study; The result of Babalola, (2013) who explored the impact of social controls on corporate performance among Nigerians manufacturing firms have agreed with other researchers (Sehu, 2013, Richard & Okoye, 2013, Lee, 2008; Abefe-Balogun, 2011), who reported that the CRS has a positive and significant relationship with the organizational profitability.

4. Conclusions and Implication for Management

The study revealed that Corporate Social Responsibility is positively associated with profitability. From the above it is clear that CSR has a significant impact on profitability. Thus, CSR offers good returns for banks in the short and long term will provide better performance for sure. The study concludes that there is a significant relationship between CSR and profitability and null hypothesis is rejected. When commercial banks neglect their responsibility towards other stakeholders in the environment, the result is always a tense relationship between them. Its implication this is that the operation of the banks will be adversely affected..

The study established the fact that corporate organizations need to meet the demands and expectations of other stakeholders apart from owners of the company. The management of organizations needs to respond to the external environment demand in order to achieve sustainable business success. The implication is that that corporate organizations need support of society in order for them to grow and prosper. On the basis of the findings of this research work, it can be concluded that Nigeria financial Services industry should recognized the important of CSR and they are doing their obligations to the stakeholders i.e. customers, community, society, both internal and external as well as society at large. The results support the stakeholder's theory of CSR and also conform to the study of Carlsson and Akerstom

(2008) and the following study; The result of Babalola, (2013) Sehu, 2013, Richard & Okoye, 2013, Lee, 2008, Abefe-Balogun, 2011) all reported that CSR has a positive and important relationship with the organizational profitability.

Based on the findings of this study, the following recommendations are suggested: First and foremost, management of Nigeria financial Services industry should continue support CSR activities because any organization that does not invest much in corporate social responsibilities its long run existence is threaten. Secondly, Nigeria financial Services industry needs to establish unit that will monitor the social responsibility of corporate organizations, in order to oversee the compliance of CSR activities. Thirdly, Nigerian corporate organizations (banks inclusive) need to establish social responsibility unit. This unit duty should include informing the management of organization, the unit also needs to ensure that organization responsive to social responsibility is in accordance with international best practice. Lastly, Nigeria financial Services industry should also increase CSR activities in other to increase its profitability level.

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Appendix

S/N	STATEMENTS.	SA %	A %	UN %	D %	SD %
1.	Corporate Social Responsibility has effect on a firms profitability	5.0	2.5	2.5	55.0	35.0
2.	Corporate Social Responsibility brings about increase in market share of the firm		2.5	5.0	62.5	30.0
3.	The expenses of Corporate Social Responsibility increases overtime		2.5	5.0	60.0	32.5
4.	Customer welfare impacts on firms profitability		2.5	5.0	62.5	28.2
5.	Corporate Social Responsibility improves firms reputations	45.0		7.5	47.5	
6.	Corporate Social Responsibility brings about hedging in competitive advantage		5.0	7.5	35.0	52.5
7.	Being socially responsible to customers and society at large brings about increase in sales		2.5	5.0	40.0	47.5
8.	Environment affect bank performance	2.5	7.5	2.5	52.5	35.0
9.	Corporate Social Responsibility brings about creation of good feelings among the citizen of the country	5.0		2.5	52.5	40.0
10.	Corporate Social Responsibility is a form of addressing human sufferings		5.0	2.5	60.0	32.5
11.	Corporate Social Responsibility activities motivate customers	2.5	5.0	7.5	55.0	30.0
12.	The cost of Corporate Social Responsibility activities exceeds its benefits	7.5	5.0	10.0	50.0	27.5
13.	Corporate Social Responsibility has contribute to sustainable economic development	10.0	7.7	20.5	33.3	28.2
14.	The goal of Corporate Social Responsibility is to leverage your firms unique capabilities in supporting social causes	7.5	12.5	7.5	32.5	40.0

15.	Corporate Social Responsibility brings about establishing good rapport with public	7.5	2.5	5.0	42.5	42.5
16.	Corporate Social Responsibility motivate employee which in turn ensure long-term survival of the corporation	7.5	5.0	7.5	42.5	37.5
17.	Corporate Social Responsibility is a tool to organizational profitability	2.5	2.5	2.5	55.0	37.5
18.	Socially responsibly organizations continue to reverse their short and long-term agenda		7.5	5.0	50.0	37.5
19.	Corporate Social Responsibility is positively correlated to profitability		2.5	2.5	55.0	40.0
20.	The idea of Corporate Social Responsibility implies how organization can manage its process to produce an overall positive impact on society	5.0	5.0	10.0	42.5	37.5

Exploring the Motives for Operating in Ghana's Informal Slum Sector

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Abstract: In the developing world, slums house a sizeable amount of the urban population and most slum inhabitants are engaged in informal activities. In Sub Sahara African countries this sector has historically contributed above 50% to non-agricultural Gross Value Added. Informal sector activities in Ghanaian slums employ a substantial amount of people, who on average earn about $8 a day, a figure which is above the poverty threshold of $2 a day. Most of these slum activity operators reside in slums whereas a sizable amount reside in formal housing, a phenomenon which has led to the growth of Ghanaian urban slums. To assist these slum operators to grow and someday integrate into the formal sector, it is important to find out the factors that motivated them to engage in these activities in the first place. The study employed Exploratory Factor Analysis, on a sample of 344 drawn from the two biggest slums (Sodom & Gomorrah and Akwatia Line) in Ghana's two major cities, Accra and Kumasi respectively. The results show a set of six clusters, explaining 61% of the variation in motives for slum activities. The avoidance of government regulation was found as the main motive for one's involvement in slum activities. Other driving forces include the 'luxury' of working at one's own time, making use of one's talents and family relations, as well as the quest for earning a higher income.

Keywords: Slums; Economic Activities; Motives; Informal Sector; Slums; Government Regulation

JEL Classification: O17

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1. Background

Over the past decades, Ghana has made some progress in reducing the proportion of urban dwellers living in slums, which led to the figure dropping from 27% in 1990 to about 20% in 2008. However, while the proportion has decreased, most recent data shows that the total number of people living in slums has increased from 4.1 million in 1990 to 5.5 million in 2008. With this trend, it is likely that about 14% of the entire Ghanaian population may still live in slum areas by 2020 (NDPC and UN, 2012). According to UN-Habitat, slums are formed due to a combination of factors such, as in-migration, poverty, failure of housing policies, poor national and urban policies and lack of planning for urban growth (UN-Habitat, 2003). In the Ghanaian case nevertheless, slums sprung up due to the lack of adequate response mechanisms to urbanisation by the various governments and these slums do not only house migrants, but also a vibrant informal economic sector.

ILO (1972) posits that the informal sector is characterised by ease of entry, reliance on indigenous resources, family ownership of enterprises, small-scale operations, labour-intensive and adapted technology, skills acquired outside the formal school system and unregulated and competitive markets. Slum activities include all informal sector activities that take place only in slum areas and possess most of the characteristics of the informal sector. The ILO further ranks India as having the largest share of informal sector employment, at 83.5% of the total employment. This figure is closely followed by Mali with 82% and Bolivia with 75% (ILO, 2014). According to the Ghana Statistical Service's (GSS) 2010 census, informal sector employment in that country was around 86%.

The Ghanaian economy registered positive economic growth during the period 1984-2015, but this growth did not translated into significant real income gains, employment and supply of housing for the average Ghanaian citizen (Aryeetey and Baah-Boateng, 2015). The country's informal sector, therefore, serves as the best employment alternative enabling individuals to earn a living. Slum activities form part of Ghana's informal sector, which employ about 86% of the nation's workforce according to the GSS, (2012), corroborating Canagarajah and Sethuraman's (2001) study which found out that the informal sector of developing economies employs about two-thirds of labour. Several other studies, in countries such as India, Bangladesh, Ghana and Kenya, have also concluded that operators in slum activities earn high-income levels above the poverty threshold income (Jha, Rao and Woolcock, 2007; Mahoney, 2010; Chege and Mwisukha, 2013; Das and Meher, 2013; Meschkank, 2013; Mahadea and Zogli, 2018).

In Ghana, the various government development programmes geared towards reducing the growth rate of the informal sector has not been fruitful. The recent National Employment Policy, according to Government of Ghana (2014), acknowledged the exacerbating growth of the informal sector and stressed the need

to curb its growth in order to provide sustainable employment in the country. The two slums under consideration, Sodom and Gomorrah (in Accra) and Akwatia Line (in Kumasi) house over 200,000 people and a vibrant informal sector whose operators live in the slum as well as in formal settlements.

For stakeholders to curb the growth rate of the informal sector and provide more scope for formal sector employment, it is important to find out the factors that motivate individuals to operate in informal sector ventures in specific slums under study. The current paper, therefore, fills that knowledge gap.

2. Literature Review: Motives for Slum Activities

The number of slum dwellers worldwide was 650 million in 1990, 760 million in 2000, 863 million in 2013 and is estimated to be about 900 million by 2020, showing an alarming slum growth rate globally (UN-Habitat 2013a, 2013b). To avert this alarming growth, the UN came up with the improved Sustainable Development Goals (SDGs) in 2015. Goal number 11 of the SDGs seeks to ensure universal access to adequate, safe and affordable housing and basic services and upgrade slums by 2030 (UN, 2015). The exacerbating growth rate of slums may not only be due to the inadequacy of urban housing but also the opportunities available in informal slum activities.

Williams (2007) study points out that one of the previously dominant discourses around the motivation of individuals engaging in informal entrepreneurial activities is the “marginalization thesis” in the informal sector of England. This school of thought argues that those that engage in informal entrepreneurial ventures, do so out of necessity, as a result of them being marginalized by formal sector regulation. This means that these individuals migrate from formal business undertakings to informal ones, as a measure of last resort in the absence of favourable alternatives. More contemporary studies suggest that informal entrepreneurs do so out of choice, and Gerxhani’s (2004) study of informal sector activities in developing countries found tax evasion, avoidance government regulation, high cost of formal business, flexibility of informal work schedule, one’s greater work satisfaction, an increase of leisure time, use of one’s expertise, bypass bureaucratic licensing procedures, high cost of formal production, the impact of international competition, and redundancy as motives prompting people to engage in informal activities.

Snyder (2004) on the other hand provided evidence against the external pressures such as discrimination, unemployment and economic restructuring, which transcended throughout the marginalization thesis, believed to heavily account for the movement of individuals from formal to informal activities. This researcher studied 50 informal entrepreneurs in a New York City locality. The main results of this investigation showed that the informal entrepreneurs involved were all doing so

out of choice. Some of their reasons for engaging in informal activities included the need to transform their work identity and to expose their genuine selves. Similar results were also reported by Cross (2000) who did a similar investigation on street vendors. This study falsified the conventional depiction of these street vendors as being in lack of other opportunities. Cross (2000) shows that many of these vendors were involved in this activity out of choice, thereby replacing the universally necessity-driven view of these informal operators, by one which also points towards these entrepreneurs being opportunity-driven.

Rather than simply portraying informal operators as uniquely necessity-driven or opportunity-driven, research in recent years has seen the birth of a third school of thought which supports the idea that necessity and opportunity might co-exist or act together to some extent as a motive for informal entrepreneurs (Aidis *et al.*, 2007). Adom and Williams's (2012) primary study in the informal sector in Ghana found out that 65% are necessity-driven whereas 35% opportunity-driven.

To date, most literature on informal entrepreneurship has been immensely restricted to western and post-socialist economies (Adom and Williams, 2012). Research in this area in the African context and sub-Saharan Africa, in particular, has not so far gained prevalent attention. The kind of literature most common in this part of the globe depicts informal entrepreneurial activities being driven by necessity or operators expressing the need to the formal economy which is characterized by high costs and regulations which make operating in it difficult (Adom and Williams, 2012).

Focusing more on the evaluation of motives of informal entrepreneurs in third world countries, Adom and Williams (2012) investigated 80 informal entrepreneurs in Ghana. They conducted face to face structured interviews and found that the necessity motive predominated amongst participants, especially women informal operators. In addition, the authors also found out that most men who were involved in informal activities did so out of their own free will, and that women who initially entered informal activities out of necessity eventually became more opportunity-driven operators. This is in line with the third school of thought which argues that there could be an overlapping between the necessity driven motive and the opportunity-driven motive. Supplementing income, generating wealth and an operator's desire for greater independence are also some motives for informal sector activities in Latin America, Lesotho and South Africa (Maloney, 2004; Skinner, 2005; Chingono, 2012).

The various studies discussed above describe factors enticing entrepreneurs to engage in informal sector activities in different countries. However, in order to discover the motives for slum activities in the slums of Ghana, 15 variables are drawn from the literature considered.

3. Methodology

Factor analysis enables researchers to analyse the interrelationships among several variables and to explain the variables in terms of their common underlying dimensions (Hair *et al.,* 2010). Factor analysis helps in exploring whether a large number of variables of interest are linearly related to a smaller number of common factors that may be grouped as a set. EFA is to be employed by the current study to determine the factors that motivate operators to engage in slum activities. Literature survey (Gerxhani, 2004; Maloney, 2004; Williams, 2007; Chingono, 2012) enabled the researcher to enumerate various motives for engaging in informal sector activities and a total of 15 variables measured on a 7 point Likert scale was used.

4. Analysis and Discussion

The questionnaire was administered to a total of 344 slum operators in the two slums, 172 in each slum. Factor analysis (FA), with oblique rotation and the principal axis factoring extraction methods, was undertaken to group factors that motivate individuals to engage in informal activities into clusters. 15 variables were run for the FA. Out of the total respondents considered, about 60% were male and 40% were females.

To ensure the factorability of the variables, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were conducted. The results of these tests are shown in Table 1. The KMO value is 0.562. As suggested by Hair *et al*., (2010), for a data set to be factorable, the KMO value must be greater than 0.5, and the KMO value for the current study, being 0.562 meets this criterion. The KMO is not high but acceptable, as seen in other studies such as Huda and Azad (2015) and Hadi, Abdullah and Sentosa, (2016) who also reported low KMOs around 0.5. In this paper, the test is significant with a p-value of 0.000. Both tests suggest that the data relating to the variables collected are factorable as represented in Table 1.

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**562**
Bartlett's Test of Sphericity	Approx. Chi-Square	857.706
	df	105
	Sig.	**000**

Source: Authors' computation, results obtained from SPSS

The factor analysis results show a set of six extracted factors based on the Kaiser's criterion (Eigen values greater than one) that explain about 61% of the total variation in motivation. These are shown in Table 2.

Table 2. Initial Eigenvalues and Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Eigen values	% of Variance	Cumulative %		% of Variance	Cumulative %
1	2.533	16.889	16.889	2.205	14.701	14.701
2	1.577	10.516	27.405	1.130	7.532	22.233
3	1.520	10.135	37.540	.938	6.254	28.487
4	1.300	8.668	46.208	.712	4.750	33.236
5	1.248	8.322	54.529	.596	3.970	37.207
6	1.022	6.816	61.346	.388	2.588	39.795
7	.973	6.489	67.835			
8	.927	6.179	74.013			
9	.843	5.623	79.637			
10	.754	5.025	84.661			
11	.630	4.202	88.863			
12	.588	3.917	92.781			
13	.555	3.697	96.478			
14	.324	2.162	98.640			
15	.204	1.360	100.000			

Source: Authors' computation, results obtained from SPSS

Of the 15 variables, only 12 were identified with significant loadings by the factor analysis. Only factors with weights equivalent to or greater than 0.32 were considered significant as per Tabachnick and Fidell's (2013) criterion. Hence, as reflected in Table 3, only components that have a loading of above 0.32 are considered. Redundancy, generating wealth and quest for greater independence did not load onto any factor, as shown in Table 3. These variables had a loading value of less than 0.32. The six components, obtained through principal axis extraction method and Oblimin rotation, are presented in Table 3.

The first factor explains about 16.9% of the variation in the motives for engaging in slum activities, with an Eigen value of 2.533 (Table 2). It consisted of three variables; avoiding tax (loading, 0.945), avoiding government regulation (loading, 0.715) and greater satisfaction (loading, 0.472). As slum operators seek to avoid government regulation, they seem to generate satisfaction for what they do. Satisfaction in this sense refers to an operator's contentment with his/her economic activity and working conditions. This first set of variables is labelled as 'Avoiding government regulation'. With Ghana's high VAT rate at 17.5% (as of 2019), which is higher than that of China, South Africa and Kenya, people may prefer to rather engage in the unregulated informal sector. This is consistent with the literature survey in

developing countries by Gerxhani (2004) and Williams and Nadin, (2014) in Ukraine, which also found out that, strict government regulation is a major reason for informalisation.

Table 3. Rotated Matrix

Variables	Factor					
	1	2	3	4	5	6
Avoid tax	.945	-.066	-.005	-.060	.075	-.002
Avoid government regulation	.715	-.101	.032	.006	.055	-.057
Satisfaction	.472	.206	-.035	-.052	-.049	-.028
Supplement income	-.182	.813	.033	-.018	.040	.016
Increase leisure time	.427	.748	-.028	.031	.049	-.090
Networks	.048	-.083	.755	-.006	-.044	-.040
Use one's expertise	-.039	.082	.535	.050	.015	.013
Flexibility of informal business	-.015	-.023	.013	.636	-.037	-.066
Expensive formal business	-.069	.021	.023	.426	.122	-.007
Redundancy	-.050	.017	-.111	-.126	.042	-.091
Taking advantage of business opportunity	.016	-.029	-.192	.202	.629	.030
Survival	-.123	-.031	.195	-.094	.338	-.206
Generate wealth	-.046	-.037	-.031	.019	-.149	-.042
Earn higher income	-.103	-.027	.002	-.071	.093	.653
Greater independence	.073	.138	-.061	.150	-.119	.176
Labels	Avoidance of government regulation	Working at one's own time	Making use of one's talent and relations	Attractive informal sector	Opportunitie s	Quest for higher income

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
Source: Authors' computation, results obtained from SPSS

The second set, with an Eigen value of 1.577, explains 10.5% (Table 2) of variation in the motives for slum activity. It consists of two variables; supplementing income with a loading of 0.813 and increasing leisure time, with a loading of 0.748. However, supplementing income has a greater bearing as a motivation factor than increasing leisure time and this factor is labelled as 'Working at one's own time'. Two major motives for informal activities according to Maloney's (2004) study in Latin America, are the informal sector's flexibility, where operators are independent and work at their own time and the quest for higher income. These have also been found to be crucial motives for slum activities in Ghana. Supplementing income (loading, .813) and increase of leisure time (loading, .748) makes up the second cluster of motives for slum activities.

The third factor, which is labelled as 'Making use of one's talent and relations', consists of two variables, accounting for about 10.12% (Table 2) of the total variance in motives for slum activity. These variables include one's networks (loading, 0.755) and using of one's expertise (loading, 0.535). In this set, networks play a bigger role in motivating an operator to engage in a slum activity than a greater use of one's expertise.

The informal sector is mainly characterised by family affiliated work. This cluster clearly reflects that freedom to make use of one's talents is a primary consideration for engaging in informal slum activities. Indeed, according to Sen (2014), a key to one's functioning in life stems from the freedom one has in engaging in an activity of choice. Making use of one's networks represents the second part of this cluster. Social capital theory, according to Portes (1998) and Putnam (2001) refers to an individual's ability to benefit from their social networks, interpersonal relationships and membership from their community engagements. Slum operators, in this case, are found to engage in informal activities partly because a friend or relative is already involved in that activity, reducing fear and entry costs. The cluster "making use of one's relations and talents" therefore combines the capability and social capital theories.

Flexibility of informal business (loading, 0.636) and expensive formal business (loading, 0.426) constitute the fourth factor, labelled as 'Attractive informal sector'. Both variables have an Eigen value of 1.3 (Table 2) and account for about 8.7% of the total variation in motives for slum activity. Taking advantage of business opportunity (loading, 0.629) and survival (loading, 0.338) jointly load onto the fifth factor, known as 'Opportunities'. This factor account for about 8.3% of total variation with an Eigen value of 1.2 (Table 2). The sixth factor, Quest for higher income (loading, 0.653) is the only stand-alone factor accounting for 6.8% of total variation with an Eigen value of one (Table 2). As one makes use of his or her family relations and talents, it is imperative that he/she takes advantages of business opportunities around. The informal sector brims with endless opportunities and taking advantage of these opportunities is one major cause of informalisation according to Gurtoo and Williams, (2009). Hence, the opportunities (loading, .629) that slum enterprises offer is one crucial motive for engaging in slum activities in Ghana. Survival (loading, .338), which stems from necessity entrepreneurship is also a major reason for slum activities in Ghana.

5. Recommendations and Conclusion

The objective of this paper was to find out the factors that motivate operators to engage in informal sector activities in slums. The literature review conducted indicated that informal sector activities are underpinned by various motivations in

different countries. The key influences were included in the structured questionnaire administered to 344 operators in the chosen slums. Various interesting results emanated from the data analysis process. One major finding was that Ghana's formal minimum wage is GH ₵ 8 ($2) is a quarter of what is earned by slum operators ($8 a day). A higher daily wage in the informal sector is a major attraction for entrepreneurs and which explains why some persons living in formal settlements prefer to engage in slum activities albeit the environmental problems. Furthermore, starting a business in Ghana is a laborious process, as the World Bank ranked Ghana at the 102nd position in 2016 and 114th in 2019 amongst 190 other countries with regards to the ease of starting a business. The deterioration of Ghana's ranking further reinforces the main motive for slum activities in the country which is the avoidance of government regulation. Hence, the informal sector is attractive since government regulation there is not as rigorous as in the formal sector. De Soto (2000), points out that, cumbersome and costly bureaucratic procedures are responsible for most micro-entrepreneurs going into informal sector activities. Hence, policies geared towards removing some of the stringent procedures of operating in the formal sector may help curb the growth of the informal slum sector. Furthermore, policies geared towards the creation of sustainable jobs are needed. As the informal sector is characterized by family labour, providing an enabling environment for them to operate within the confines of the formal sector will, in turn, provide similar opportunities for their relatives.

Although Ghana is blessed with fertile land and good weather, agriculture which was the highest contributor to GDP from independence (1957), is now (in 2019) the least contributor. Sector contribution to GDP as of 2018 was led by services (57%), industry (25%) and lastly agriculture (18%).

Ghana's Medium Term Agricultural Sector Investment Plan (METASIP), Agribusiness Support Division as well as World Bank and USAID's Ghana Commercial Agricultural Project (GCAP) hope to facilitate investment in the agricultural sector by equipping farmers with vital skills and tools. This they hope will lead to the improvement of food security, increase in farmer incomes, sustainable land management and technological improvements. These policies seem to have great objectives but have barely yielded results as agricultural contribution to output is still low. Hence, continuous investment in modernised agriculture and basic infrastructures such as transport, ICT, water and electric systems will lead to the sustainable exploitation of the country's natural resources. Life expectancy in Ghana is about 60 years, whereas the average age of a farmer was 55 years in 2011. Therefore, as a major sector for Ghana's development, engaging youth in agriculture will, in the long run, lead to sustainable economic development and job creation.

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A Psychographic Analysis of Foreign Investors' Perceptions of the Non-Financial Factors Influencing Foreign Direct Investment to Zimbabwe

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Abstract: Understanding the role of psychographics in influencing financial consumer behaviour is an emerging discourse. There is a discernible gap in the literature relating to the psychographic profiling of foreign investors, more-so within the African context. This study examines the potential differences existing between investors in their rating of the non-financial factors influencing the consideration of FDI market opportunities in Zimbabwe (2009-2015) based on their psychographic profiles – investor status and investor motives. A quantitative cross-sectional deductive study was conducted. Data was generated via an online survey and was analysed utilising STATISTICA 12 software. The survey data from the sample of n=305 foreign investors was analysed by employing Multivariate Analysis of Variance, Post-hoc Scheffè test and the Cohen D's effect sizes techniques. As a result, six statistically significant psychographic-based differences were established. The findings of this study provide important empirical insights into the role of psychology in investment promotion, and more significantly provides empirical evidence of psychographic-based differences. Thus, this study expands on the extant of the literature within behavioural finance theory on the role of psychographics in foreign direct investment decision-making, as well as the feasibility of market segmentation in investment promotion for national governments by identifying heterogeneity within investor groups.

Keywords: Behavioural finance; psychographics; investment promotion; investor status; investor motive

JEL Classification: D03; D11; D12; F20

1. Introduction

Foreign direct investment (FDI) is a key internationalisation strategy for Multi-national enterprises (MNEs), and thus may be considered to be a key catalyst for the economic development of host economies (Eminovic, 2013; Kok & Ersoy, 2009). The resultant global competition for the financial and non-financial resources associated with FDI, has seen the governments of potential FDI host economies

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engaging in investment promotion activities. Investment promotion generally encompasses all the marketing-related government initiatives undertaken by government and quasi-government agencies to market a country as a location for investment in order to attract FDI and encourage foreign investors to invest and/or to re-invest in their economies (Ajaebgu, 2014; Pietersen, 2011; Trink, 2007). The need for national governments to be both proactive and reactive in their FDI attraction efforts due to competitive global forces necessitates an interventionist approach to investment promotion (Cotula, 2014; Trnik, 2007).

The interventionist approach to investment promotion is premised on the notion that the attraction of FDI involves the 'marketing' of a country as an attractive investment destination by managing market failure (perception and information gaps), and intervening in the market in order to promote FDI (Cotula, 2014; Miskinis & Byrka, 2014; Trnik, 2007). A key success factor for the interventionist approach to investment promotion is investor targeting - which seeks to address the perception and information gaps that may hinder or negatively influence the FDI location decision-making process for specific segments of foreign direct investors (Pietersen & Bezuidenhout, 2015). Therefore, more effective investor targeting requires specialised information relating to the segment of investors according to their predilections. This implies that that factors influencing specific investors whom a particular country would like to target/attract become increasingly important within the investment promotion context. Thus, foreign investors represent a key "consumer segment" for national governments within the global political economy. It follows then that, marketing techniques such as market segmentation are critical within investment promotion practice, hence the increasingly significant role of psychographics in the attraction of FDI.

Market segmentation is a critical component in the competitiveness of products and services, more-so within the contemporary global business context, where the market is sub-divided into homogenous strata in-order to more efficiently identify the taxonomy of consumer behaviour (Baharun, 2011). Psychographics are one of the four traditional approaches to the segmentation of consumer markets based on the individual psychological characteristics of consumers and how they relate to their consumption behaviour (Larsen, 2010; Martins, 2007). Psychographic factors have conventionally been applied to market segmentation within the marketing discourse – particularly as an approach to the measurement of the predisposition of consumers to the consumption of certain products or services, as well as the particular influences that stimulate the consumers' buying behaviour (Johansson, 2017; Mintz, 2017). To this end, psychographic segmentation is widely associated with the multivariate analyses of consumer characteristics which include consumer attitude, behaviour, value and perception in order to better manage consumer segments (Thomas, 2017). Hafner and Grabler (2015) advance the notion that psychographics have significant

predictive power in the formation and more pertinently, the assessment of consumer segments.

The role of psychographics in influencing financial consumer behaviour is an emerging discourse in the segmentation of financial consumer markets (Matenge, Makgosa & Mburu, 2016). Within the broader economic theory, the role of psychographics in FDI decision-making is supported by the behavioural finance theory. The behavioural finance theory debunks traditional rationality-based economic models by positing that individual investors are in fact irrational and are predominantly influenced by their inherent psychological biases when making investment decisions (Aspara, 2013; Halaba, Iiguen & Halibegoviç, 2017). The two biases that are of particular relevance to the present study are, framing bias and heuristics, which are contextualised further in the review of the literature. Within the context of the present study, psychographics are applied to segment the sample of foreign investors in Zimbabwe (2009-2015) in-order to examine their heterogeneity in relation to the non-financial factors influencing FDI decisions.

Halaba et al. (2017) observe a discernible dearth of empirical evidence pertaining to the psychographic profile of foreign investors and how these psychographic characteristics may influence their investment decisions. Furthermore, there is a gap in the literature relating to the identification of heterogeneity within investor segments with regards to the factors influencing individual investor decisions in their selection of FDI location, as well as the prediction of foreign investor behaviour based on psychological factors. Therefore, the aim of the present study was to ascertain whether two significant psychographic factors - categorised as the psychographic variables investor status and investor motive - predisposed foreign investors' perceptions of the non-financial factors influencing the consideration of FDI market opportunities in Zimbabwe between 2009 and 2015. The period under review represents the post-2008 Zimbabwe crises period up to the time the study was conducted. This was achieved by examining the potential differences existing between investors in their rating of the non-financial factors influencing the consideration of FDI market opportunities in Zimbabwe between 2009 and 2015. To the best of the authors' knowledge, this is the first study to attempt to examine the differences in the relationship between investor status, as well as investor motive variables and the non-financial factors influencing foreign investor behaviour within both the African and global context. Thus, this study makes a novel contribution to the extant of the literature within both the behavioural finance and investment promotion discourses respectively, by examining investor heterogeneity within the investor framing (investors status and investor motives)-heuristics (cultural values and practices; human capital; export profile; government actions and regulatory framework) nexus.

2. Literature Review

The psychographic segmentation discourse predominantly focuses on individual consumer behaviour, interests and opinions (Baharun et al., 2011). Within the tourism context, psychographic factors were considered to be more insightful descriptors of tourist behaviour than socio-demographic factors (Hafner & Grabler, 2015). To this end, Stylidis, Kokho and Biran (2018) found that place image as a psychographic factor was an effective segmentation basis. While, within the finance context, Matenge et al. (2016) considered psychographic characteristics as being key to the identification of heterogeneity within financial consumer segments. Ghazali and Othman (2004) observe a correlation between investor preferences and psychographics, suggesting that investor behaviour may be predicted based on their interests, attitudes and opinions. For instance in Malaysia, "active" investors were found to be information intensive in their investment decision making, drawing their information symmetry regarding investment decisions from various sources including television, the internet and business news media (Ghazali & Othman, 2004). While, Foscht, Maloles, Schloffer, Chai and Sinha (2010) consider financial consumers' level of interest and behavioural intentions to be key psychographic factors in the segmentation of financial consumer markets. The extant of the literature (Jadczakova, 2013; Larsen, 2010; Lynn, 2011; Martin, 2011; Matenge et al. 2016), also identifies psychographic factors to include characteristics such as motivation, perceptions, attitudes and values.

Behavioural finance theory proposes that an investor is susceptible to bias premised on both intrinsic and extrinsic influences (Phan & Zhou, 2014). Within the context of this study, the intrinsic factor is framing bias which is characterised by Halaba et al. (2017) as the preconceived notion exhibited by investors based on how they process information cognitively within the context of their own comprehension, inherent perspectives and/or subjective perceptions. Thus, framing bias implies that investors essentially make investment decisions premised on their own judgements, and within the context of the present study the intrinsic influences examined are the psychographic factors: *Investor status* and *Investor motive* respectively. The two psychographic factors examined in relation to the non-financial factors that foreign investors would consider in their investment decision making process are operationalised.

2.1. Investor Status

Investor status refers to the context within which the investor considered the non-financial determinants of FDI in the case of post-crisis Zimbabwe. The context of the decision-making is a significant psychographic factor as it is an insight into the heterogeneity of investors based on perspective from which the foreign investor makes their decisions. Within the context of the study, *Investor status* is akin to the perceptions and attitude of the foreign investors when rating the non-financial factors

they considered in their investment decisions. For the purposes of the study, three investor psychographic segments were examined: investors who had invested in Zimbabwe; investors who had considered investing in Zimbabwe but had decided not to do so and; investors who would have considered investing in Zimbabwe in the future at the time of the survey.

2.1.1. Investor Motive

Investor motive refers to intention of the foreign investor for engaging in FDI activity in post-crisis Zimbabwe. The intention of the investor is a significant psychographic factor as it is an insight into the heterogeneity of investors based on the purpose for which a foreign investor makes their decision. Within the context of the study, *Investor motive* is akin to the interests, motivations and values of the foreign investors when rating the non-financial factors they considered in their investment decisions. For the purposes of the study, four investor psychographic segments were examined: market-; resource-; efficiency- and; strategic asset-seeking FDI motives.

The extrinsic influence considered in this study is heuristics, which is characterised by Kahneman (2011) as the external cues or mental shortcuts referenced by investors to inform their investment decisions to mitigate information asymmetry. By utilising heuristic cues, investors essentially infer certain decision-making information from extrinsic environmental cues, which for the purposes of the study are Zimbabwe's: Cultural values and practices; Human capital; Export profile; Government actions and Regulatory framework. With the psychographic factors in mind, each heuristic cue is operationalised and the following hypotheses were formulated.

2.2. Hypotheses tested

2.2.1. Cultural Values and Practices and FDI

Cultural values and practice is the measure of the perception of external stakeholders of a nation's inherent characteristics, influencing global perceptions of the nation's heritage, as well as appreciation for the contemporary cultural assets (Belloso, 2010). Within the FDI context, culture and heritage can be considered to be a qualitative measure of the perceptions of the socio-cultural mechanisms in which social institutions are grounded to the extent that they either aid or deter FDI and its promotion (Alcacer & Ingram, 2008; Kalamova & Konrad, 2009; Keillor, Hauser & Griffin, 2009; Siegel, Litcht & Schwartz, 2010). Cultural values and practices factors considered by foreign investors may include: propensity and acceptance of corruption and bribery (Osei & Gbadamosi, 2011; Smith, 2010); language and knowledge transfer systems (Alcacer & Ingram, 2008; Kalamova & Konrad, 2009); cultural dynamics such as the power distance index; individualism; masculinity, and the uncertainty avoidance index (Lausberg, 2010) and; acceptance of cultural diversity and attitude of the locals towards foreigners (Hlongwana, 2015). With the Zimbabwean context in mind, the following hypotheses were formulated:

$H0_{1.1}$: There is no difference in how foreign investors rate Zimbabwe's Cultural values and practices based on Investor status.

$H0_{2.1}$: There is no difference in how foreign investors rate Zimbabwe's Cultural values and practices based on Investor motive.

2.2.2. Human Capital and FDI

Human capital refers to the perception of external stakeholders of a country's citizens regarding their reputation for competence, openness, friendliness, and other qualities such as tolerance (Belloso, 2010). According to Kalamova and Konrad (2009), within the FDI context, human capital as a determinant of FDI may be considered to be a qualitative measure of the enduring investor perception of the citizens and the biographical profile of a particular FDI location. Human capital factors considered by foreign investors may include: the availability of a skilled labour force (Vinesh, Boopendra & Hemraze, 2014); the percentage of the population with higher public education (Aziz & Makkawi, 2012; Gharaibeh, 2015); a large population indicating a potentially larger market (Kavita & Sudhakara, 2011); the total available productive labour force, based on gender and age (Mottaleb & Kalirajan, 2010) and; labour force growth rates (Gebrewold, 2012). With the Zimbabwean context in mind, the following hypotheses were formulated:

$H0_{1.2}$: There is no difference in how foreign investors rate Zimbabwe's Human capital based on Investor status.

$H0_{2.2}$: There is no difference in how foreign investors rate Zimbabwe's Human capital based on Investor motive.

2.2.3. Export Profile and FDI

A county's Export profile within the FDI context may be viewed as a measure of the perception of external stakeholders of a nation, based on its export policies, as well as its branded products and services (Belloso, 2010; Khan & Nawaz, 2011). Export profile may also encompasses aspects considered to be critical to the evaluation of the nation's key products, propensity for innovation, its science and technology capabilities, and key competencies of the nation in particular product/service categories (GfK Roper Public Affairs & Media, 2009). Export profile factors considered by foreign investors may include: implementation of export-friendly policies (Kahai, 2011); specific desirable export products (Loots & Kabundi, 2012); strategic location of an investment location in relation to developed markets (Campos & Kinoshita, 2006) and; export incentives for export oriented industrial activity (Khan & Nawaz, 2011). With the Zimbabwean context in mind, the following hypotheses were formulated:

$H0_{1.3}$: There is no difference in how foreign investors rate Zimbabwe's Export profile based on Investor status.

$H0_{2.3}$: There is no difference in how foreign investors rate Zimbabwe's Export profile based on Investor motive.

2.2.4. Government Actions and FDI

Government actions within the FDI context refer to how governments manage the macro environment of an economy, and is therefore, critical to the development and predictability of the business environment (Naude & Krugell, 2007:1228). Government actions therefore, influence the perception held by external stakeholders of a country's government and its activities (Belloso, 2010). Government actions factors considered by foreign investors may include: the effective or ineffective management of public resources and the macro environment (Kalamova & Konrad, 2009; Naude & Krugell, 2007); political stability (Kariuki, 2015); application of the rule of law (Ajide, 2014) and; the level of interventionist behaviour and bureaucracy (Kalamova & Konrad, 2009; Ojong, Aripko & Ogar, 2015). With the Zimbabwean context in mind, the following hypotheses were formulated:

$H0_{1.4}$: There is no difference in how foreign investors rate Zimbabwe's Government actions based on Investor status.

$H0_{2.4}$: There is no difference in how foreign investors rate Zimbabwe's Government actions based on Investor motive.

2.2.5. Regulatory Framework and FDI

The regulatory framework, in the FDI context, refers to the extent to which governments intervene and exercise control over their economies by enforcing rules and guidelines meant to manage and safeguard their economies (Fagan, 2009; Steyt, 2006). Some authors (Anyanwu, 2012; Busse & Groizard, 2008), suggest that the more highly regulated a potential foreign investment location is, the less willing investors would be to invest in that location. The literature (Aveh & Krah, 2013; Erdogan & Unver, 2015; Kariuki, 2015) confirms that the regulation framework of a country influences FDI inflows to a specific location significantly. Regulatory framework factors considered by foreign investors may include: the protection of intellectual property rights (Hailu, 2010); the enforcement of earnings remittance policies (Ajayi, 2006; Campos & Kinoshita, 2006); transparency within the investment location's business environment (Bartels, Kratzsch & Eicher, 2008) and; government guarantees of investment against nationalisation and expropriation through bilateral and multilateral agreements (Senkunku & Gharleghi, 2015). With the Zimbabwean context in mind, the following hypotheses were formulated:

$H0_{1.5}$: There is no difference in how foreign investors rate Zimbabwe's Regulatory framework based on Investor status.

$H0_{2.5}$: There is no difference in how foreign investors rate Zimbabwe's Regulatory framework based on Investor motive.

The following section outlines the research methodology of the study.

3. Research Methodology

A quantitative cross-sectional deductive study was conducted to generate the data for this study as part of a broader study to explore the non-financial factors influencing the consideration of FDI market opportunities in post-crisis Zimbabwe (2009-2015). From a sample of 640 foreign investors with valid e-mail contact details an effective sample *n*=305 investors participated in the online survey, resulting in a response rate of 47.66%. This sample was deemed to be adequate for the purposes of the study based on the empirical guidelines (Krejcie & Morgan, 1970; Sue & Ritter, 2007). An online survey was utilised to generate the data from respondents, with responses being recorded on an ordinal 5-point Likert scale Toepoel (2016), with predetermined responses ranging from (1) not at all influential; (2) slightly influential; (3) undecided; (4) influential to; (5) extremely influential. STATISTICA 12 software was used to analyse the data. Exploratory Factor Analysis, Principle Component Analysis (Eigenvalue - EV), was employed to determine validity, while the Cronbach's alpha test (α) was employed to determine reliability, and Pearson product-moment correlation coefficients (*r*) was employed to determine the correlation of the heuristic cues examined in this study. A summary of these results is presented in Table 1.

Table 1. Summary of Results for the Determination of the Heuristic Cues Examined in this study

Factor	**Factor Loading**		**Items retained**	**(EV)**	**(α)**	**(*r*)**				
	Min	**Max**				**(CVP)**	**(HC)**	**(EP)**	**(GA)**	**(RF)**
Cultural values and practices **(CVP)**	0.503	0.622	5	1.99	0.723	**1.000**				
Human capital **(HC)**	0.706	0.835	5	2.67	0.861	0.316	**1.000**			
Export profile **(EP)**	0.512	0.712	10	3.11	0.904	0.338	0.397	**1.000**		
Government actions **(GA)**	0.500	0.821	17	26.27	0.952	0.485	0.428	0.622	**1.000**	
Regulatory framework **(RF)**	0.516	0.670	12	5.87	0.907	0.321	0.485	0.576	0.636	**1.000**

As is summarised in Table 1 each factor retained more than the three variables, with a minimum factor loading coefficient of >0.500 and EV of <1.0 as per guidelines provided by Hair, Black, Babin, Anderson and Tatham (2006), and Larsen and Warne (2010) for validity. All factors reported α > 0.700 which was the cut-off for reliability (George & Mallery, 2003). All factors were found to be cognate with a

coefficient of *r*>0.30 being preferable as it implied that the factor association was not weak (Yong & Pearce, 2013). In order to examine whether statistically significant differences occurred between the two psychographic investor profile categories with regards to Zimbabwe's cultural values and practices; human capital; export profile; government actions and regulatory framework as influential foreign direct investment decision-making determinants, the following data analysis techniques were employed. Multivariate Analysis of Variance (MANOVA) was employed to determine if differences exist based on investor- status and motive when considering the non-financial determinants influencing FDI to Zimbabwe (Grice & Iwasaki, 2007). A Post-hoc Scheffè test followed and was completed to identify where the specific significant differences occurred between the different categories (Lund Research, 2013). Cohen D's values were then calculated to determine the effect sizes of the specific mean differences identified from the post-hoc Scheffé tests for practical significance (Grice & Iwasaki, 2007; Warne, 2014). Effect sizes were categorised according to the recommendations by Cohen (1988) as follows: $0.2 < d < 0.5$ is a small effect size; $0.5 < d < 0.8$ is an average effect size, and $d > 0.8$ is a large effect size.

4. Data Analysis and findings

Table 2 summarises the psychographic profile of the foreign investors surveyed.

Table 2. Psychographic Profile of the Foreign Investors Surveyed

(%) of *n*=305		
Investor status	Had invested in Zimbabwe	47
	Had considered investing in Zimbabwe but had decided not to do so	38
	Would consider investing in Zimbabwe in the future	15
Investor motive	Market seeking	43
	Efficiency seeking	10
	Resource seeking	25
	Strategic asset seeking	22

With regards to the psychographic factor segments of the foreign investors surveyed most of the surveyed investors (47%) had invested in Zimbabwe at the time of the survey, while the remainder (38% and 15%) had considered investing but had not done so and reported considering investing in Zimbabwe in the future respectively. A significant proportion of the investors surveyed (43%) reported having market-

seeking motives for engaging in FDI activity in Zimbabwe. While the remainder (25%, 22% and 10%) reported having resource-, strategic asset- and efficiency-seeking motives for engaging in FDI activity in Zimbabwe respectively.

The results of the MANOVA on *Investor status* and *Investor motive* regarding the influence of Zimbabwe's cultural values and practices, human capital, export profile, government actions and regulatory framework in the consideration of engaging in FDI activity in Zimbabwe are presented in Tables 3 and 4 respectively.

4.1. Investor Status

Table 3 presents the findings of the MANOVA for investor status.

Table 3. Results of the MANOVA for Investor Status

Psychographic factor	Independent variables	F-value	P-value	Hypothesis No.	Practically significant differences
Investor status	Cultural values and practic	2.124	0.121	$H0_{1.1}$	-
	Human capital	9.306	0.000*	$H0_{1.2}$	Large (one group) Average (one group)
	Export profile	7.097	0.001**	$H0_{1.3}$	Average (one group)
	Government actions	11.684	0.000*	$H0_{1.4}$	Small (one group) Large (one group)
	Regulatory framework	6.050	0.003**	$H0_{1.5}$	Average (one group)

***p<0.001 **p<0.05**

As is evident in Table 3, no statistically significant difference could be established between *Investor status* (0.121; $p<0.05$) and Zimbabwe's *Cultural values and practices*. Thus null hypothesis $H0_{1.1}$ was accepted. Table 3 also presents evidence that statistically significant differences could be established with regards to investors' perceptions of Zimbabwe's *Human capital* (0.000; $p<0.001$), *Export profile* (0.001; $p<0.05$), *Government actions* (0.000; $p<0.001$) and *Regulatory framework* (0.003; $p<0.05$) in Zimbabwe based on their *Investor status*. Thus, the null hypotheses $H0_{1.2}$, $H0_{1.3}$, $H0_{1.4}$, and $H0_{1.5}$ were rejected. Each statistically significant psychographic-based difference is discussed in more detail.

The post-hoc Scheffé test for the significant differences related to *Investor status* and Zimbabwe's *Human capital* (0.000; $p<0.001$) revealed two specific mean differences. Investors who had invested ($\bar{x}$ = 3.849) and considered investing in Zimbabwe in the future ($\bar{x}$ = 4.030) scored a higher mean score than investors who had considered investing in Zimbabwe but did not do so ($\bar{x}$ = 3.390). This implies that at the time of the survey, investors who had invested in Zimbabwe, as well as investors who considered investing in Zimbabwe in the future, regarded Zimbabwe's human capital to be quite influential in their FDI decisions, while those who had considered investing in Zimbabwe but did not, tended to be undecided about to the extent of its influence. The Cohen d-effect size values for the specific mean differences were 2.307 and 0.618 representing an average and a large practical significance respectively.

The post-hoc Scheffé test for the significant relationship between *Investor status* and Zimbabwe's *Export profile* (0.001; $p<0.05$) revealed that investors who would consider investing in Zimbabwe in the future ($\bar{x}$ = 3.628) scored a higher mean score than investors who had considered investing in Zimbabwe and did not do so ($\bar{x}$ = 2.943). This implies that investors who would consider investing in Zimbabwe in the future, regarded Zimbabwe's export profile to be quite influential in their FDI decisions, while those who had considered investing in Zimbabwe but did not do so, were undecided about the extent of its influence. The Cohen d-effect size value was 0.610, representing an average practical significance.

The post-hoc Scheffé test for the significant differences related to *Investor status* and Zimbabwe's *Government actions* (0.000; $p<0.001$) revealed two specific mean differences. At the time of the survey, investors who would have considered investing in Zimbabwe in the future ($\bar{x}$ = 3.702) and those who had invested ($\bar{x}$ = 3.300), scored higher mean scores than investors who had considered investing in Zimbabwe but did not do so ($\bar{x}$ = 2.885). This implies that foreign investors who would consider investing in Zimbabwe in the future, regarded the actions taken by the Zimbabwean government as quite influential in their FDI decisions, while those who had invested were undecided as to the extent of their influence, and those who had considered investing in Zimbabwe but did not do so, were even more uncertain whether government actions had indeed played a role in their FDI decisions. The Cohen d-effect size values were 0.857 and 0.413 a large and a small practical significance respectively.

The post-hoc Scheffé test for the significant differences related to *Investor status* and Zimbabwe's *Regulatory framework* (0.003; $p<0.05$) revealed that at the time of the survey, investors who would have considered investing in Zimbabwe in the future ($\bar{x}$ = 4.083) scored a higher mean score than investors who had considered investing in Zimbabwe but did not do so ($\bar{x}$ = 3.568). This implies that although investors who would have considered investing in Zimbabwe regarded the regulatory framework

in Zimbabwe to be quite influential in their FDI decisions, they also regarded it to be more influential than those who had considered investing in Zimbabwe, but did not do so. The Cohen d-effect size value was 0.594, representing an average practical significance.

4.2. Investor Motives

Table 4 presents the findings of the MANOVA for investor motives.

Table 4. Results of the MANOVA for Investor Motives

Psychographic factor	Independent variables	F-value	P-value	Hypothesis No.	Practically significant differences
Investor motives	Cultural values and prac	0.941	0.421	$H0_{2.1}$	-
	Human capital	6.486	0.000*	$H0_{2.2}$	Average
	Export profile	3.304	0.021**	$H0_{2.3}$	-
	Government actions	1.981	0.117	$H0_{2.4}$	-
	Regulatory framework	0.634	0.594	$H0_{2.5}$	-

***p<0.001 **p<0.05**

As is evident in Table 4, no statistically significant differences could be established between *Investor motives* and Zimbabwe's *Cultural values and practices* (0.421; $p<0.05$); *Government actions* (0.117; $p<0.05$) and *Regulatory framework* (0.594; $p<0.05$). Thus, null hypotheses $H0_{2.1}$, $H0_{2.4}$ and $H0_{2.5}$ were accepted respectively. Relatedly, statistically significant differences could also be established with regards to investors' perceptions of Zimbabwe's *Human capital* (0.000; $p<0.001$) and *Export profile* (0.021; $p<0.05$) and in Zimbabwe based on their *Investor motives*. Thus, the null hypotheses $H0_{2.2}$ and $H0_{2.3}$ were rejected. The statistically significant psychographic-based differences are discussed in more detail.

The post-hoc Scheffé test for the statistically significant differences related to *Investor motive* and Zimbabwe's *Human capital* (0.000; $p<0.001$) revealed two specific mean differences. Resource- seeking investors ($\overline{x}$ = 4.003) and efficiency-seeking ($\overline{x}$ = 3.948) scored higher mean scores than strategic asset-seeking investors ($\overline{x}$ = 3.291). This implies that resource- and efficiency-seeking investors regarded Zimbabwe's human capital to be quite influential in their FDI decisions, while strategic asset-seeking investors were undecided as to the extent of its influence. The Cohen d-effect size values were 0.663 and 0.623 respectively, representing average practical significance. The post-hoc Scheffé test for the statistically significant differences related to *Investor motive* and Zimbabwe's *Export profile* (0.021;

p<0.05), reported that the statistically significant differences were not powerful enough to detect any specific mean differences.

5. Discussion and Conclusions

Market segmentation enhances the effectiveness of marketing activity by providing information symmetry through the identification of the key behavioural cues of consumers (Dolnicar and Kemp, 2008). Hence, by effectively identifying the differences (heterogeneity) in investors by segmenting foreign investor markets based on psychographic factors, national governments such as that of Zimbabwe, can better manage the attraction of foreign investors and position their economies as competitive investment locations. The findings of this study support this assertion.

From a behavioural finance perspective the findings of the study provide empirical evidence of the heterogeneity within foreign investor segments in the case of the non-financial factors influencing their FDI decisions relating to engaging in FDI activity in Zimbabwe (2009-2015). For instance, statistically significant differences were identified between investors who had invested in Zimbabwe, as well as investors who considered investing in Zimbabwe in the future, regarding rating the influence of Zimbabwe's human capital compared to those who had considered investing in Zimbabwe but did not - the latter tending to be undecided about to the extent of its influence. While, foreign investors motivated by resource and efficiency FDI opportunities in Zimbabwe rated Zimbabwe's human capital higher than strategic asset-seeking investors in the country. This notion is partially supported by the literature, where the availability of skilled, cost-effective and productive labour is essential to the profitability of resource and efficiency-seeking investors (Bhatt, 2013; Sarna, 2005). Thus, it can be concluded that there was heterogeneity within the sample of investors, segmented based on *Investor status* and *Investor motive* and that to some extent, psychographic factors may be utilised to predict the factors influencing foreign investor behaviour. The extant of the contemporary literature generally substantiates the assertion that psychographics play an increasingly significant in consumer decision-making across various and diverse consumer segments including tourism (Stylidis et al. 2018), retail services (Otaibi and Yasmeen, 2014) and more pertinently investor markets (Gamel, Menrad and Decker, 2017; Kumar, Goyal and Basu, 2017; Laksiri and Silva, 2013).

However, while differences in the rating of the influence of the non-financial factors within the Zimbabwean context point to heterogeneity in the sample of investors - supporting the role of individual psychological characteristics in the investment decision-making process within the FDI context – there is paucity in supporting literature. The findings of this study provide important empirical insights into the role of psychology in investment promotion, and more significantly provide

empirical evidence of a relationship between two behavioural finance concepts – investor framing bias and heuristics, thus expanding on the extant of the literature within behavioural finance theory on the role of psychographics in the framing (interpretation) of heuristic cues in FDI decisions, as well as the feasibility of market segmentation in investment promotion for national governments. Therefore, the absence of specific empirical evidence to support *Investor status* and *Investor motive* differences as related to specific non-financial determinants influential for FDI consideration, suggests that the findings of this study are a novel contribution to both behavioural finance and investment promotion literature respectively.

It is recommended that the Government of Zimbabwe cognisant of the psychographic differences that exist within its investor market and actively segment its investors to improve the effectiveness of their investment promotion initiatives. For instance based on the findings of this paper, by initiating targeted segment-specific marketing promotion activities such as newsletters/policy briefs or investor forums, the Government of Zimbabwe may focus on showcasing the comparative and competitive advantages of investing in Zimbabwe based on its human capital profile of highly-skilled, productive, and cost-effective labour force to the resource- and efficiency-seeking investor segment. Relatedly, from a policy perspective, this suggests that the Government of Zimbabwe must benchmark its labour laws in line with global standards in order to better attract human-capital oriented investors who had indicated considering investing in Zimbabwe in the future as they regarded Zimbabwe's human capital to be quite influential in their FDI decisions, as well as those investors who had considered investing in Zimbabwe but did not, since they appeared to be undecided about Zimbabwe's human capital. This recommendation is relevant to other African countries in particular as they transcend into the interventionist paradigm of investment promotion (Ajaebgu, 2014; Pietersen, 2011; Trnik, 2007).

The authors are cognisant to limitations of the study. Particularly the generalisability of the findings to other African countries and globally. Given the subjective nature of FDI location decision-making, it is recommended that a comparative study of the psychographic factors influencing the consideration of non-financial factors in FDI decisions be conducted as part of a broader study on the qualitative factors influencing FDI into the African region in particular. The African context is of particular academic interest due to the dearth in Afro-centric studies focusing on emerging discourses such as behavioural finance and investment promotion. These new insights would be beneficial to African governments in their policy making agenda towards the attraction of FDI to their economies.

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Electrical Energy Insecurity and the Performance of the Small and Medium Enterprise Sub-Sector in Nigeria

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Abstract: This study empirically investigates electrical energy insecurity and the performance of the SME sub-sector in Nigeria using data from the World Bank Enterprise Survey for Nigeria. The survey covered a total of 2676 SMEs which were categorized as "small", "medium" and "large" based on the number of their employees. Differences among the categories of SMEs based on the effect of energy insecurity are identified from the study. The study reveals that electricity insecurity is a reality among SMEs in Nigeria as they experience outages on daily basis on the average, with duration of 11.6 hours. Large Enterprises experience more outages of 44.2 times in a month. On the average, SMEs record loss of 15.6% of their annual sales to electricity outages and generate 56% of electricity from generator. Large and small firms generate as much as 64.8% and 59.2% electricity from generator, respectively. Also, the findings show that SMEs spend an average of N766, 801.5 naira (USD 2,126.93 at USD360.52 exchanges) on electricity annually, and indicate electricity insecurity as major obstacle to their operations. Thus, government should address electricity issues in the country as a state of emergency with priority given to not only the households but also the SME sector.

Keywords: Energy insecurity; Electricity; SMEs; Enterprise survey

JEL Classification: L32

1. Introduction

Global demand for energy is rapidly increasing with population and economic growth. Many countries are making impressive progress in meeting the increasing energy demand by increasing energy supply. Amidst this impressive development in energy supply, there exist disparities among the regions and countries of the world. A study by IEA in 2014 showed that energy supply in sub-Saharan Africa continues to fall short of demand. Energy demand rose by 45 percent from 2000 to 2012, and more than 620 million people do not have access to electricity, while 730 million rely on unclean energy (solid biomass) for cooking.

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In Nigeria (the largest economy in the sub-Saharan region), the condition seems more critical. Poor electricity generation has remained a burden in Nigeria, and has inhibited the drive towards industrialization, technological advancement and development of micro and macro businesses (Ohiare, 2015). Less than 40 percent of Nigerians have access to electricity, with only 30 percent of their demands being met (Mushelia, 2004). The gap between demand and supply of power is as a result of poor and obsolete infrastructure, and poor managerial capabilities, among others. Gas flaring and disruptions in gas supply coupled with recurrent attacks on gas pipelines by militants in the Niger-Delta region, have further worsened power generation in the country. Power generation capacity fluctuates between 3500MW and 4400MW with per capita electricity usage about 144 kWh; among the least in the sub-Saharan Africa[1].

Significantly, Nigeria is a large market for business penetration given its population size – the largest in the sub-Saharan region. It is home to many multinationals, micro and macro enterprises that leverage on its natural resources and market size for growth in business. However, many businesses have experienced retarded growth and complete shutdown of business with the major factor attributed to inadequate electricity supply and high operation costs. Recurrent power outages have forced about 90 percent of the industrial and commercial sectors to indulge in self-generation of electricity, contributing to high operation costs (Adenikinju, 2005).

Self-power generation by industries and commercial entities exert costs of about four times more than what they would have to pay the national grid, as revealed in the literature. A survey study released by the Manufacturing Association of Nigeria revealed that expenditure on self-generated energy in the manufacturing sector increased by about 122% from $162.2 million (N58.82 billion) in 2015 to $359.5 million (N129.95 billion) in 2016 (MAN, 2014). Many small scale businesses with potentials for employment generation and wealth creation in the country have failed as a result of deficiency in electricity supply and high costs. Many have experienced ineffectiveness in terms of competitiveness, and many operate below capacity.

Hence, there is a need to empirically determine the impact of electricity energy insecurity on the performance of the SME sub-sector in the country. This study therefore empirically examines energy insecurity and the performance of SME sector in Nigeria. Specifically, it evaluates the level of electricity outages and electricity generation by the SMEs; the level of losses and costs incurred by the SMEs as a result of electricity outages. The study is divided into five sections namely: introduction, literature review, methodology, results and discussion, and conclusion and recommendation.

[1] Kenya (167kWh), Cameroon (281kWh), Angola (312kWh), Ghana (355kWh), Mozambique (463 kWh), Morocco (901 kWh), Gabon (1175 kWh), Botswana (1749 kWh), Libya (1857 kWh); all these have per capita electricity consumption higher than Nigeria (IEA Statistics, 2014)

2. Literature Review

2.1. Energy Security

The concept of energy security has been viewed by different authors and scholars in different ways. Some have viewed it from the dimension of supply security and availability, while some have included vulnerability, threat and risk in their definition of the concept of energy security. Three categories of authors have been identified with a common focus in their definitions of energy security (Azzuni and Breyer, 2018). The first category of authors defines energy security as the continuity of energy commodity supplies (Scheepers et al. 2007; Lieb-Dóczy, Börner, and MacKerron 2003; Ölz, Sims, and Kirchner 2007; Wright 2005; Hoogeveen and Perlot 2007).

The second category of authors introduced subjective impact measure to their definitions of energy security to differentiate between secure and insecure levels of continuity (DECC, 2009; McCarthy et al., 2007; Taiwan, 2000). The most famous of these definitions was given by the International Energy Agency (2001) "…in terms of the physical availability of supplies to satisfy demand at a given price". The concept behind this definition seems to imply that apart from supply interruptions, security is only impaired if the scarcity of energy leads to prices above a certain threshold, while the price volatility below that threshold is not relevant (Mabro, 2008). The use of subjective severity filters makes the concept of security very imprecise and difficult to measure. Continuity and price levels that are considered as insecure by one country could be completely sufficient for another country (Paul et al., 2018; Spanjer 2007; Rutherford *et al.*, 2007).

A third group of authors extend the scope of the impact measure. Instead of measuring the continuity of prices and quantities on the commodity market, they extend the impact measure to the price and continuity of services; the impacts on the economy and in some cases, the environment (Winzer, 2011; Kruyt et al., 2009; Verrastro and Ladislaw, 2007). An extension of the concept to the continuity of services can be found in the definition of Noel and Findlater (2010): "security of gas supply (or gas supply security) refers to the ability of a country's energy supply system to meet final contracted energy demand in the event of a gas supply disruption" (Noel and Findlater 2010). The standard definition for the extension of the impact measure to the economy is the one given by Bohi, Toman, and Walls (1996). They defined energy insecurity as "the loss of welfare that may occur as a result of a change in the price or availability of energy" (Bohi *et al.* 1996).

This study defines energy security as the ability of an economy to guarantee the availability of energy resource supply in a sustainable and timely manner with the energy price being at a level that will not adversely affect the economic performance

of the economy. This implies that energy insecurity occurs when an economy cannot guarantee the availability of energy resource supply in sustainable and timely manner, and cannot regulate the price to an affordable level to end users (firms and households).

2.2. The nature of SMEs in Nigeria

Nigeria is a developing country in sub-Saharan Africa where SMEs account for 60 to 70 percent in terms of employment according to Allen (2001). Chima (2014) stated that these SMEs currently represent about 90 percent of the industrial sector in terms of number of enterprises. A study conducted by the International Finance Corporation (IFC) in 2006, estimated that 96 per cent of all businesses in Nigeria are SMEs compared to 53 percent in USA, 65 percent in the EU (European Union) with SMEs in both places accounting for over 50 percent of their respective country's Gross Domestic Product (GDP) (IFC, 2006). SMEs can be considered as the driving force for the Nigerian economy as they assist in promoting the growth of the country's economy (Iddris, 2012); hence, all the levels of government at different times have policies that promote the growth and sustenance of SMEs.

In Nigeria, SMEs are instrumental in job and wealth creation. The future of the economy relies heavily on ensuring that SMEs improve their competitiveness by their performances. SMEs also play a vital role in enhancing the economic development of Nigeria, having contributed greatly by the provision of employment opportunities, marketing of goods and services, supplying the needs of larger industries and in terms of growth and development of the rural areas. They have also brought about the growth of indigenous entrepreneurship in Nigeria and increased local participation (Chima, 2014).

2.3. Energy Insecurity and the Performance of SMEs Nexus

A study conducted by Scott *et al*. (2014) reveals a relationship between electricity outages and the performance of SMEs in low and medium income countries. The study establishes a positive correlation between electricity outages and costs of SMEs business operations. Electricity outages exert more cost on the SMEs in the form of high cost of alternative power generation, loss of output, damage of equipments. Also, electricity outages lead to high product cost and reduce labor productivity of the SMEs (Doe and Asamoah, 2014; Tarun *et al*., 2013; Cecelsi, 2004). Auru and Okoro (2011) found that about 820 manufacturing SMEs shut down operation between 2000 and 2008 as a result of energy insecurity and high cost of alternative energy generation.

Electricity insecurity seems to have more effect on the growth of medium and large-scale business enterprises than small ones, and influences choice of location for investments by SMEs (Adenikinju, 2005). A study on firms operating under electricity constraint in developing countries by Alby *et al.,* (2011) found that

countries with high frequency of power outages have less concentration of small firms in sectors with high energy requirement. This is because only large firms have the capacity to absorb the high cost self-generation of electricity to reduce the effects of outages (Alby *et al.*, 2011). Evidence from India implies that in countries with high levels of electricity insecurity, firms find it unattractive and unprofitable to expand or move industries with enhanced productivity, as this will mean more reliance on electricity with its associated high cost (Abeberese, 2012).

Frederick and Asamoah (2014) did a study on how the performances of 70 SMEs within Accra Ghana have been affected by unreliable power supply using historical data over a period of time. They found that SME business performances were directly linked to power instability situation in Accra. Another study by Paul et al. (2018) on factors affecting the investment climate, SMEs productivity and entrepreneurship in Nigeria, revealed that SMEs contributed significantly to economic growth in Nigeria. However, among the factors affecting investment climate and SMEs productivity include poor power availability, as access to electricity ranked second in position (27.2%) behind finance as obstacles to business development in Nigeria.

Ado and Josiah (2015) examined the impact of deficient electric power supply on the operations of small scale businesses operating in North-East Nigeria. They discovered the severity of electricity supply outages and the costs associated with it, including self-generation costs, on the operation of this class of businesses in the region. Hence, the need for policy attention towards revamping electricity in Nigeria becomes critical in enhancing the performance of the SMEs sector to realize its potential in contributing to economic development of the country.

3. Methodology

3.1. Research Design

The research design adopted by this study is a descriptive survey approach (Muhammad et al., 2017; Ohiare, 2015; Adenikinju, 2005). Descriptive study involves accurate portrayal of events, persons, or situations. It is aimed at collecting data and describing them in a systematic manner, the characteristics, features and facts about a given population. In this method, the problem is structured based on the previous research problem and may involve multiple variables (Borg and Gall 1989).

3.2. Population and Sample Size

The SMEs sector in Nigeria serves as the population size for the study. However, for availability of data and simplicity, this study focuses on 2676 SMEs in manufacturing industry and service sector which constitute the sample size for the study. The manufacturing industry covers SMEs in the following businesses: food & beverage, garments, fabricated metal products, non-metallic mineral products, furniture, publishing, and other manufacturing. The service sector covers SMEs in retail, wholesale, transport, hotels & restaurants, repair of motor vehicles, and other services (World Bank, 2015). The criteria for classification of business unit as SMEs was based on the definition of SMEs by the Central Bank of Nigeria as firms with capital (aside land) between N5 million to N500 million and with a labour force of 1 to 300 workers (CBN, 2010).

3.3. Sources of Data

The study made use of secondary data from the Nigeria Enterprise Survey, 2014, conducted by the World Bank. The survey covers a total of 2676 SMEs in the country. The survey sample was selected using stratified random sampling (World Bank, 2015). Three levels of stratification were used in the survey: industry, region and size.

i. Industry stratification: For panel firms, the universe was stratified into manufacturing industries and two service sectors (retail and other services). For fresh firms, the universe was stratified into seven manufacturing industries and six service sectors.

ii. Regional stratification: SMEs in 19 states were captured: Abia, Abuja, Anambra, Cross River, Enugu, Gombe, Jigawa, Kaduna, Kano, Katsina, Kebbi, Kwara, Lagos, Nasarawa, Niger, Ogun, Oyo, Sokoto, Zamfara.

iii. Size stratification: Small (1 to 19 employees), medium (20 to 99 employees), and large (more than 99 employees).

Wide ranges of relevant questions which revealed the condition of the business establishment for the study were covered in the survey. The questions covered area such as: ownership of establishment, years in operation, number of employees, energy (electricity) access, usage, and generation, frequency of electricity outages, and losses and costs from electricity outages, among others.

3.4. Method of Data Analysis

Descriptive statistics, simple percentages, tabulation, charts, and graphs were majorly employed as analytical tools for the study (Forkuoh and Li, 2015). Data were analyzed using STATA 14.0 statistical software.

4. Result and Discussion

A total of 2676 SMEs were surveyed through the World Bank Enterprise Survey in Nigeria, 2014. The SMEs were further categorized into three groups as small, medium and large. The categorization was based on number of employees (see Table I). A total number of 1711 (64%) small, 740 (28%) medium, and 225 (8%) large SMEs were surveyed. This outcome revealed the dominance of small SMEs in the Nigerian SME sector. This may be as a result of the high cost involved in establishing and running medium or large SMEs, the risk level associated, and the managerial and technical requirements which serve as hindrance to the business community.

Table 1. Categorization of SMEs in Nigeria Based on Size

Category of SMEs	Number of Participation	Percentage (%)
Small (1-19)	1711	64
Medium (20-99)	740	28
Large (100 and above)	225	8
Total	2676	100

Source: Author's Analysis using data from World Bank Enterprise Survey 2014

4.1. Level of Electricity Energy Insecurity Experienced by SMEs in Nigeria

The results in Tables II, III and IV explain of the level of electricity energy insecurity experienced by the SMEs sector in Nigeria. Table II shows the number of SMEs in aggregate that have experienced electrical outage during the previous fiscal year. A total of 2027 (76.4%) of the SMEs experience electrical outage in the previous fiscal year while 597 (22.5%) have not, the remaining 28 (1.06%) indicated no ideas to the question. The result reveals that most SMEs in the country experience electrical outage which shows the level of non-reliability of power supply in the country.

Table II. SMEs (aggregated) that Experienced Electrical Outages

Did your firm experience electrical outage during the previous fiscal year?		
Total SMEs	Frequency	Percentage (%)
Yes	2027	76.4
No	597	22.5
No Idea	28	1.06
TOTAL	2652	100

Source: Author's Analysis using data from World Bank Enterprise Survey 2014

Table III shows that 76.5 percent of the small enterprises experience electrical outage, while 77.7 and 71.3 percents of the medium and large enterprises experience electrical outages respectively. This implies that small enterprises experience more power outage than medium and large enterprises in Nigeria. This could be attributed

to their relative sizes and capacity for self-generation of more reliable power as backup. The result is in line with the findings of Henry et al., (2016) that small enterprises are most prone to frequent power outages in Nigeria.

Table III. SMEs that Experienced Electrical Outages

Did your firm experience electrical outage during the previous fiscal year?						
	Yes		**No**		**No Idea**	
SMEs	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Small (1-19)	1307	76.5	382	22.3	19	1.1
Medium (20-99)	566	77.7	155	21.3	7	1.0
Large (100+)	154	71.3	60	27.7	2	1.0
Total	**2027**		**597**		**28**	**2652**

Source: Author's Analysis using data from World Bank Enterprise Survey 2014

Table IV shows that 75.7 percent of the total SMEs surveyed in Nigeria experience electrical outages 32.8 times in a month, with about 11.6 hours duration on the average. This implies that on the average, SMEs in the country experience electrical outages which last for a period of 11 hours on daily basis. This reality is a miserable situation considering that most of these SMEs depend on electrical energy for operation. The aggregate result does not reveal the disparities among the various categories of SMEs in the country. The situation appears worse among large and medium enterprises. Large enterprises experience electrical outages up to 44.2 times in a month with duration of 11.4 hours, while medium enterprises experience electrical outages of 39.5 times in a month with 14.7 hours duration. Small enterprises have the least number of electrical outages and duration in a month.

Table IV. Electrical Outages Experienced by SMEs in a typical month

SMEs	**Frequency**	**Percentage**	**No. of Outages**	**Duration of Outage**
SMEs in Aggregate	***2027***	***75.7***	***32.8***	***11.6***
Small (1-19)	1307	64	31.1	10.9
Medium (20-99)	566	28	39.5	14.7
Large (100+)	154	8	44.2	11.4
Total	**2027**			

Source: Author's Analysis using data from World Bank Enterprise Survey 2014

From the results so far, it can inferred that the SMEs in Nigeria experience high rate of energy insecurity. This is evident in the high percentage of SMEs that witness electrical outages within the previous fiscal year, number of outages experienced in a month and the duration of the electrical outages on the average. The result is disturbing at all instance compared to that of the sub-Saharan Africa (SSA). SMEs

in the SSA recorded power outages of about 9 times in a month with average of about 6 hours. Small, medium and large SMEs in SSA experience monthly power outages of about 8, 9 and 9 times respectively with durations of 6, 6 and 5 hours respectively (World Bank, 2015).

4.3. Cost of Electricity Energy Insecurity to the SMEs

Average losses (% of annual sales) of typical electrical outage of SMEs in Nigeria are shown in Table V. The result shows that only 1930 (73%) SMEs responded to the question related to losses as a result of electrical outage in the survey. Despite this shortfall, the percentage of SMEs that responded to this particular survey question is high enough to be used as basis for drawing conclusion on the outcome of the result. On the aggregate, average loss recorded by SMEs in the country is 15.6 percent of their annual sales. This result is in sharp contrast with that of the Sub-Saharan Africa (8.3%) (World Bank, 2014). The losses incurred by the SMEs in Nigeria range from destruction of raw materials, loss of output, restart cost, to damage of equipment (Adenikinju, 2003).

Large enterprises in the country experience the highest percentage loss (23.8%) as a result of electrical outage with small and medium enterprises recording 16.3 and 11.9 percent respectively. From the survey, it is observed that the monetary value of the losses by the SMEs in Nigeria amount to over five hundred thousand naira (N500, 000.00) on the average as percentage of their annual sales. Large firms report the highest monetary value of losses of over one million naira (N1, 000,000.00) as a percentage of their annual sales. The survey further reveals that SMEs spend a total of N766, 801.5 naira (USD 2,126.93 at USD360.52 exchange rate) on the average as annual cost of electricity in their business operation (World Bank, 2014). The result is an indication that unavailable, unreliable and inconsistent supply of electrical power in Nigeria constitutes avoidable costs to the SMEs sector in the country. These costs could have been avoided if the development of the energy sector has been a priority of the government. These costs, coupled with the unfavourable business condition in Nigeria signify that sustainability and continuation of SME businesses face serious threat as highlighted by Igwe et al., (2018).

Table V. Average Losses of Typical Electrical Outage to SMEs in Nigeria (% of annual sales)

SMEs	Frequency	Percentage	% of Losses	Mean ($\bar{X}$)
SMEs in Aggregate	***1930***	***73***	***15.6***	
Small (1-19)	1241	73	16.3	16.0 (21.9)
Medium (20-99)	543	73	11.9	
Large (100+)	146	57	23.8	
Total	**1930**			

Source: Author's Analysis using data from World Bank Enterprise Survey 2014
Note: Value in bracket = Standard Deviation (SD)

4.4. Level of Electricity Generation by SMEs in Nigeria

Ownership/share of a generator by SMEs in Nigeria for electricity generation is shown in Tables VI and VII. The results reveal the rate of self-generation of electricity power by the SMEs in Nigeria. Table VI shows that 78.2 percent of total SMEs in the country own or share a generator in their business outlets over the last fiscal year, while 21.3 percent do not, and the remaining 0.5 percent indicated no idea. This figure is an indication of the level of uncertainty and unreliability of electrical power supply in the country. Hence, SMEs resolved to self-generation of electricity through the use of a generator as a backup.

Table VI. Ownership/Share of Generator over the last Fiscal Year by SMEs in Nigeria

Did this firm own or share a generator over the last fiscal year?		
Total SMEs	Frequency	Percentage (%)
Yes	2074	78.2
No	565	21.3
No Idea	13	0.5
TOTAL	**2652**	**100**

Source: Author's Analysis using data from World Bank Enterprise Survey 2014

The result in Table VII reveals that medium and large enterprises in the country record the largest percentage of SMEs that own or share a power generator for the supply of electricity. From the result we can infer that most SMEs in Nigeria depend on self-generation of electricity as backup, and power generator is widely used other than any alternative energy supply. This indeed poses additional costs to the SMEs in Nigeria, as revealed above, which affect their performances. Many SMEs have either close shops or relocated to another country in Nigeria as a result of these accumulated operation costs caused by energy insecurity in the country (Adenikinju, 2003). This result is in agreement with the findings of George and Oseni (2012) that SMEs are faced with electrical power self-generation in the country which constitute to more costs to them.

Table VII. Ownership/Share of Generator over the last Fiscal Year by SMEs in Nigeria

Did your firm own or share generator over the course of fiscal year?						
	Yes		**No**		**No Idea**	
SMEs	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Small (1-19)	1274	74.5	424	24.8	10	0.7
Medium (20-99)	618	84.8	107	14.6	3	0.6
Large (100+)	182	84.3	34	15.7	0	0.0
Total	**2074**		**565**		**13**	

Source: Author's Analysis using data from World Bank Enterprise Survey 2014

On the aggregate, average electricity generated by the SMEs in the country through a power generator stands at 56 percent, as shown in Table VIII. This gives a picture of the level at which electrical energy is unstable and unreliable; hence, the SMEs rely on alternative source of electricity – majorly electrical power generator – for their business operation. This finding is in agreement with the findings of Yekeen and Gideon (2016) in their study on energy poverty and its spatial differences in Nigeria, that there is energy instability which leads to high energy poverty in the country. The result is more disturbing when the SMEs are disaggregated on categorical basis. Large enterprises have the highest percentage (64.8%) of average electricity generation through a generator for their business operations followed by small firms (59.2%). Medium firms have the least percentage (56.1%). This shows that self-generation of electrical power is critical in the operation of SMEs in Nigeria. Since most of the SMEs depend on electrical power to carry out most of their activities, they are left with no option than self-generation. It has been argued by many authors that it costs much to generate electricity by self than the public energy supply. Just as much as this argument many be valid, SMEs in Nigeria consider it as the only option which in turn exerts more costs on them (Nigerian Economic Summit Group, 2017). The survey further shows that most SMEs indicated electricity as a major obstacle to business operation in Nigeria.

Table VIII. Average Electricity from a Generator used by SMEs in Nigeria (%)

SMEs	Frequency	Percentage	Average Electricity from Generator (%)	Mean ($\bar{X}$)
SMEs in Aggregate	***2074***	***77.5***	***56***	***56.3 (28.7)***
Small (1-19)	1274	74.4	59.2	
Medium (20-99)	543	73.4	56.1	
Large (100+)	182	80.1	64.8	
Total	**1930**			

Source: Author's Analysis using data from World Bank Enterprise Survey 2014

5. Conclusion and Recommendation

This study is an empirical investigation on how energy (electricity) insecurity affects the performance of SMEs in Nigeria. No doubt, huge investment has been made to improve electrical energy generation and supply by the government; to meet the demand in the country; however, the outcome seems disappointing. It is quite clear that whatever investments and policies the government of Nigeria has made towards resolving the electricity challenges are far from appropriate by reason of the findings from the study.

The following conclusion can be drawn from the result of the study:

i. Electricity insecurity is a reality among SMEs in Nigeria.

ii. Electricity outage is a daily occurrence among the SMEs in their daily operations, and such daily outage lasts for long hour durations.

iii. Electricity insecurity exerts much cost on SMEs in Nigeria as they rely on generator for electrical power source for their business operations.

iv. Electricity insecurity is a major constraint to the performance of SMEs in Nigeria.

Based on the conclusion made from the findings of the study, we recommend that:

i. Government should design regulatory policies for generation and distribution of electricity targeting not only the households (final consumers), but also the SMEs sector and investors as priority. This is essential considering that the devastating effect of energy insecurity on the business sector has a negative trickle down effects on the household.

ii. There should be deliberate, detailed and pragmatic commitment on the part of government in addressing the electricity issue as a state of emergency in the country.

iii. The private owners of power generation and distribution companies should be encouraged to invest in new technologies to improve generation efficiencies. Institutions should also be put in place to see to power transmission expansion and improved efficiency in power distribution to SMEs sector.

iv. Government should find a way to ensure peace in the Niger Delta (the hub of crude exploration and gas production) to minimize or eradicate pipeline vandalism that usually disrupts supplies to gas power plants.

v. Government should build institutions around the power sector that are robust enough to self-check corruption across its agencies and the private investors to reduce the level of wastes which culminate to low reliable supply, that leads to disruption of business operations and high operation costs.

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The Dynamics of Education and Stokvels in South Africa

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Abstract: The study investigated the dynamics of education and Stokvels in South Africa using a quantitative research methodology (descriptive statistics and correlation analysis) with data collected from the Gauteng province using questionnaires. Few authors have written on the subject matter and the author wanted to add her voice on the dynamics of education and Stokvels especially in the case of South Africa. The few related literature focuses on the role that stokvels plays on alleviating poverty and providing small credit to people who are excluded by formal financial institutions. The available literature on the relationship between stokvels, poverty and financial inclusion is still scattered, scant, inconclusive and signalling mixed results. To the best of the author's knowledge, no study exist that has exclusively investigated the dynamics of education and stokvels in South Africa. The study found out that stokvels in the Gauteng province of South Africa were instrumental in the provision of not only education related small credit but also credit for groceries, transport, bridging loans, paying debts and guarantees. In line with literature, the correlation matrix shows a significant positive correlation between (1) education credit and groceries credit, (2) education credit and school uniform credit and (3) education credit and transport credit. The study therefore urges South African authorities to put in place policies that promotes the growth and safeguards the interests of stokvels as they are an important stimulant in the economy. Stokvels achieve this through their ability to improve financial inclusion by promoting savings and provision of small credit to people shunned by formal financial institutions.

Keywords: Education; Stokvels; South Africa

JEL Classification: H75

1. Introduction and Background of the Study

South African Savings Institute (SASI) and FinMark Trust (2007) quote that 67% of the target population are currently not saving. Of the 33% that are saving, only 5% are saving towards retirement. Given South Africa's poor savings culture, and propensity for high consumption, it is imperative that the population starts to engage in behaviour that supports a high savings culture. A savings culture is influenced by

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various factors that drive the ability and willingness of people to save, as illustrated in Figure 1 below.

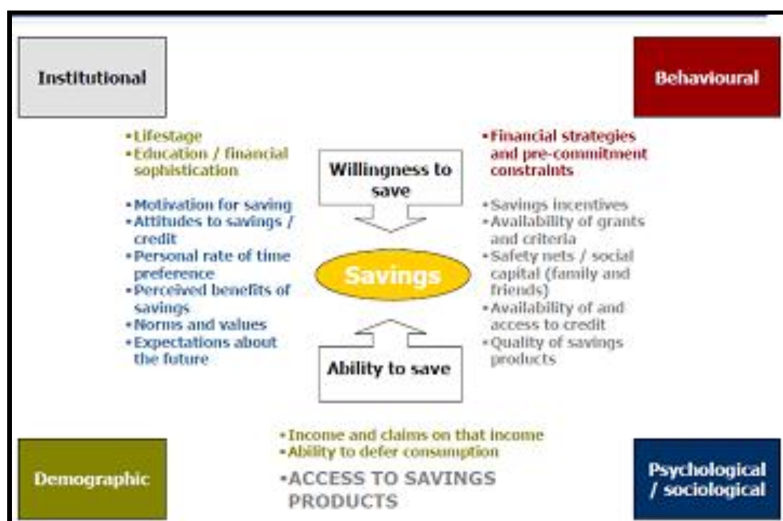

Figure 1. Factors that Impact on the Willingness of People to Save

Source. SASI and FinMark Trust 2007, January 23

Consistent with the South African Savings Institute (SASI) and FinMark Trust (2007), behavioural factors entail personal circumstances which can either promote or dissuade savings, psychological and sociological factors address attitudes and personal preferences, institutional factors revolve around incentives to save, products and available financial support whilst demographic factors include education, income levels and life stage.

Even according to Grobler (2015), education was identified as one of the reasons why households were able to save. In other words, the more the household is educated, the more the household is able to save money in order to cater for uncertainty in the future.

Table 1. Drivers of Household Savings

Ability to save	Willingness to save
Levels of income	Levels of uncertainty
Country demographics	Access to credit
Employment levels	Trust/mistrust
Education	Retirement policies (access)
Financial literacy	
Stability of income	
Levels of debts	

Source: (Grobler, 2015)

Contrary to the literature, in South Africa, being educated does not mean that you are employed and you are able to save money to cater for a future rainy day or for future educational needs of your family (see Statistics South Africa 2017/2018 report). It is against this background that even the majority of the educated young population in South Africa remains excluded in formal financial markets which offer financial products such as credit, savings, insurance and death benefits, among others. This is the reason why Stokvels in South Africa have been gaining momentum and becoming very by each passing day because they fill such a gap (Matuku & Kaseke, 2014). A Stokvel is a South African term for an investment group where members contribute a certain amount to a central fund, weekly, fortnightly or monthly also known as financial mutual (Bozzoli, 1991; Lukhele, 1990; Verhoef, 2001; Mashigo & Schoeman, 2010; Matuku & Kaseke, 2014; Karlan et al. 2014; James, 2015). Worldwide, stokvels are commonly known as "rotating savings and credit associations" (ROSCAs) (Matuku & Kaseke, 2014; Kalan et al., 2014; Mphahlele, 2011).

Since Stokvels attempt to fill the gap created by formal financial institutions such as commercial banks by providing saving and credit, the objective of this study was to investigate the investigate the dynamics of Stokvels in relation to education in South Africa. This study is important for South Africa according to (Arendse, 2011) as many learners are denied the right to basic education because of the levying of school fees and other educational charges, in spite of the international obligation imposed on government to provide free primary education. The results of the paper can help South African educational authorities to develop and implement education access policies by the majority that ensures that the country moves towards an irreversible path to prosperity. The study will also force the government of South Africa to find ways to ensure the poor people not only gets education but becomes part of the mainstream economy despite their status in the country.

The rest of the study is structured as follows: Section 2 is literature review, Section 3 is methodology, Section 4 is results discussion and interpretation whilst Section 5 summarizes the study.

2. Relationship between Education and Stokvels - Literature Review

Wilson (1996) noted that majority of the people survive below the minimum poverty level thus exposing them to minor shocks which have detrimental effects on them (Johnson & Rogaly, 1997). One of the detrimental effects is that they will not be able to get out of the poverty zone unless and until they get education, access to financial markets, among others (consistent with Tsaurai, 2018). It is against this background that Stokvels in South Africa have sprouted out in order to address these conditions

that Tsaurai (2018, p. 244) pointed out which must be available before poverty can be reduced especially amongst the poorest of the poor.

Stokvels are community-based savings schemes aimed at improving the lives of poor household's and alleviating poverty and unemployment (Floro & Seguino, 2002, p. 1). Moreover, literature shows that South Africa has a very low saving rate, of which stokvels' savings money can easily be learnt to the participating members who are unemployed and poor in times of need in order to reverse their unfortunate circumstances (Moyagabo, 2015). Helms (2006) opined that even though poor and unemployed households are willing to save, they are confronted by multiple demands on their low incomes and lack of access to banking services such as credit. Stokvels are growing in popularity as a savings vehicle albeit official statistics indicating that South Africa has a very low saving rate (Moyagabo, 2015).

Poor and unemployed households often use precautionary savings for stokvels, which are made to safeguard against any possible future unexpected income shocks, often referred to as "rainy day" or "emergency" saving (Floro & Seguino, 2001, p. 1). A study by Buijs (2002) found out that most women participated in stokvels because they were poor, uneducated and unemployed. In line with this argument, the people who are employed but earn lower income supplement it by being in stokvels (Mboweni, 1990).

The most important aspect is that women are increasingly relying on stokvels to fulfil their responsibilities towards their children in schools, including the payment of school fees, buying school uniforms and to contribute to any direct educational costs which ordinarily they will be unable to afford (Arendse, 2011; Buijs, 2002). Due to credit constraints facing them in formal financial markets, many poor women consequently pull their children out of schools or ask their children to cut down studying time to do part time menial jobs especially when they face adverse shocks (Kurosaki, 2002). In line with Maldonado et al (2002), credit would be a tool to guarantee investment in education under perfect financial markets, therefore, access to financial services allows women to smooth their consumption in order to improve their decisions about children's education. Women facing adverse shocks and having insufficient access to credit may not afford to take their children to school and prefer children to work in order to smooth household consumption (Jacoby & Skoufias, 1997; Kurosaki, 2002). When women are able to borrow adequately, they may not need their children to work, so children may stay at school longer and the dropout rate is then lower. Moreover, loans to the poor often attract higher interest rate and short-term repayment conditions thus shutting them completely out of the formal financial markets for the purposes of acquiring education loans for their children.

A large number of members of stokvels (normally poor people) find it difficult to approach banks and financial institutions to get education loans for their children because they do not have the required collateral security (Kurosaki, 2002).

Low financial literacy is correlated with poor savings and the majority of individuals who are financially illiterate are unable to save (Lusardi & Mitchell, 2007, p. 240). There is still a lot of misunderstanding with regards to the relationship between poverty, unemployment, education and the role financial institutions. Other literature says that the role of financial institutions is to go to poor communities and give them financial literacy education to understand more about banking sector products as a way of alleviating poverty. On the other hand, it is actually education that is a strong predictor for wealth since it improves individual's money management behaviour, spending habits, use of financial services and ultimately may motivate individuals to save. The possibility of a chicken and egg scenario makes this topic quite intriguing hence the major reason why the author investigated the dynamics of education and Stokvels in South Africa.

As to the dynamics of borrowing for education and other purposes from the stokvel by members, both own funds and non-current assets for collateral security are relatively a consideration (Schulze, 1997). A member will borrow from a stokvel, where members will analyse their present financial performance. An interest rate and time frame will be made clear to the borrower for repayment. A borrower has to disclose his assets to the stokvel. These assets will be used as guarantee for the loan repayment.

As already alluded to, due to credit constraints, many poor and unemployed people are not able to borrow from formal financial institutions. Consequently, parents are likely to pull their children out of schools or ask their children to cut down studying time to work especially when they face adverse shocks (Kurosaki, 2002). Credit would be a tool to guarantee investment in education under perfect financial markets. Therefore, access to financial services allows poor and unemployed people to smooth their consumption in order to improve their decisions about children's education (Maldonado et al., 2002). Poor and unemployed people facing adverse shocks and having insufficient access to credit may not afford to take their children to school and prefer children to work in order to smooth household consumption (Jacoby & Skoufias, 1997; Kurosaki, 2002). When poor and unemployed people are able to borrow adequately, they may not need their children to work, so children may stay at school longer and the dropout rate is then lower for the credit participants. Moreover, loans to the poor often have higher interest rate and short-term repayment condition, they therefore require high returns to repay interest rate in a short time and this makes the Stokvels a popular vehicle through which a financial market and education can lead to poverty alleviation.

Skinner (2000) opined that illiteracy and lack of educational background in black society creates unemployment, causes difficulty in understanding and completing the necessary financial institutions forms and documents (for example; business plans and statements of utilization of loans) and which in some cases do not even

result in submission of an application form. Given the low levels of formal education in the poor households and unemployment and because many people are functionally illiterate, the terms and conditions of the constitution are written in vernacular and the choice of a written language depends on the location of the stokvel. As a result, people see little reason to go to school. Poor households lack financial knowledge of budgeting due to lack of financial literacy and training. Roberts and Sruwing (2011) observed that poor households in the Gauteng Province need further education in order to encourage the use of saving products such as bank saving and credit accounts, stocks and shares and bonds.

Stokvels contribute to community development by creating employment, funding education, provision of homes and so forth (Vermaak, 2000). Savings in stokvels by poor households and the unemployed cover future expenses, for example: education, buying property, car/furniture and for weddings celebrations (Demirguc-Kunt & Klapper, 2012). According to Robinson (2001), it is also evident that there is a strong demand for small-scale commercial financial services, both credit and savings from poor and unemployed households. The strong demand for financial services by the poor and unemployed households, together with the evidence that access to credit reduces household poverty, provides clear incentives for policy makers to develop a framework for providing financial services to the poor and unemployed households.

3. Research Methodology

The current study used a quantitative research methodology, more specifically it employed a survey research framework in its approach. Primary data collection using questionnaires was mainly directed at the province of Gauteng (Johannesburg and Pretoria cities), where most of the stokvels activities takes place. Six hundred self-administered questionnaires were handed out to the stokvel members in the two cities of Gauteng and this number met Martinez-Mesa et al's (2014) criteria of a good sample size. The response rate was 64.33%, which is good enough to ensure meaningful results, according to Kim et al (2016). Relevant information (credit, education, biographical and other general information) necessary to undertake the study was part of the questionnaire. The self-administered questionnaire followed a 5-point Likert scale whilst the study used the Confirmatory Factor Analysis (CFA) to test the validity of the instrument (questionnaire) used to collect the primary data. The root mean square error of approximation was found to be 0.674, a statistic which validates the questionnaire, in line with Kim et al (2016). Questionnaires were then distributed to the respondents by the researcher with the help of four field workers trained by and reporting to the main researcher. Descriptive statistics and correlation analysis were then employed to understanding the meaning of the responses in order to comprehend the dynamic of education and stokvels in South Africa, which is the major objective of the study.

4. Discussion of the Results and Interpretation

Table 2 below presents a summary of demographic information of the respondents, more specifically the sample of the level of education of the respondents.

Table 2. Summary of Demographic Information

Demographics			
	Frequency	Percent	Valid Percent
Education			
No schooling	65	16.8	17.6
Matric	131	33.9	35.5
National certificate	38	9.8	10.3
Diploma	57	14.8	15.4
Degree	78	20.2	21.1
Total	369	95.6	100.0

Source: Field work (2016)

The results for education showed that most of the respondents (33.9%) had matric education, followed by degree holders (20.2%), then no schooling (16.8%), diploma holders (14.8%) and lastly holders of national certificates of the total sample in that sequence. The results confirm two theoretical views that are there in the literature. (1) uneducated people are the unbanked and financial excluded because they cannot meaningfully participate in formal financial markets (especially securing credit lines) because they are poor and unemployed and do not have the required collateral security. (2) The results that degree holders (20.2%) constitutes the second largest group participating in the stokvels confirms also a theoretical view that says education enhances someone's financial literacy and improves the awareness of someone to save money. The finding confirms Berg and Karlsen's (2012) argument that education results in the empowerment of people and enables them to think clearly and act effectively to achieve self-selected goals and aspirations.Table 3 contains the descriptive statistics on the types of credit offered by the stokvels in the Gauteng province.

Table 3. Descriptive Statistics: Types of Credit Granted by Stokvels

	N	Minimum	Maximum	Mean	Std. Deviation
Groceries	130	1	5	4.22	0.972
Education	108	1	5	4.25	1.128
To pay debts	64	2	5	4.39	0.789
School uniform	61	1	5	4.07	1.328
Transport	59	1	5	4.27	1.112
Guarantees	55	1	5	4.02	1.163
Bridging loans	40	1	5	3.68	1.385
Valid N (listwise)	27				

Source: Fieldwork, 2016

On top of the list is groceries, followed by education, to pay debts, school uniform, transport, guarantees and bridging loans. Education credit is the second most popular stokvel credit type after grocery credit because the poor finds it very difficult to buy food and pay school fees for their children as they are trapped in the vicious cycle of poverty. The finding is consistent with Mboweni (1990) and Floro and Seguino (2001). School uniform credit ranked fourth because the poor believes and knows that the only way to sustainably get out of the poverty cycle is to educate their children, consistent with Tsaurai (2018). Following Aredse (2011), the parents do all whatever they can in order to send their children to school for fear of being imprisoned especially when their children are still in the foundation phase.

Table 4 shows correlation analysis of types of credit, which guided the discussion on stokvels and education funding in South Africa.

Table 4. Correlation Matrix for Types of Credit received from Stokvel

		Education	Groceries	School uniform	Transport	Pay debts	Bridging loans	Guarantees
Education	Pearson Correlation	1	.788**	.995**	.448**	-.151	-.129	.175
	Sig. (2-tailed)		.000	.000	.008	.452	.504	.355
	N	108	45	42	34	27	29	30
Groceries	Pearson Correlation	.788**	1	.767**	.174	-.118	-.329	.092
	Sig. (2-tailed)	.000		.000	.325	.550	.087	.615
	N	45	130	45	34	28	28	32
School uniform	Pearson Correlation	.995**	.767**	1	.486**	-.089	-.117	.184
	Sig. (2-tailed)	.000	.000		.004	.658	.554	.339
	N	42	45	61	34	27	28	29
Transport	Pearson Correlation	.448**	.174	.486**	1	.262	.316	.435*
	Sig. (2-tailed)	.008	.325	.004		.187	.101	.021
	N	34	34	34	59	27	28	28
Pay debts	Pearson Correlation	-.151	-.118	-.089	.262	1	.727**	.603**
	Sig. (2-tailed)	.452	.550	.658	.187		.000	.001
	N	27	28	27	27	64	27	27
Bridging loans	Pearson Correlation	-.129	-.329	-.117	.316	.727**	1	.874**
	Sig. (2-tailed)	.504	.087	.554	.101	.000		.000
	N	29	28	28	28	27	40	28
Guarantees	Pearson Correlation	.175	.092	.184	.435*	.603**	.874**	1
	Sig. (2-tailed)	.355	.615	.339	.021	.001	.000	
	N	30	32	29	28	27	28	55

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

*. Correlation is significant at the 0.05 level (2-tailed).

From Table 4, three variables were found to have had a significant positive correlation with education as a credit type, namely credit for groceries, credit for school uniform and credit for transport. Education credit was found to have been positively correlated with groceries credit from the stokvel. The finding is consistent with literature in the sense that a stokvel member who qualifies for an education credit is more likely to qualify for grocery credit because the lending criteria is the same. It is also possible that the groceries credit offered by the stokvel is mainly

channelled towards feeding school going age group who cannot fend for themselves because they supposed to be in class most of the time. A significant positive correlation between education credit and school uniform credit was also observed, a finding which resonates with literature because education and school uniform are synonymous. As expected, transport and education credit were positively and significantly correlated because parents have to borrow for both paying of children school fees and for transporting the same children to and from school. The finding is consistent with Maldonado et al (2002) whose study states that, when members of stokvel are able to borrow adequately, they may not need their children to work, so children may stay at school longer and the dropout rate is then lower thus increasing the transport needs of the same children to and from school.

Education credit and payment of debts were found to be negatively but non-significantly related, a result that well resonates with literature. In other words, education credit granting cannot be expected to be done at the same time the borrower is repaying the same debt. Repayment is expected to be done after a certain amount of time, hence the two types of credit are negatively correlated.

Bridging loans and education credit were negatively related in a non-significant manner. This is expected in literature because when stokvel members get the education credit, other forms of bridging loans are expected to be scaled down in order to improve the borrower's chances of being able to pay back the education credit. In fact, when stokvel members get education credit using their non-movable assets as collateral security consistent with Schulze (1997), it implies that chances of securing other bridging finance from elsewhere diminishes as they will not have adequate collateral security. As expected, the more the guarantees available at the disposal of a stokvel member, the more the education credit that they are allowed to get in order to send their children to school. Such a theoretical prediction was supported by a positive but non-significant relationship between guarantees and education credit in the current study (see Table 4).

5. Summary of the Paper

The study investigated the dynamics of education and Stokvels in South Africa using a quantitative research methodology (descriptive statistics and correlation analysis) with data collected from the Gauteng province using questionnaires. Few authors have written on the subject matter and the author wanted to add her voice on the dynamics of education and Stokvels especially in the case of South Africa. The few related literature focuses on the role that stokvels plays on alleviating poverty and providing small credit to people who are excluded by formal financial institutions. The available literature on the relationship between stokvels, poverty and financial inclusion is still scattered, scant, inconclusive and signalling mixed results. To the

best of the author's knowledge, no study exist that has exclusively investigated the dynamics of education and stokvels in South Africa. The study found out that stokvels in the Gauteng province of South Africa were instrumental in the provision of not only education related small credit but also credit for groceries, transport, bridging loans, paying debts and guarantees. In line with literature, the correlation matrix shows a significant positive correlation between (1) education credit and groceries credit, (2) education credit and school uniform credit and (3) education credit and transport credit. The study therefore urges South African authorities to put in place policies that promotes the growth and safeguards the interests of stokvels as they are an important stimulant in the economy. Stokvels achieve this through their ability to improve financial inclusion by promoting savings and provision of small credit to people shunned by formal financial institutions.

6. Acknowledgment

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Effect of Corporate Governance on Firm Performance in Nigeria

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Abstract: The study examined the effect of corporate governance on firm performance in Nigeria. The study specifically investigate the extent to which board size affect firm performance; investigate the relationship between board independence and firm performance; ascertain the extent to which ownership structure influence firm performance; examine the relationship between board gender diversity and firm performance for the period of five years which covered 2013 to 2017. Data were sourced from Annual report and statement of financial accounts of the selected companies. Panel Data econometric technique which included least squares dummy variable (LSDV), random effect model and Hausman tests were employed. The model adopted return on asset (ROA) and return on equity (ROE) as the dependent variables while Ownership structure (OWNSTR), Board independence (BIND), Board size (BSIZE) and Board gender diversity (BGD) were used as the explanatory variables to capture corporate governance. The study found that board independence (BIND) has positive effect on return on asset while Ownership structure (OWNSTR), Board size (BSIZE) and Board gender diversity (BGD) on return on asset. The study further revealed that all the explanatory variables that is, Ownership structure (OWNSTR), Board independence (BIND), Board size (BSIZE) and Board gender diversity (BGD) have significant and positive effect on return on equity. The study concluded that corporate governance have significant effect on return on equity and it was recommended that size of the board (membership) should be increased but not exceeding the maximum number specified by the code of corporate governance for banks.

Keyword: Corporate governance; Financial and Non-financial institution; Performance; Nigeria

JEL Classiffication: G30

1. Introduction

Corporate governance is concerned about accountability, boards, disclosure, investor involvement and related issues which suggests that the performance of an entity is to a large extent is determined by the composition of board. Corporate governance is therefore concerned with the creation of a balance between economic and social goals and between individual and communal goals (Udeh, Abiahu & Tambou, 2017).

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To achieve this, there is the need to encourage efficient use of resources, accountability in the use of power and the alignment of the interest of the various stakeholders, such as, individuals, corporations and the society.

The recent financial crisis that hit the globe in the twenty-first century necessitated the move for good corporate governance practices in corporations. Nielson (2000) opines that the common denominator of these monumental failures was poor corporate governance culture. While, Ajagbe (2007) put forward that in poor corporate management, fraud and insider abuse of power by management and board of directors is commonly placed. There is however, a unanimous agreement that the key outcome of poor corporate governance is earnings smoothing. However, poor corporate governance practices invariably result to failure of firms (Enofe & Isiavwe, 2012). Such significant failures have brought to the fore the need for a deeper understanding of the impact of corporate governance on firm performance. The most important aspect to structure the firm appropriately whether it's in Asia, Europe, Africa is to implement the right governance mechanisms in order to help businesses in the process of decision making (Ahmed & Hamdan, 2015).

The study of Ajala, Amuda and Arulogun, (2012); Lubabah and Bawa (2013); Adekunle & Aghedo (2014); Ahmed and Hamdan, (2015); Ilaboya and Obaretin (2015); Abdulazeez, Ndibe and Mercy (2016); Udeh, Abiahu and Tambou (2017) to mention but a few concluded both positive and negative effect of corporate governance on firm performance. This implies that there is inconsistency in empirical study on corporate governance and firm performance which necessitates further study. It is noted that majority of these studies focused on either only financial institutions or non financial institutions. It was also pointed out that the nature of the performance measures used could also be responsible for such inconsistency. It is in this regards, that the present study investigate the effects of corporate governance on firm performance in Nigeria by focusing on both financial institutions and non financial institutions as a means to measure performance with ROA and ROE respectively. The objective of the study is therefore to examine the effects of corporate governance on firm performance in Nigeria while the specific objectives are to: investigate the extent to which board size affect firm performance; investigate the relationship between board independence and firm performance; ascertain the extent to which ownership structure influence firm performance; examine the relationship between board gender diversity and firm performance.

2. Literature Review

The Asian Development Bank defined the corporate governance as the manner in which authority is exercised in the management of a country's social and economic resources for development (Eng & Mak, 2003; Cheng, 2008). Solomon and Solomon

(2004) opined that corporate governance is the basic tool of checks and balances, both within and outside to companies, which ensures that firms discharge their accountability duty to stakeholders and act in a socially responsible manner. Nielsen (2000) reported that corporate governance is the system of rights, structures and control mechanisms recognized internally and externally for the management of a listed public limited liability company, with the aim of protecting the interests of stakeholders. In Nigeria, the governance of a limited liability company is the duty of its board of directors. Dozie (2003) believes that corporate governance is characterized by transparency, accountability, probity and the protection of stakeholders' rights. Conclusively, what is evident from the various definitions reviewed is that corporate governance is the set of structures, processes, cultures and systems through which objectives are determined and companies are directed and controlled.

On the other hand, performance is a multi-dimensional construct which varies depending on whether the measurement objective is to assess performance outcomes or behaviour (Akintonde, 2013). Nnabuife (2009) believed that performance is not only a team work but also as an individual efforts resulting into a specific end result that will be matched with expected reward by managers. Armstrong in Akintonde, (2013) described performance as the outcomes of work because they provide the strongest linkage to the strategic goals of the organization, customer satisfaction, and economic contributions. Performance could be regarded as behavior i.e. the way in which organizations, teams, and individuals get work done. Hornby, Michael, Joanna, Diana, Dilys, Patrick and Victoria (2010) see performance as the act or process of performing a task, an action that involves a lot of effort, or how well or badly you do something or something works.

Many theories have been propounded to explain the relationship between corporate governance and performance in literatures. Some of these theories include agency theory, stakeholder theory, shareholder theory, etc. Agency theory contends that as firms grow in size the shareholders (principals) lose effective control, leaving professional managers (agents), have more information than principals to manage the affairs of the business. Since principals do not have access to all available information at the time a decision is being made by an agent, they are unable to determine whether the agent's actions are in the best interest of the firm (Jensen & Meckling cited in Egbunike & Abiahu, 2017).

The stakeholders' theory helps to fill the observed gap created by omission found in the agency theory which identifies shareholders as the only interest group of a corporate entity. The stakeholder theory provides that the firm is a system of stakeholders operating within the larger system of the host society that provides the necessary legal and market infrastructure for the firm's activities (Aminu, Aisha & Mohammad, 2015). The stakeholders' theory proposes that companies have a social

responsibility that requires them to consider the interest of all parties affected by their actions.

Olayinka, (2010) investigated the impact of board structure on corporate financial performance in Nigeria. The study identified board characteristics as (board composition, board size, board ownership and CEO duality) while financial performance was measured by return on equity (ROE) and return on capital employed (ROCE). The Ordinary Least Squares (OLS) regression was used to estimate the relationship between board structure and financial performance, findings from the study showed that there is strong positive association between board size and corporate financial performance. Evidence also revealed that there is a positive association between outside directors sitting on the board and corporate financial performance. However, a negative association was observed between directors' stockholding and firm financial corporate financial performance. However, a negative association was observed between directors' stockholding and firm financial performance measures. In addition, the study reveals a negative association between ROE and CEO duality, while a strong positive association was observed between ROCE and CEO duality. Ajala, Amuda and Arulogun (2012) examined the effects of corporate governance on the performance of Nigerian banking sector. The Pearson Correlation and the regression analysis were used to find out whether there is a relationship between the corporate governance variables and firms performance. The study revealed that a negative but significant relationship exists between board size and the financial performance of these banks while a positive and significant relationship was also observed between directors' equity interest, level of corporate governance disclosure index and performance of the sampled banks.

Lubabah and Bawa (2013) examined corporate governance and financial performance of banks on twelve banks in Nigeria covering a period of five years (2006-2010), employing regression analysis, the study found negative relationship between board size and profitability of banks. Fanta, Kemal and Waka (2013) examined Ethiopian banks between 2005 and 2011 using multivariate regression analysis and classical linear regression model, the study found an inverse relationship between capital adequacy ratio, bank size; audit committee in the board and bank performance. However positive linkage was established between banks' size, capital adequacy ratio; board size and bank's profitability. On the other hand they observed that the existence of audit committee members in the board, ownership type, loan loss position and loan to deposit ratio have no significant influence on bank performance.

Akingunola, Adekunle and Adedipe (2013) carried out a study on corporate governance and bank's performance in Nigeria (Post–Bank's Consolidation). Binary probit was adopted to test the covariance matrix computed on structured

questionnaire to bank's clients and it was discovered that the variables such as independence, reliance, and fairness helps in the effective performance of banks but the major significant ones in this consolidation period are accountability and transparency of banks staff. Least square regression was adopted to convey the relationship between bank deposits and bank credit. The estimation of the developed model found that banks total credit was positively related but not significantly determinant factors of bank's performance, and bank deposit was found to be positively related to bank performance. George and Karibo (2014) investigated the effect of corporate governance mechanisms and financial performance of listed firms in Nigeria: A Content Analysis, a total of 33 firms were selected cutting across three sectors: Manufacturing, Financial and Oil & Gas. The study showed that most of the corporate governance items were disclosed by the case study firms. The result also showed that the banking sector has the highest level of corporate governance disclosure compared to the other two sectors. The result thus indicates that the nature of control over the sector have an impact on companies' decision to disclose online information about their corporate governance in Nigeria; and that there were no significant differences among firms with low corporate governance quotient and those with higher corporate governance.

Osisioma Egbunike and Adeaga (2015) in Nigeria on influence of corporate governance on deposit money banks' performance between 2006 and 2013, the study proxied firm performance as ROA while financial soundness indicators of corporate governance were capital adequacy ratio, liquidity ratio, loan to deposit ratio, deposit money bank lending rate, nonperforming loan to total credit, and cash reserve ratio. The study employed Panel regression analysis and it was found that there is no statistical significant difference between corporate governance practices among the DMBs based on the perceptions of the shareholders and there is significant relationship between DMBs' performance and corporate governance proxy variables and also the corporate governance proxy variables have impacted both positively and negatively on DMBs' performance in Nigeria. Ahmed and Hamdan (2015) examined the impact of corporate governance characteristics on firm performance in Bahrain Stock Exchange. The study sample contained 42 Out of 48 Bahrain's financial companies which are listed in Bahrain Stock Exchange during the period 2007-2011. The descriptive results indicated that the sample firms fulfill corporate governance variables. The empirical results indicated that performance measures such as return on assets and return on equity are significantly related to corporate governance in Bahrain. However, earning per share performance measure is not showing any significant impact related to corporate governance. Overall, the study found a positive influence of corporate governance mechanisms on performance for the entire firm in Bahrain Stock Exchange.

Abdulazeez, Ndibe and Mercy (2016) reviewed the impact of corporate governance on the financial performance of all listed deposit money banks in Nigeria for a period

of seven (7) years (after consolidation). Data for the study were quantitatively retrieved from the annual reports and accounts of the studied banks. The study concluded that larger board size contributes positively and significantly to the financial performance of deposit money banks in Nigeria.

Udeh, Abiahu and Tambou (2017) evaluated the impact of board composition as a tool of corporate governance on return on capital employed as a tool of firm financial performance in Nigeria Quoted Banks. The method of data analysis utilised was ordinary least squares regression analysis, the study showed that board composition has a negative, though insignificant impacts on ROCE during the 2003 – 2008 period (p1) and during the 2009 – 2014 period (p2). The study concluded that the way in which corporate governance is organised differs among countries, depending on the economic, political and social contexts.

3. Research Method

3.1. Sampling Technique and Model Specification

Multi-stage sampling technique was used for the study. The first stage involved the purposive selection of Nigerian quoted firms on the floor of Nigeria Stock Exchange. The second stage was the random sampling selection of three financial institutions and two non-financial institutions quoted on the floor of Stock Exchange. Hence, the financial institutions included Access bank, Ecobank, and Zenith bank while the non-financial institutions include Coca-cola company and Dangote Flour.

The study adapted the model of Abdulhazeez, Ndibel and Mercy (2016) which investigate corporate governance and financial performance of listed deposit money banks in Nigeria.

The model is stated as $ROA = f\,(BS, BC, CD, AC, FS)$

Where;

ROA = Return on Assets proxy for financial performance; BS = Board Size; BC = Board Composition; CD = CEO duality; AC = Audit committee; FS = Size of the firm

The study modified the model by replacing all the corporate governance indices with the exception of board size. Therefore, with replacement, the corporate governance indices become board size, board independence, ownership structure and board gender diversity. The justification for the new variables included in the model is to give a clearer and better understanding of corporate governance and firm performance against the commonly used variables.

Hence, the model for the study is stated as;

Performance = f (corporate governance)

ROA=f (OWNSTR, BSIZE, BIND, BGD)

ROE=f (OWNSTR, BSIZE, BIND, BGD)

The above functions can be mathematically represented as:

$ROAit = \beta_0 + \beta_1 BSize_t + \beta_2 BIND_t + \beta_3 BGD_t + \beta_4 OWSTR_t + e_t$ ………………. (3.1)

Substitute ROA=ROE into (1) to arrive at;

$ROEit = \beta_0 + \beta_1 BSIZE_t + \beta_2 BIND_t + \beta_3 BGD_t + \beta_4 OWNSTR_t + e_t$ …………..... (3.2)

Where; ROA = Return on assets; ROE = Return on equity; OWNSTR = Ownership structure; BIND = Board independence; BSIZE = Board size; BGD = Board gender diversity

3.2. Sources of Data, Measurement of Variables and *Apriori* Expectation

Data were obtained from secondary source which were collected from the annual financial statement of the selected financial and non-financial institutions (Access bank, Ecobank, Zenith, Coca-cola company and Dangote Flour) from the period 2013 to 2017.

Return on Asset (ROA): Measures the overall efficiency of management and gives an idea as to how efficient management is at using its assets to generate earnings. ROA = Profit after Tax/Total Asset

Return on Equity (ROE): Measures a firm's financial performance by revealing how much profit a company generates with the money shareholders have invested. It shows how well the shareholders' funds are managed and used to generate return. ROE = Profit after Tax/Total Equity.

BDSIZE: Board size is a measure of the number of individuals on the board. It is used as proxy for board characteristics of the number of individuals on the board. It is expected to have a positive effect.

BDIND: This represents board independence and it is measured by number of non-executive directors on the board. It is expected to have a positive effect.

OWSTRU: This represents ownership structure of the firm. The study used three variants of ownership structure namely; foreign ownership, government ownership and institutional ownership. It is expected to have a positive effect.

BGD: This represents board gender diversity. It is the ratio of female director to total number of directors. It is expected to have a positive effect.

3.3. Method of Data Analysis

Panel data regression was employed in the study. The panel data regression test is divided into three namely; pool OLS, fixed effect model, random effect model and Hausman test to justify the best and appropriate model to be adopted.

3.3.1. The Fixed Effect Model

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

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

$$\mathrm{Y}_{\mathrm{it}} = \sum_{j=2}^{k} \beta_j X_{ijt} + \eth\mathrm{t} + \sum_{t=1}^{n} \infty_i A_i + \mathrm{E}_{\mathrm{it}} \qquad \text{------------------(3.3)}$$

3.3.2. Random Effect Model

Random effects regression model is subject to two conditions: the first condition is that it is possible to treat each of the first unobserved Z_p variables as being drawn randomly from a given distribution. This may well be the case if the individual observations constitute a random sample from a given population.

If:

$$\mathrm{Y}_{\mathrm{it}} = \beta_j + \sum_{j=2}^{k} \beta_j X_{ijt} + \eth_{\mathrm{t}} + \infty_i + \mathrm{E}_{\mathrm{it}} \quad = \quad \beta_i + \sum_{j=2}^{k} \beta_j X_{ijt} + \eth_{\mathrm{t}} + \mu_{\mathrm{it}} \qquad \text{----(3.4)}$$

w*here:* $\mu_{it} = \infty_i + E_{it}$

The unobserved effect has been dealt with by subsuming it into the disturbance term.

The second condition is that the Z_p variables are distributed independently of all the X_j variables. If this is not the case, ∞, and here μ, will not be uncorrelated with X_j variables and the random effects estimation will be biased and inconsistent.

4. Result and Analysis

The Pooled Ordinary Least Square (OLS) regression estimation technique was adopted in carrying out the analysis of the study. It would be recalled that there are five (5) firms (cross sections) and there are five (5) variables in each model such as return on asset (ROA), Ownership structure (OWNSTR), Board size (BSIZE), Board

independence (BIND) and Board gender diversity (BGD) for model 1 and return on equity (ROE), Ownership structure (OWNSTR), Board size (BSIZE), Board independence (BIND) and Board gender diversity (BGD) for model 2. Hence, the study analyzed the relationship between return on asset and return on equity (ROA and ROE the dependent variables) and four (4) explanatory variables Ownership structure (OWNSTR), Board size (BSIZE), Board independence (BIND) and Board gender diversity (BGD) for model one and two respectively.

4.1. Pooled OLS Regression Model

In the pooled OLS regression model, the study pulled all the 25 observations and run the regression for the two models, neglecting the cross section and time series nature of data. The result of the pooled OLS regression model is presented in Table 4.1a and 4.1b:

Table 4.1 a & b. Extract from the Pooled OLS Regression Models Result

Model I (Dependent Variable = ROA) Period (2013-2017)					Model II (Dependent Variable = *ROE)* Period (2013-2017)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Variable**	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.560685	1.935760	0.289646	0.7754	*C*	-5.543892	2.521929	-2.198274	0.0405
OWNSTR	0.024204	0.008460	2.861042	0.0097	*OWNSTR*	0.646366	0.294827	2.192355	0.0357
BSIZE	0.660970	0.127140	5.198752	0.0001	*BSIZE*	0.557490	0.311419	1.790159	0.0829
BIND	0.188601	0.011049	17.06972	0.0000	*BIND*	0.511964	0.054110	9.461491	0.0000
BGD	0.046940	0.282459	0.166183	0.8699	*BGD*	0.281743	0.059914	4.702465	0.0000
R-squared			0.889481		*R-squared*			0.798646	
Adjusted R-squared			0.864921		*Adjusted R-squared*			0.773477	
F-statistic			36.21688		*F-statistic*			31.73100	
Durbin-Watson stat			1.422224		*Durbin-Watson stat*			0.648565	
Prob(F-statistic)			0.000000		*Prob(F-statistic)*			0.000000	

Source: Author's Computation from EViews 7

Estimated Pooled OLS Regression Models

$$ROA = 0.560685 + 0.024204 * OWNSTR + 0.660970 * BSIZE + 0.188601 * BIND + 0.046940 * BGD \quad (4.1)$$

$$ROE = -5.543892 + 0.646366 * OWNSTR + 0.557490 * BSIZE + 0.511964 * BIND + 0.281743 * BGD \quad (4.2)$$

The results of the pooled OLS regression models for the two periods are shown in Table 4.1a &b where all the variables, except board gender diversity *BGD,* depict an insignificant result in model 1. It is evident from the estimated pooled regression result of Table 4.1a that all the parameters were positive and significant except BGD variable which has an insignificant positive effect on return on asset. Hence, it can be concluded that OWNSTR, BSIZE and BIND affect ROA significantly by 0.02%, 0.66% and 0.18% while BGD affect ROA insignificantly by 0.04%. Looking at model two presented in the Table 4.1b, all the variables are positively and significantly related to the dependent variable ROE, however *BSIZE* was statistically insignificant at 5% while *OWNSTR, BIND* and *BGD* were significant at 5% level of significant. Hence, it is inferred that OWNSTR, BIND and BGD significantly affect

ROE by 0.64%, 0.51% and 0.28% while BSIZE insignificantly affect ROE by 0.55%.

The R^2 coefficient is (79.8%) in the case of model two in Table 4.1b. On the other hand, the R^2 value of 88.9% is quite high in the model one of Table 4.1a. These values connote the degree of variation of the dependent variable as explained by the explanatory variable. However, the models are statistically significant in its overall looking at the significance of the F-statistics from it probability value. Nonetheless, since we assume that all the five (5) firms are the same, which normally does not happen, hence, we cannot accept this model because all the firms are not the same.

However, the major problem with this model is that it does not distinguish between the various firms that that the study considered. Conversely, by combining 3 banks and 2 non-banks, the study denied heterogeneity or individuality that may exist among the five firms selected for analysis in the study, therefore, it is imperative to carry out the remaining two regression models.

4.1.2. Fixed Effect or LSDV Model

The fixed effect or LSDV model allows for heterogeneity or individuality among the five firms by allowing having its own intercept value. The term fixed effect is due to the fact that although the intercept may differ across firms, but intercept does not vary over time, that is, it is time invariant.

The result of the fixed effect model is presented in Table 4.2a and 4.2b.

Table 4.2. a&b. Extract from the Fixed Effect or LSDV Regression Model Result

Model I (Dependent Variable = ROA) Period (2013-2017)					Model II (Dependent Variable = *ROE)* Period (2013-2017)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.788012	3.552216	0.784865	0.4507	C	0.092743	2.117390	0.043801	0.9655
OWNSTR	-0.165987	0.608874	-0.272612	0.7907	OWNSTR	-7.849018	2.651361	-2.960373	0.0097
BSIZE	2.202749	1.086971	2.026502	0.0702	BSIZE	-0.252995	0.218315	-1.158855	0.2609
BIND	0.020797	0.008732	2.381841	0.0300	BIND	0.916927	0.316466	2.897393	0.0092
BGD	0.183129	0.011468	15.96851	0.0000	BGD	0.017408	0.131621	0.132257	0.8962
R-squared			0.889481		*R-squared*			0.798646	
Adjusted R-squared			0.864921		*Adjusted R-squared*			0.773477	
F-statistic			36.21688		*F-statistic*			31.73100	
Durbin-Watson stat			1.422224		*Durbin-Watson stat*			0.648565	
Prob(F-statistic)			0.000000		*Prob(F-statistic)*			0.000000	

Source: Author's Computation from EViews 7

Estimated Pooled OLS Regression Models (Fixed Effect Model)

$$ROA = 2.788012 - 0.165987 * OWNSTR + 2.202749 * BSIZE + 0.020797 * BIND + 0.183129 * BGD \quad (4.3)$$

$$ROE = 0.092743 - 7.849018 * OWNSTR - 0.252995 * BSIZE + 0.916927 * BIND - 0.017408 * BGD \quad (4.4)$$

Presented in Table 4.2a and Table 4.2b are the fixed effect regression models for the two models under consideration. It can be seen in the estimated models that all the variables depict conflicting coefficients in the two models. In another word, the result of the model one of Table 4.2a connote that OWNSTR has an insignificant negative effect on return on asset which implied that OWNSTR reduced ROA by 0.16%. BSIZE has an insignificant positive effect on ROA which implied that BSIZE insignificantly increased ROA by 2.20%. More so, BIND and BGD have positive and significant effect on ROA, this effect implied that BIND and BGD increased ROA by 0.02% and 0.18% respectively. On the other hand, in the model two of Table 4.2b, OWNSTR and BSIZE have negative effect on ROE which indicated that OWNSTR and BSIZE negatively affected ROE by -7.84% and 0.25% respectively however, OWNSTR appeared to be significant while BSIZE remained insignificant. BIND has a significant positive effect on ROE while BGD has an insignificant positive effect on ROE. However, the result implied that BIND and BDG have an increasing effect on ROE by 0.91% and 0.01% respectively. Therefore, 1% change in the value of each of the variables will either increase or decrease the value of the dependent variables depending on their respective coefficient signs. The R^2 values of 96.3% and 95.6% in both periods are quite high. In its overall, the model in Table 4.2 a&b are statistically significant owing to the statistical significance of its F-statistics. The third model (random effect model) will hence be analysed.

4.1.3. Random Effect Model

The random effect model assumed that all the five (5) firms have a common mean value for the intercept. The result of the random effect model is presented in Table 4.3a and Table 4.3b.

Table 4.3. a&b. Extract from the Random Effect Regression Model Result

Model I (Dependent Variable = ROA) Period (2013-2017)					**Model II (Dependent Variable = *ROE*) Period (2013-2017)**				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Variable**	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.092743	2.117390	0.043801	0.9655	C	0.588313	0.367511	1.600803	0.1192
OWNSTR	-0.047875	0.254780	-0.187906	0.8529	OWNSTR	0.646366	0.185770	3.479381	0.0015
BSIZE	-0.252995	0.218315	-1.158855	0.2609	BSIZE	0.557490	0.196225	2.841075	0.0078
BIND	0.188601	0.011049	17.06972	0.0000	BIND	0.511964	0.034095	15.01588	0.0000
BGD	-0.017408	0.131621	-0.132257	0.8962	BGD	0.281743	0.037752	7.463055	0.0000
R-squared			0.956004		*R-squared*			0.798646	
Adjusted R-squared			0.916640		*Adjusted R-squared*			0.773477	
F-statistic			24.28594		*F-statistic*			31.73100	
Durbin-Watson stat			1.264031		*Durbin-Watson stat*			0.648565	
Prob(F-statistic)			0.000000		*Prob(F-statistic)*			0.000000	

Source: Author's Computation from EViews 7

Estimated Pooled OLS Regression Models (Random Effect Model)

$$ROA = 0.092743 - 0.047875*OWNSTR - 0.259995*BSIZE + 0.188601*BIND - 0.017408*BGD$$

(4.5)

$$ROE = 0.588313 + 0.646366 * OWNSTR - 0.557490 * BSIZE + 0.511964 * BIND + 0.281743 * BGD -$$

(4.6)

The estimated random effect models are presented in equation 4.5 and 4.6. The result showed that the replica of the direction of estimates in the preceding models estimated earlier in the pooled OLS regression as well as the fixed effect regression model where the variables tends to have conflicting direction of effect on the dependent variables in both models. Specifically, the model one of Table 4.3a explored that *OWNSTR* and *BSIZE* have an insignificant negative effect on ROA, as a result *OWNSTR, BSIZE* and *BGD* have reduction effect on ROA with about -0.04%, -0.25% and -0.01% while only *BIND* have a direct and significant effect on ROA with about 0.18% increase. Evidence from the model two of Table 4.3b showed that all the variables i.e. *OWNSTR*, *BSIZE*, *BIND* and *BGD* have direct and significant effect on ROE with 0.64%, 0.55%, 0.51% and 0.28%. This result is directly at variance with what was obtainable in the model one of Table 4.3a. It is however evident that, the R^2 values of 95.6% and 79.8% imply the variation in the dependent variable as explained by the independent variables while the remaining percentage is ascribed to the stochastic error term. The random effect model is statistically significant in its overall owing to the significance of the model's F-statistic value. To ascertaining the appropriateness of either of these estimated models, the study employed the Hausman Test to know which of the models to accept for analytical and policy implication purpose in each of the periods under consideration; this is the model that was analysed in explaining the disparity or not between the two models.

4.1.4. Hausman Test

Having estimated the three models above; the study decided on the best model to accept. To check it, the study employed the Hausman Test to check which model is suitable to accept.

Hausman Test Hypothesis:

H_0: Random effect model is appropriate

H_1: Fixed effect model is appropriate

NB: If the probability value is statistically significant, the study shall use fixed effect mode, otherwise, random effect model.

Table 4.4. Extract from the Hasuman Test Results

	ROA (2013-2017)			ROE (2013-2017)		
Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	2.935429	4	0.5047	52.599465	4	0.5510

Source: Author's Computation from EViews 7

Looking at the Chi-square values of the cross-section random in Table 4.4, the probability values of the chi-square statistics are 0.50% and 0.55% for the model one and two respectively, these values are greater than 5%, this implies that, the study cannot reject the null hypotheses; rather, the study accept the null hypotheses, hence, the random effect model is the appropriate model to accept for analytical *raison d'être*. Nonetheless, looking at the estimated random effect models in both models as shown in Table 4.3, it is evident that all the explanatory variables that is, ownership structure (OWNSTR), board size (BSIZE), board independence (BIND) and board gender diversity (BGD) have significant positive effect on return on equity (firm performance) in the second model while only board independence was significant in the model one, leaving other variables that is, OWNSTR, BSIZE and BGD to be negatively related with return on asset. Hence, OWNSTR, BSIZE and BGD negatively affected ROA by –0.04%, -0.25% and -0.01% and BIND have positive effect on ROA with 0.18%. The second model therefore implied that OWNSTR, BSIZE, BIND and BGD influenced ROE positively by 0.64%, 0.55%, 0.51% and 0.28% respectively. The overall significance of the entire models connotes that the explanatory variables are able to explain the behavior and direction of relationships of the dependent variables as inherent in the estimated models. The econometric criteria of Durbin Watson test of autocorrelation in the study showed that the estimated result is free from the problem of autocorrelation in the model one while the autocorrelation test is inconclusive in the model two.

4.2. Discussion of Finding

In other to establish an empirical significance of the results and analysis in the study, this section briefly illustrate the discussion and policy implication of the study's results and analysis as earlier discussed in the preceding sections. From the accepted random regression shown in Table 4.3. a&b, it was shown that all the explanatory variable have significant effect on firm performance in the second model while only BIND has significant effect on firm performance in the first model.

The implication is that, as firm maintain sizeable number of internal and external directors, the financial performance of the firm is expected to increase. The studies of Mehran (1995); Pinteris (2002) confirmed this standpoint. However, Laing and Weir (1999) play down the importance of this argument by stressing the importance

of business experience and entrepreneurship. It can be deduced that as companies maintain appropriate board size, the financial performance of the firm would increase. This finding corroborates the result of Abdulazeez *et al.* (2016) that larger board size is better for corporate performance than smaller board size because in larger board, members have a wide range of expertise to help make better decisions and are also difficult for a powerful CEO to dominate. Also, it is in consistent with Osisioma *et al.,* (2015); Adekunle and Aghedo (2014) and Abdulazeez *et al.*, (2016) who concluded that corporate governance have significant effect on firm performance in Nigeria.

5. Conclusion

The effect of a good and efficient corporate governance practice is the board of directors (firm's management) who guarantees that the stakeholders' interests are not put in danger (Hashanah & Mazlina in Adewoyin, 2012). Probity, transparency and accountability are apparatus of corporate governance that would assist firms increase depositors', shareholders', investors' and other stakeholders' trust.

From the study, it was concluded that board independence have positive effect on firm performance measured by ROA while other variables, that is, board size, ownership structure and board gender diversity have negative effect on firm performance leading to low performance of firm. The negative effect inferred that dominance of family owned businesses existed in Nigerian firms. As a result, when family dominance over board matters happens, it showed the weakness of corporate governance apparatus. Also by the results reached related to the board members, it is concluded that investors in Nigeria are less protected. Evident from the study also revealed that board size, board independence, ownership structure and board gender diversity have significant effect on firm performance measured by ROE. The study concluded that corporate governance improves stakeholders' confidence and aided the development of business in the long run. Consequent upon the discussion of findings the study concluded that corporate governance have significant effect on firm performance in Nigeria. Based on the findings of the research, the following recommendations were made: Firms should endeavour that board members are independent that is, to ensure that board of directors are not in any way employed into the firms; size of the board (membership) should be increased but not exceeding the maximum number specified by the code of corporate governance for firms; Government should enact laws on institutional and governmental ownership to serve as control mechanism and in the long run enhance firm performance;

Female directors should be given a reasonable mandatory quota on board membership in order to enhance cross fertilization of technical know-how.

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The Factors Contributing to the Low Numbers of Women Entrepreneurs in Kigali

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Abstract: With excessively low levels of entrepreneurial activities reported for most developing countries, women who make up the majority of the population are under-represented in entrepreneural activities. Although the low numbers of women in entrepreneurial activities have been aligned to cultural barriers, the role played by non-cultural factors has been overlooked in many cases. Using Kigali as the locus, this paper sought to identify the non-cultural reasons for the low numbers of women entrepreneurs in Rwanda.The data utilized for this study were solicited from 398 women entrepreneurs in Kigali by means of a structured self-administered questionnaire. Though categorized as a quantitative study, primary focus was descriptive statistics, which were obtained through the use of Statistical Package for the Social Sciences (SPSS, V24) software. The results suggest that the typical woman entrepreneur in Kigali is of age 29-43, married, fairly educated and mostly in the retail subsector. In the order of gravity, the respondents noted the persistence of the following non-cultural factors as contributing to the low numbers of women entrepreneurs in Kigali: high rentals, limited access to captital, a complex tax system and the fear of failure. The contribution of this study lies in its examination of non-cultural reasons for the low uptake of entrepreneurial activity by women in Rwanda especially considering among other factors, Rwanda's very low position in Africa's total entrepreneurial activity (TEA). It is hoped that the results may inform policy directives that provide not only for the integration of women into mainstream economic activities but also continue to invest in the optimal utilisation of every member of Rwandan society irrespective of gender in furthering the economy.

Keywords: entrepreneurship; women entrepreneurs; enterprise development; formal and informal sector; Kigali-Rwanda; female entrepreneurship

JEL Classification: M20; M14; M10

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1. Introduction and Background

Over the years, entrepreneurship has gained the status of a grand socioeconomic transformer. This is because of its capacity to generate jobs, reduce poverty and generally strengthen the livelihoods of people. Interestingly men are known to dominate in most businesses and even government appointments. Most developing economies are known for their patriarchal stance (Rubagiza, 2010; Choto, Tengeh & Iwu, 2014) yet their economies continue to struggle for various reasons (Legas, 2015). Some of the reasons put forward for the failure of these economies range from corruption to decadent infrastructure. This tends to suggest that the domination of men in most societies does not necessarily result in progressive socioeconomic development. Of significance are recent findings which suggest that involving women in mainstream socioeconomic activities will bring about accelerated socioeconomic development (Adom, 2015; Matsoso & Iwu, 2016). In many African societies, women outnumber men (See Table 1). Disturbingly, the African society regards the womenfolk to be weak and unable to carry out entrepreneurial activities, but instead suitable for performing housekeeping tasks such as raising children, looking after family, cooking, and looking after old people and domestic animals (Bruni, Gherardi & Poggio, 2004; Kushnir & Amin, 2013; Musomandera, Shukla & Luvanda, 2015).

Table 1. Eastern African Community Population Record

Country	Total population	Male percentage (%)	Female percentage (%)
Tanzania	56 877 529	50%	50%
Kenya	48 466 928	50%	50%
Uganda	41 652 937	50%	50%
South Sudan	13 096 190	50%	50%
Rwanda	12 159 586	48%	52%
Burundi	11 936 481	49%	51%

Source: World Population Review (2017)

As the table above shows, there are more women in all the developing nations listed. In Rwanda for example, women represent the majority (52%) of the population. Also in Rwanda, business is dominated by males and this has been attributed to culture, beliefs, and religion (Rubagiza, 2010; Kushnir & Amin, 2013; Adom, 2015; Musomandera et al., 2015). Rwanda continues to experience high levels of poverty and unemployment notwithstanding the considerable progress made since after the genocide of 1994. While significant progress has been recorded since after genocide, there is negligible improvement in the involvement of women in strategic mainstream economic activities. Table 2 displays the distribution of sole proprietor establishments by size and gender of owner in Rwanda.

Table 2. Distribution of Sole Proprietor Establishments by Size and Gender

Size	Gender			
	Total	Male	Female	NS
Total	142 029	101 665	38 017	2 347
Micro (1-3)	135 386	96 987	36 169	2 230
Small (4-30)	6 469	4 538	1 817	114
Medium (31-100)	133	104	27	2
Large (100+)	41	36`	4	1

Source: Rwanda. National Institute of Statistics of Rwanda (2015, p. 55)

The severity of such exclusion is evident in the low levels of women in small, medium and large businesses (Rwanda. National Institute of Statistics of Rwanda, 2015) Table 3 shows distribution of sole proprietor establishments by economic activity and gender of owner in Rwanda.

Table 3. Distribution of Sole Proprietor Establishments by Economic Activity and Gender

Economic activity	Sex of owner			
	Total	Male	Female	NS
Total	**142,029**	**101,665**	**38,017**	**2,347**
Agriculture, forestry and fishing	231	188	40	3
Mining and quarrying	156	135	19	2
Manufacturing	10,051	6,059	3,859	133
Electricity, gas, steam and air conditioning supply	4	4	0	0
Water supply, sewage, waste management and remediation activity	17	13	4	0
Construction	63	58	4	1
Whole sale and retail trade; repair of motor vehicles and motor cycle	76,472	52,215	22,998	1,259
Transportation and storage	47	35	11	1
Accommodation and food service activities	43,996	33,980	9,299	717
Information and communication	347	310	27	10
Financial and insurance activities	172	118	48	6
Real estate activities	3	3	0	0
Professional, scientific and technical activities	755	478	266	11
Administrative and support services activities	776	477	277	22
Education	241	153	75	13
Human health and social work activities	342	236	100	6
Arts, entertainment and recreation	74	59	14	1
Other services activities	8,282	7,144	976	162

Source: National Institute of Statistics of Rwanda (2015, p. 58)

Thus, to help eradicate poverty, contribute to the economic growth of the country, improve families' welfare, and bring about change in the community, opportunities should be provided for women to participate in mainstream economic activities (Adom, 2015; Musomandera et al., 2015).

Issues of culture as they pertain to female entrepreneurship in sub-Saharan Africa have been extensively studied, more so in Rwanda (for example Rubagiza, 2010; Kushnir & Amin, 2013).

This research focused on Rwanda to specifically identify the non-cultural reasons for the low numbers of women entrepreneurs in Kigali.

The contribution of this study lies in its examination of non-cultural reasons for the low uptake of entrepreneurial activity by women in Rwanda especially considering Rwanda's very low position in Africa's total entrepreneurial activity (TEA) (Kelley, Singer & Herrington, 2012). Moreover, the underrepresentation of women in mainstream economic activities especially in developing countries is well documented. This illustrates the urgent need to optimally utilise every member of society irrespective of gender in growing the economy. Indeed, a nation's "economic growth depends on the growth and survival of firms; and as such, the more firms that are established the better it is for an economy" (Williams, 2014). Any inquiry into the barriers to effective women integration into mainstream economic activity in a developing economy is therefore justified.

This paper is organised in the following order. Literature review comes next, followed by details of the methods used in carrying out this study. Thereafter, the findings are discussed while the last section concludes with implications for theory and practice.

2. Literature Review

Broadly speaking, the following factors have been implicated as reasons for low uptake of entrepreneurial activities in developing economies.

Table 4. Obstacle to Entrepreneurship in Selected Developing Country

Obstacles to entrepreneurship in developing country		
Obstacles	**Country**	**Source**
Access to finance, infrastructure, corruption, government policies, too much taxes, red tape	Nigeria	Okpara & Wynn, 2007; Fohtung, *et al*. 2012; Ihugba, Odii & Njoku, 2013; Gwija, Eresia-Eke & Iwu, 2014; Ofili, 2014.
High Tax rate, lack of business support, infrastructure, access to finance	Cameroon	Stevenson & St-Onge, 2011; Fohtung, *et al*. 2012
Access to finance, entrepreneurship skills, high taxes, shop rent, insufficiency consumers & market, infrastructure	Rwanda	FinScope, 2016; Ndikubwimana, 2016: 8
Start-up capital, entrepreneurship skills, government policies, large family, lack of commitment	Kenya	Kaburi, *et al*., 2012;Odinga, 2012.
Fear of failure, government policies, entrepreneurship skills, business registration, access to finance, cost of capital, start-up capital	South Africa	Fohtung, *et al*. 2012; OMIDYAR NETWORK, 2012; Gwija, *et al*., 2014; Mandipaka, 2014; Lose and Tengeh, 2015.
Corruption, high taxes, infrastructure, access to finance, and entrepreneurs skills	Sub-Saharan Africa	Legas, 2015, pp. 26-31
Access to finance, infrastructure, governments policies, Globalisation, inadequate government assistance	Africa	Feinstein, 2016
Infrastructure, high taxes, access to finance, lack of collateral, business experiences, high shop rent	Tanzania	Odinga, 2012; OMIDYAR NETWORK, 2012
Lack of government support, corruption, nepotism, access to finance, collateral	Ghana	OMIDYAR NETWORK, 2012
Access to finance, cost of capital, collateral, lack of network, infrastructure	Ethiopia	Singh & Belwal, 2008; OMIDYAR NETWORK, 2012

With specific reference to female entrepreneurship in a developing economy, the factors listed above are not unique to men. In fact, those obstacles tend to obstruct women more than their menfolk (The Voice of Midlife and Older Women, 2012; Tinuke, 2012; Fernandes, 2017; Singh & Seema, 2017). According to Bruni, *et al.* (2004), barriers facing women entrepreneurs are categorized under three headings namely demographic factors, socioeconomic factors, and cultural factors.

2.1. Demographic Factors

Rwigema, Urban, and Venter (2008), Genty, Idris and Kadir (2015) identified demographic factors as age, sex, education, work experience income, marital status, job, religion, birth rate, death rate, family size, and marriage. With respect to gender, several studies have found it as a deterrent in entrepreneurship. For instance, the so-called traditional role of women as home makers has its disadvantages according to Nxopo and Iwu (2015) who found that even though women ran nearly successful businesses, they were still expected to tend to domestic chores such as caring for their partners as well as the children. This point is also buttressed in Cohoom, Wadhwa and Michell's (2010) study which noted that running a business and caring for the family were major obstacles to the growth of women-owned businesses. This explains why most women-owned businesses struggle to attain significant growth.

2.2. Socioeconomic Factors

A significant number of men died during the 1994 Rwanda genocide leaving behind countless number of widows who had to find ways to survive and support their families (The United States of America. United States Agency for International Development, 2009; Coldham, 2013). Thus, a substantial number of women-owned businesses were driven by necessity. To provide for their families and grow their businesses, many women-owned businesses seek financial support. However, because of the absence of collateral and lenders' negative perception of women as high-risk borrowers, they are denied loans (Stevenson & St-Onge, 2011; Siddiqui, 2012; Nxopo & Iwu, 2015). Siddiqui (2012) reports that some men believe that financing women in business is like setting money on fire since women do not have the managerial ability to run a successful business.

2.3. Cultural Factors

Despite the efforts being made by Rwanda government to promote gender equality, culture continues to favour men. For instance, Rwandan society perceives a woman as weak and unable to carry out entrepreneurial activities (Kushnir & Amin, 2013; Musomandera et al., 2015). Moreover, women entrepreneurs who give orders to their male employees are regarded as arrogant or abnormal (The United States of America. United States Agency for International Development, 2015). Vis (2012) stated that Rwandan culture limits women entrepreneurs' mobility and networking; consequently, they do not have enough information about the business environment, and this negatively affects their competitiveness. While a significant number of women have entrepreneurial intentions, it is argued that social stereotypes can prevent them from starting a business (Kamberidou, 2013). Women entrepreneurs do not enjoy the same business environment as men entrepreneurs. Gender stereotypes encourage gender inequality and the underestimation of women's capacity to run a business. They work under the pressure of discrimination, and this

is a major reason why there are comparatively few of them (Tambunan, 2009; Adema, Ali, Frey, Kim, Lunati, Piacentini & Queisser, 2014).

Owing to the foregoing, we posed the following question: what are the non-cultural factors that are responsible for the low uptake of entrepreneurship by women in Kigali city of Rwanda? After all, "entrepreneurship is a legitimate occupational source of income for women" (Mboko & Smith-Hunter, 2009) and if properly harnessed, will close the raging gaps in society. And by all accounts, women have the potential and are crucial contributors to socioeconomic development (Coldham, 2013; Adom, 2015; Deborah et al, 2015).

3. Methodology

In this study, the quantitative method was used to gather data. Essentially, questionnaires were distributed to women entrepreneurs in Kigali while the Statistical Package for the Social Sciences (SPSS) was used to analyse the data.

3.1. Sample

Considering the absence of a database of women entrepreneurs in Kigali, Rwanda (African Development Bank, 2008; Rukundo, 2015; Stevenson & St-Onge, 2011), the researchers selected 398 women entrepreneurs in the formal and informal business sectors in the districts of Gasabo (133 respondents), Kicukiro 138 respondents), and Nyarugenge (127 respondents) of the City of Kigali. Each respondent completed a questionnaire.

The researchers used the purposive sampling method, which we considered as the most convenient method to reach respondents, especial those in the informal sector (hawkers). The qualifying criteria included the following: participants had been in either the formal or informal sectors for at least 6 months; were located in the districts of Gasabo, Kicukiro, and Nyarugenge; they must be Rwandan citizens; and the businesses must be in one of the following industries: service, agriculture, manufacturing, mining, wholesale or retail, and construction.

3.2. Research instrument

In this study, a self-administered questionnaire was used to collect data. The self-administered questionnaire was useful in reaching out to the large population over several large areas.

4. Findings and Discussion

4.1. Demographic Characteristics of the Respondents

Out of 398 participants, the majority (78.9%) were married; followed by unmarried ones (12.8%); widows (6%); separated (1.5%), and 0.5% for divorced subjects. The findings show that women entrepreneurs' level of education concentrated on vocational (30.9%); primary school (33.1%); and secondary school (26.3%). Graduates (diplomate and degree) represent only 11.7%. Could this finding be an indication that the majority of the subjects, owing to their low educational achievement, opted for self-employment? In terms of age, the most energetic group was between 29-43 (60.2%) years old.

4.2. Business Profile

Most of the participants are in retail (64.6%), followed by service (33.7%) which mostly concentrated on clothing; (67.8%) for example sewing; wholesale (1.3%), and (0.5%) agriculture. Most of the businesses had been in existence for over six years dispelling the common notion that small businesses struggle to stay alive for 3years. 39.7% obtained start-up capital from their husbands; 33.2% savings; 25.2% from family and friends; 1.8% compensation [pension]; very few (0.5%) start-up capital was obtained from banks and micro-finance. According to annual income, the majority 87.3% run micro- enterprises; 8.9% small businesses; and 3.8% large businesses. 69.3% run formal businesses while 28.7% were in the informal sector.

4.3. Factors Contributing to Lower Number of Women Entrepreneurs in Kigali

The aim of this study was to determine the reasons why there are so few women entrepreneurs in Kigali. A 5-point Likert scale was used throughout, and from the results a mean value was derived. Responses producing mean values of 4.07 and above were regarded as major factors contributing to the relatively low number of women entrepreneurs in Kigali; mean values of 2.51 to 3.08 were regarded as minor factors contributing to this situation. Values of 2.49 and below were not considered to be factors contributing to the low number of women entrepreneurs in Kigali. Table 5 displays the findings regarding factors contributing to lower numbers of women entrepreneurs in Kigali.

Table 5. Factors contributing to lower numbers of women entrepreneurs in Kigali

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Shop rent is high	396	1	5	4.30	.598
Start-up capital is a problem	394	2	5	4.23	.537
Complex taxes	397	1	5	4.07	.882
Fear of failure	395	1	5	3.08	1.158
Family responsibility	393	1	5	2.95	1.129
Too much government regulations	395	1	5	2.51	.943
Lack of family support	397	1	5	2.49	1.012
Market is saturated	394	1	5	1.84	.742

The findings presented in Table 5 above, indicate that a mean value of 4.30 and a standard deviation of 0.598 were obtained for the statement "Shop rent is high". This result suggests that respondents strongly agreed with the fact that high shop rentals are a major factor contributing to the low number of women entrepreneurs in Kigali. The cost of rent is a particular problem for those running on little capital, and is one reason why some women prefer to run their business from their homes and remain in the informal sector. According to Rwanda Ministry of Trade and Industry (2010, p. 7), micro- enterprises net start-up capital is less than RwF 500 000 (R 8 074; USD 606). What may seem like an affordable shop in the city of Kigali is around RwF 50 000 per month. It is difficult and even impossible to pay rent of 1/10 of one's working capital. Besides, some landlords demand several months' rent in advance. In addition, shops with cheaper rentals are not strategically placed for running a successful business. This concurs with what Stevenson and St-Onge (2011) reported that some women entrepreneurs run their businesses from home due to high rental cost and a lack of appropriate shops to rent.

A mean value of 4.23 and a standard deviation of 0.537 were produced by the statement "Start-up capital is a problem". This indicates that respondents were in full agreement with the statement that start-up capital is a problem and thus a factor contributing to the relative scarcity of women entrepreneurs in Kigali. This result might suggest that some women had the ambition of starting a business, but could not due to a lack of start–up capital, unless they had the money themselves or could call on support from someone else. Stevenson and St-Onge (2011) assert that start-up and growth capital are some of the challenges women entrepreneurs face. As indicated earlier, most start-up capital was self-sourced – either from family or friends, with very little support (0.5%) from banks and micro-financiers. This finding relates to the findings of Singh (2012), Chinomona and Maziriri (2015), Uwantege and Mbabazi (2015) who also found that lending institutions were not favourably disposed to women-owned businesses owing to either lack of collateral or unappealing business venture.

Most women's businesses are micro-enterprises, and many of them are informal, which severely limits their chances of obtaining loans from lenders (United Nations, 2014). Without adequate access to finance, women's businesses have no competitive advantage (Tambunan, 2009; Laetitia, Shukla & Luvanda, 2015).

The results presented in Table 5 show that a mean value of 4.07 and a standard deviation of 0.882 were obtained for the statement "Complex taxes". This indicates that the respondents fully agreed with the statement that the complexity of the taxation system is a factor contributing to the lower number of women entrepreneurs in Kigali. This might mean that would-be women entrepreneurs are afraid of starting a business, feeling that they might not be able to cope with the taxes. They might prefer to look for a job in the labour market or remain in the informal sector to avoid paying taxes. The World Bank (2009, pp. 65-66) confirms that complex taxes are a common problem for entrepreneurs in Africa, particularly women. Operating a business in the city of Kigali might incur various taxes that are difficult to pay. It is hard to cope with taxes when one's working capital is small and there are other expenses associated with business. A delay in paying taxes incurs a penalty which is also costly. This finding is in line with previous studies for example World Bank (2009), Deborah, Wilhelmina, Oyelana and Ibrahim (2015) claims that complex taxes and a higher tax rate discourage women from entering business in Kigali. Interestingly, Stevenson and St-Onge (2011) argue that some women entrepreneurs prefer to run their enterprises without any intention of growth thus suggesting that as long as they remain small, they won't worry about taxes.

The statement "fear of failure" scored a mean value of 3.08, which is slightly higher than a neutral mean value of 3, with a standard deviation of 1.158. This result indicates that the respondents had mixed feelings about the statement that fear of failure is a factor which prevents women from becoming entrepreneurs in Kigali, with a small majority agreeing with it. Lose and Tengeh (2015) observe that fear of failure coupled with an absence of business incubation discourages women from launching new businesses.

A mean value of 2.95 and a standard deviation of 1.129 were obtained for the statement "Family responsibility," as indicated in Table 5. This result suggests that respondents almost equally agreed and disagreed about the perception that family responsibilities are a factor contributing to the low number of women entrepreneurs in Kigali. Although the agree statement was not strong enough to demonstrate that family responsibility is a factor contributing to the low number of women entrepreneurs in Kigali, there are clearly significant numbers of women for whom it is a factor. On the other hand, the results show that there has been an improvement in gender equality. It appears that there has been a change in the perception that housekeeping is a woman's responsibility. These findings seem to suggest that males are now prepared to perform duties in the home which were previously considered

women's responsibility (Adom, 2015). These findings are in line with Adom (2015) who observed positive and negative influence of family responsibility on business.

The result for the statement "too much government regulation" was a mean value of 2.51. This value indicates that majority of respondents disagreed with the statement that too much government regulation is a factor contributing to the small number of women entrepreneurs in Kigali. It seems that government regulations are a minor factor contributing to reduce the number of women entrepreneurs in Kigali. Could this be an indication that government regulations are flexible enough to accommodate and even facilitate entrepreneurs' conduct of business? Flexible business rules attract entrepreneurs to invest their money while at the same time creating jobs from which the government also collects taxes. This implies that Rwanda is a good environment in which to run a business. Fellman (2012) reports that after the 1994 genocide, legal reforms created a favourable environment for women entrepreneurs who took the opportunity to launch new businesses. The International Finance Corporation (2008) and the US Agency for International Development (USAID, 2009) have spoken out about the considerable level of collaboration which is in existence between the Rwandan government and stakeholders to promote women's businesses. This positive business reckoning seems to have earned Rwanda, the second place in Africa in terms of facilitating investors' launching and conducting businesses (The World Bank, 2014).

A mean value of 2.49 and a standard deviation of 1.012 were obtained for the statement "lack of family support", as indicated in Table 5. This implies that from the respondents' point of view, a lack of family support is not a factor contributing to the small number of women entrepreneurs in Kigali. Could this be an indication that women entrepreneurs in Kigali get family support? And that their families believe that women entrepreneurs can add value to the family if they are supported in business? Perhaps, as Adom (2015) noted, it is possible that Rwandan husbands realise that they cannot cover all the family financial expenses themselves and therefore encourage their wives to become entrepreneurial. These findings are in line with Zhu and Chu (2010) who realised a somewhat similar result in their study of Chinese women entrepreneurs whom they found to have received strong family support to help reduce the stress associated with doing business. Also, Shahnawaz (2015) found that United Arab Emirates (UAE) men believe that women can perform well in business if they obtain the requisite resources, which is why some husbands support their wives or daughters to launch enterprises. However, these results contradict the study of Chinomona and Maziriri (2015), who found that some communities in Gauteng Province of South Africa still discriminate against women offering instead discouraging attitudes towards their business efforts.

A very small mean value of 1.84 was attributed to the statement that "the market is saturated", with a standard deviation of 0.742. This indicates that the respondents

disagreed with the statement that the market being saturated is a factor contributing to the fewness of women entrepreneurs in Kigali. According to these results, the window of opportunity for business is still open in Kigali. If women can obtain start-up and growth capital, and open shops, they can run businesses and attract enough customers. Could this be as a result of the support obtained from Rwanda Chamber of Women Entrepreneurs? The International Finance Corporation (2008) reported that the chamber, including other organisations, assists women entrepreneurs to find new markets?

5. Conclusion and Recommendations

Entrepreneurship has consistently earned the reputation of a socioeconomic development contributor. Nonetheless, owing to certain cultural constraints especially in sub-Saharan Africa, women, the majority of the population, are underrepresented in entrepreneurial activities but instead are regarded and found in domestic/housekeeping activities. The influence of culture on the uptake of entrepreneurial activities by women has received considerable attention. Although many of these studies have focused on several sub-Saharan nations, there is still limited study on this subject within the context of Rwanda, and specifically the capital city, Kigali. Rwanda is notoriously associated with the mass killings of 1994, which left several families without parents, particularly fathers.

The objective of the study was to identify the non-cultural reasons for the low uptake of entrepreneurship by women in Kigali, Rwanda. From a public policy perspective, this research is significant in that it helps to address some of nagging factors that have kept women-owned enterprises from performing optimally.

Our findings have shown that women in Kigali face various hurdles which are responsible for their low participation in the entrepreneurship ecosystem. We classify these hurdles into major and minor factors. The major factors include high rental cost, deficient/non-existent start-up capital, and complex taxes. The minor factors are fear of failure, family responsibility, and excessive government regulations. However, the effort to eliminate these factors require a synergy of women entrepreneurs, Chamber of Women Entrepreneurs, government of Rwanda, academia, and other key stakeholders such as the Private Sector Federation. For instance, those who struggle to cover business expenses could form cooperatives in order to not only access funding, but also cut costs arising from taxes, and rentals (Hoffmann & Schlosser, 2001; Stevenson & St-Onge, 2011). With respect to funding, perhaps women entrepreneurs may make use of agencies such as Duterimbere and SACCO Umurenge that have the responsibility of providing financial and non-financial support to entrepreneurs. We acknowledge that the women entrepreneurs may lack the confidence in making such moves, however, fear

of failure could be eradicated through education and training. Chamber of Women Entrepreneurs and other stakeholders are encouraged to initiate training programmes for women entrepreneurs and prospective women entrepreneurs. These women entrepreneurs may receive further encouragement from government's tax reduction opportunities.

Rwandan women enterprise development research is emerging. Therefore, this paper makes an important contribution to literature. We nonetheless acknowledge some limitations in our research and in fact scope. And for these, we offer the following: We recognize the critical results we have obtained from the study as well as the need for continued interest in Rwanda women enterprise development research. Therefore, we are of the view that future studies can utilize much more advanced designs and statistical methods. For example, it might be interesting to know the correlation between the respondents' demographic characteristics and the factors contributing to the lower numbers of women entrepreneurs in Kigali. We are however by no means suggesting that our use of simple descriptive statistics lacks substance. Further, our scope may not warrant generalization opportunities, rather a new study may want to determine if the entire Rwandan cities share the same attributes.

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Analysis of the Impact of Changes to International Financial Reporting Standards, on the National Accounts Dashboard

Valentin Burca[1], Robert Almasi[2]

Abstract: Along the last two decades, IASB has been entitled as the core accounting standard-setting institution. As result of its cooperation with FASB, within the international accounting convergence projects, there have been issued, either revised forms of existing financial reporting standards, or completely new standards, under the constraints of the international due process. All those changes affected in different forms and amplitudes the macroeconomic performance indicators, such as the gross domestic product. This study aims to raise discussion around the implications on GDP value of the recently issued IFRSs, from a qualitative point of view. This way, we provide some insights concerning the role of financial information quality on macroeconomic predictions, from an international framework analysis perspective. As a first step in our research, we try to understand the scheme of changes generated by modifications on IFRSs on the macroeconomic indicators, such as GDP, considering two examples.

Keywords: gross domestic product; international financial reporting standards; European System of Accounts; leases; depreciation

JEL Clasiffication: E17; H68; M40; M41; O11

Introduction

The continuous process of global accounting convergence has been confirmed as a success, at least from the perspective that competing IASB and FASB efforts have led in the last decade to significant insights into the area of potential financial reporting quality improvements (Kothari et. al., 2010). Either we refer to due process political and cultural considerations (Ramanna, 2015), economic consequences of IFRS adoption (Bruggermann, 2011; Palea, 2013; De George et. al., 2016), or financial information quality (Soderstrom & Sun, 2007; De George et. al., 2016), IFRSs are considered high quality financial reporting standards, that can be translated into a global solution for financial reporting purposes.

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However, as Nobes & Parker (2008) emphasized, the financial reporting system has to evolve in line with the economic system it serves. As currently we are witnesses to increasing economic uncertainty, the accounting system has to face any challenge that would deter its main purpose, to provide a true and fair view of the financial position and performance of each reporting entity.

On this direction, IASB has conducted visible efforts towards increasing financial information quality, by issuing new financial reporting standards and revising existing ones. By now, there are issued seventeen new standards (IFRSs), from which only four standards were not yet subject to amendments (IAS 2, IFRS 14, IFRS 16, IFRS 17). On the other side, existing standards (including the new issued standards) were subject for different revisions, implying changes in: recognition/derecognition criteria, classification considerations, measurement models aspects, or even on the area of conceptual considerations.

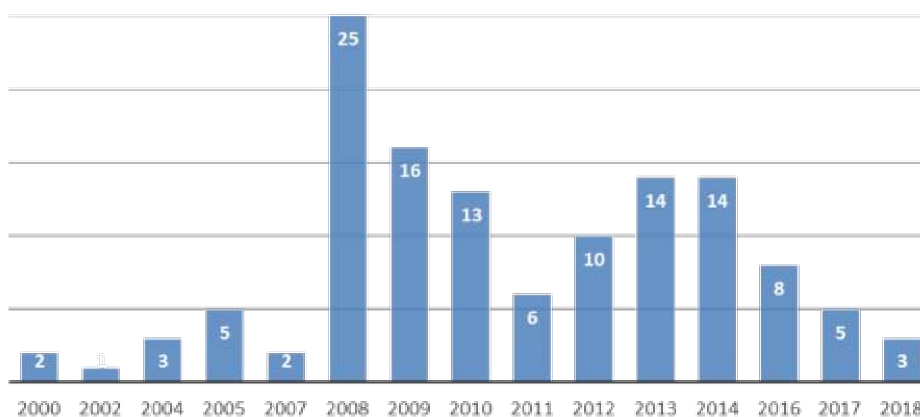

Figure 1. Count of Amendments to Existing Standards

Source: Own projection based on research on Deloitte website (www.iasplus.com)

We observe there is not constant standard-setting output, because of complexity on the standards proposed for amendments, like is the case of IAS 39, IFRS 7 and IFRS 9, which treat the financial instruments concerns.

Figure 2. Standards with most amendments

Source: Own projection based on research on Deloitte website (www.iasplus.com)

Additionally, we observe a visible concern of IASB towards disclosure topics, seen not only on the revisions performed on the existing standards, but on projects included on the current Work Plan as well (e.g. Better Communication in Financial Reporting core project, that include two projects IASB pay special attention for the next few years, namely Primary Financial Statements and Principles of Disclosure), or on the recently revised standards (Burca, 2015).

Having this overall image presented, we consider a study analyzing the impact of those changes on the macroeconomic indicators is essential. Our rationale start from the basic point that Governments' policies are drawn-up against a consolidated budget. This consolidated budget use mainly financial information disclosed by reporting entities. How those changes affect the Gross Domestic Product? Is it accrual accounting relevant for the State, as it is for private financial entities? Are they any inconsistencies between entity-based financial information and aggregate macroeconomic financial information, in terms of recognition, classification, or measurement? Have IFRS adoption generated any significant changes on the GDP structure? Those questions are just some of a longer list that have not been answered yet, or at least have not been sufficiently debated, in the last decade.

We will try to emphasize some controversies concerning the relation between national accounts and entity-based financial statements, in order to understand if the aggregation process deter somehow the quality of the financial information, either because of technical inconsistencies between national accounting methodology and microeconomic accounting, because of the variation generated by different financial reporting framework, or just because of the heterogeneity of sector-based level practices.

Literature Review

As consequence of accounting convergence and regional accounting harmonization, there have been tested several hypothesis concerning the impact of IFRS adoption on the main macroeconomic indicators.

Cai & Wong (2010) have confirmed that, once with IFRS adoption, it has been reached a higher capital market integration. A single global accepted financial reporting framework has facilitated the cross-border movements of capital, through the institutional investors that followed short-term portfolio optimization strategies. The correlation between local capital markets indices proved to be higher in case of jurisdictions adopting IFRS, compared with countries that have not adopted the international financial reporting framework. The positive impact on capital markets integration is even higher between the highly developed EU capital markets, like Germany, U.K., France and Italy. This could emphasize the positive complementary effect of the EU accounting harmonization process, conducted by EFRAG. This way, the investment component from the GDP, could lead to an increase on GDP in case of efficient capital allocation. On those circumstances, the national accounting methodology should take out the effect of earnings manipulation practices, led by the balance of the capital markets incentives.

Beneish et. al. (2015) have confirmed an increase on international debt contracting, as IFRS provide more relevant financial used for usual contracting covenants. This translate into higher financial capital available for companies and government financing needs that potential allow economic growth, through an efficient investment policy. The GDP is affected, not only through the investment component, but the other components as well, like the consumption and the government purchases. In case of a competitive national economy, the debt investments could be allocated to productive production sectors that result into increase on export as well. However, there are voices that raise vivid discussion concerning the accuracy of economic relevance of the financial information used for debt covenants calculation. As underlined by Dechow & Schrand (2004), professionals tend to make use of real manipulation (manipulation on timing of transaction, e.g. lease-back, in-substance-defense) or artificial manipulation (manipulation on timing of disclosure, e.g. big-bath accounting, bill-and-hold transactions). If managers decide in one direction or another, it is clear the effect of those transactions on the financial information is transferred automatically on the national accounts as well, after the aggregation process.

Marquez-Ramos (2014) reveal the strong relation between the decision of countries to adopt IFRS and the increasing level of direct investments. If in case of debt contracting there is an explicit cost of capital, through foreign direct investments can be created new production facilities with no explicit cost of capital. Omitting the fact that strategic investors follow potential gains generated by economic regional

disparities, they prove a positive perception of the IFRS adoption. Investors observe lower costs of financial statements preparation, as financial reporting consolidation does not involve any more reconciliations cause by different individual financial reporting frameworks. With this, the cost of audit decrease as well. Nonetheless, investors perceive positively the due process of IASB, that involve a large range of stakeholders interested on accounting standard-setting, reason why IFRS are considered an output with higher quality than what national standard-setters could provide.

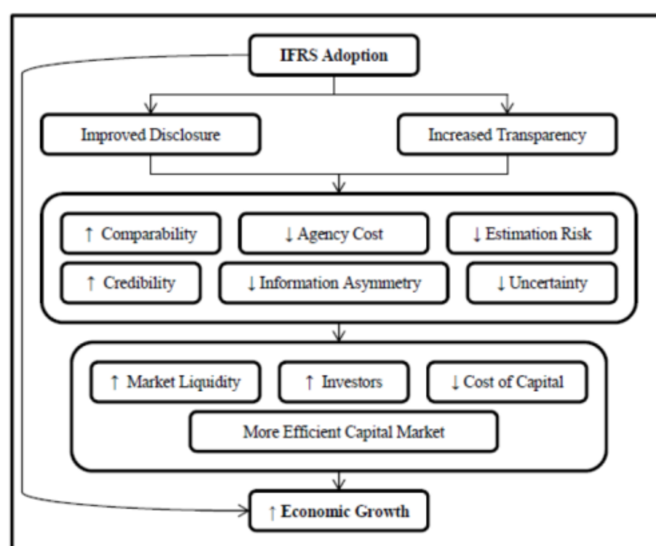

Figure 3. Impact of IFRS adoption on GDP dynamics

Source: Zaidi & Huerta (2014), IFRS Adoption and Enforcement as Antecedents of Economic Growth, p. 3, International Journal of Accounting and Financial Reporting

The capital markets integration proven by Cai & Wong (2010) has behind various factors. One of the factors amplifying this integration is the facilitation provided to the companies for international cross-listing. Through IFRS adoption, Chen et. al. (2015) confirm an increase on companies that have listed, not only the local capital markets, but on cross-border capital markets as well. This result is strongly related with the impact of implementing fair value for accounting valuation purpose. Moreover, those cross-listed entities expand their possibilities of financing, with lower international cost of capital.

IFRS adoption seem to bring benefits in the intensification of the trade relations as well, with high impact on the commercial balance, included on the GDP composition as well. Marquez-Ramos (2014) and Ramanna (2015) underlined the fact that countries having the similar accounting systems reach higher commercial relations. This would impact significantly the consumption, either we talk about households or

government purchases. The reason behind this conclusion is the fact information cost incurred by trade transactions, is reduced.

Another interesting macroeconomic IFRS adoption effect is the increase on international acquisition and mergers, as shown on Francis et. al. (2016) study. The reduction in information cost and the dynamics in the international strategic investment decisions have led to this result. Moreover, once a company acquires a cross-border company, managers realize the cost of future consolidated financial statements preparation will be lower as well.

Direct impact of IFRS adoption on economic growth was studied, as well. Vivian (2011), Zaidi & Huerta (2014), Ghajar & Saedi (2016), Ozcan (2016), or Park (2018), have conducted studies that revealed the positive causal relation between GDP and IFRS adoption dummy variable.

IFRS adoption seem to be positively perceived also within the financial institutions, like emphasized in ECB (2016) report. This report conclude the main benefit of IFRS adoption on the banking systems is the consolidation of financial stability. This is explainable, as the banks and investment funds have placed big part of the available financial capital into local and cross-border financial investments. From this point of view, the financial system get lower cost of financial statements preparation and certification. Also, they perceive international accounting standards are less probable to be frequently changed, compared with the local accounting standards. Nonetheless, they are part to the due process, thorough different professional associations.

Those studies consider in the econometric model only macroeconomic indicators. Some studies use the classical linear regression model, while others use dummy regression models (like Probit). In the end, the signs of the regression coefficients are the most relevant. However, all those studies have to be carefully analyzed, as there are additional factors conditioning the effects generated by the adoption of IFRS. Endorsement process could lead to significant differences between original IFRS and local adopted version of IFRS. The role of enforcement framework is also extremely important, influencing significantly the way capital markets incentives are balanced by enforcement costs (Barth & Israeli, 2013).

All the studies mentioned above reflect a clear connection between the economic system and the accounting system. The question is how the microeconomic financial information is transferred to the aggregate macroeconomic data. For instance, Zaidi & Huerta (2014) have analyzed the causal relation between a 3 years average GDP pre and post IFRS adoption, with a series of country-level factors (economic: level of development, foreign direct investment, or institutional factors: level of education, corruption, political stability, or EU membership quality). Nevertheless, this model just establish a relation between the decision to adopt IFRS and previously mentioned country-level factors.

Nothing is mentioned about the quality of the financial information disclosed by financial statements, information that led to the macroeconomic indicators and the economic growth itself, after aggregation process. Exception could be considered the studies of Konchitchki & Pataoukas (2014a), Gaertner et. al. (2015), Lechien (2017) or Nallareddy & Ogneva (2017).

Konchitchki & Pataoukas (2014a) reveal in their study that aggregated accounting earnings growth can predict future GDP growth, especially considering only one quarter ahead. Unfortunately, the authors underline the fact that the macroeconomic analysts are not able to incorporate complete information of accounting earnings growth, just information that is available in real time.

Gaertner et. al. (2015) designed their study in order to bring some insights about the accounting conservatism the macroeconomic forecasters exert. They confirm that negative aggregate accounting earnings predict future GDP growth, while positive aggregate accounting earnings do not. Similar to the prospect theory, the aggregate accounting timeliness take a leading place on the construction of a GDP growth forecasting model. Unfortunately, similar to Konchitchki & Pataoukas (2014), this study underline the fact that the macroeconomic analysts do not react sufficiently on the signals given by negative aggregate accounting earnings, attitude translated into the amplitude of GDP growth forecasts as well.

Similar conclusions, as in Konchitchki & Patatoukas (2014b), are emphasized by Leichen (2017), on the European Union economy. The study underline the fact that macroeconomic forecasters do not fully rely on available accounting information. The study focus on specific financial ratios, like ROE, Net Profit Margin, Asset Turnover, or Interest Burden that are related to GDP future growth forecasts. What is interesting is the fact that the study underline the role given by macro experts to the stock returns evolution on explaining future GDP growth, as an essential aggregate earnings measure modeled by capital markets behavior.

At last, but not the least, the study of Nallareddy & Ogneva (2017) focus on the problem of GDP forecast restatements. They suggest that actual GDP forecasting models do not fully incorporate all information available on the economy, because of limitations on methodology used and inaccurate sources of information considered. In their study, the authors underline the marginal positive effect on improving GDP growth estimates, especially through the value relevance of aggregate accounting earnings dispersion that reflect the dynamics encountered in the economy, in terms of capital and labor.

All those studies bring insights of how aggregate accounting earnings variations affect the GDP forecast accuracy. Along the time, the importance of the announcements on GDP forecast is proven essential, as it reflect partially the future expectation from various stakeholders, like investors, policy makers, analysists etc. The literature is currently limited, even there still are several questions to be

answered. How is the aggregation process adjusting the quality of the microeconomic financial information? Do the national accounts reflect the true and fair view of the national worth and the macroeconomic performances? Which are the mechanisms that generated, through IFRS implementation, the positive macroeconomic effects?

As most of the studies have analyzed the impact of initial IFRS adoption, we think there is needed a post-IFRS adoption analysis on a larger timeframe. Such analysis suppose, as a first step, the construction of the model of causality between microeconomic financial information, changes made to IFRS and the macroeconomic data, incorporated in indicators, such as Gross Domestic Product, Gross Value Added, Gross Fixed Capital Formation etc. Afterwards, there can be, more easily explained the causal relation modeled through various econometric models.

Methodology Research

Our study will be limited to the economic subjects of the Romanian national economy. Otherwise, we would get inconsistencies in the aggregation process of the microeconomic financial information. For instance, the private sector report their financial position and performance, using IAS/IFRS as financial reporting framework. On the other side, the public sector refer to IPSASs as financial reporting framework. Based on recent information disclosed by IPSASB (2018) on their regular progress report IPSAS-IFRS alignment dashboard, there are underlined differences between the two financial reporting framework. In order to analyze the marginal effects of each change on a financial reporting standard, we will start from ESA 2010 national accounts structure. The new SNA has been adopted on EU level on 2014, as a consequence of the EU Regulation 549/2013.

Table 1. Production Account of an Entity from Macroeconomic Perspective

Production Approach (1)	Expenditure Approach (2)	Income Approach (3)
+ Sum of values added at basic prices of all producers + Taxes on products - Subsidies on products	+ Final consumption expenditure + Gross fixed capital formation + Changes in inventories + Exports of goods & services - Imports of goods & services	+ Compensation of employees + Taxes on production and imports - Subsidies on production + Operating surplus / mixed income
= Gross domestic product (GDP) at market prices (I) – Consumption of fixed capital = Net domestic product		

Source: Eurostat (2014), Essential SNA: Building the basics, p. 74

Starting from this matrix, we will draw-up some practical examples from the total list of accounting treatment changes, in order to highlight the way GDP is impacted. In order to illustrate practical impact on GDP because of changes in financial reporting standards, we will choose three examples:

first example will illustrate the impact of a new standard, recently issued; for this we will analyze the impact IAS 17 Leases is superseded by IFRS 16 Leases, focusing on the main difference expected to generate high changes on the financial position of the entities; according to IFRS 16, operating lease transactions will be accounted same as financial leasing transactions; on our example, we will underline the effect of the off-balance sheet assets transferred to the financial position statement;

second example will illustrate the impact of a recent change on one already existing financial reporting standard, in order to emphasize the relevance of such changes on the dynamics of the key financial ratios of each entity affected; for this, we will analyze the impact on GDP of the amendment included on the Annual Improvements 2010–2012 cycle for IAS 16 and IAS 38, that forbids using depreciation method based on revenue.

Result and Discussions

The change on any financial reporting standard translate automatically into the macroeconomic indicators, with a significant impact or a lower one. This reality has been perceived by professionals in national accounting as well, through the converged efforts profile regional and international institutions have made to revise a global/regional acceptable system of national accounts (Bos, 2009). In spite of all those efforts, they are still inconsistencies between the value relevance of the microeconomic financial information and the aggregated macroeconomic data.

To illustrate this, we propose to make a short inventory of some of the well-known inconsistencies between the macroeconomic accounting system and the entity-level accounting system. Most of them refer to GDP weaknesses, as this macroeconomic indicator is widely used to measure the evolution of an economy (Fluerbaey & Blanchet, 2013), even they are enough voices that contradict its value relevance, proposing alternative economic growth measures:

GDP incorporate the accounting earnings, without any concern on the need to reflect the economic earnings (e.g. the depreciation method used to amortize a fixed asset, which is part of the gross fixed capital formation on the GDP composition, can impact the GDP by using linear method instead of production-based depreciation method); moreover, we remind earnings smoothing practices (real manipulation transactions, artificial manipulation transactions);

Inventory valuation adjustments affect GDP, especially in case of adjustments that to not imply any stock movements (e.g. obsolete inventory is adjusted on a regular basis, based on entity accounting policy, in order to reflect an estimated accounting value, even if there is no physical transaction involved);

Final consumption represent the sum of all production factors, excluding the corresponding indirect taxes and subsidies;

In case of regional trade operations, part of GDP is explained by tax rate or labor cost rate regional disparities, resulting into an increased artificial net value added (e.g. transfer pricing raise plenty of discussions and controversies of how those disparities should be shared through countries, as the market is extremely volatile, production processes are highly complex and there cannot be made a clear estimation on anything);

In the light of increasing role of accounting estimates in financial statements preparation, GDP is directly affected (e.g. impairment tests, fair value valuation, reserves estimations, basing on assumptions that later one cannot be verified anymore, because of missing historical data);

The valuation treatment of assets and liabilities might depend of the class they are included (e.g. the difference between assets accounted under IFRS 5, compared with the assets accounted under IAS 16, might differ just because o management intention of use of sale, leading to different valuation basis); moreover, we underline the difference generated on GDP by the assets generated internally, as they are to be recognized to the cost of production, compared to the acquired similar assets that are accounted to the equivalent of market price;

They are difficulties on incorporating some intangible assets into the GDP value (e.g. human capital expertise is hard to be measured); moreover, there has been (until ESA 2010 was implemented), an inconsistency concerning the development costs accounting treatment (on entity-level, the expenses incurred on the development phase can be capitalized on the asset value, while in national accounts they are recognized as expenses of the period).

Though those inconsistencies still persist, we have to underline some of the main changes brought together with the implementation of the ESA 2010 framework, as evidence there are effort on regional and international level towards harmonization between business accounting system and national accounts framework (EU Commission, 2014):

expenditure on research and development is classified as investment, reason why is integrated in the gross fixed capital formation aggregate; it is important that we underline the fact there is still inconsistency with IAS 38, as expenditure in research cannot be capitalized; but, there is a positive change on GDP composition if we refer

to the expenditure on development, which is much higher than the research expenditure;

the value of goods sent abroad for processing will have no more an impact of the gross exports and imports, as there will be accounted only the processing service (without physical movements); this change will get more closer the ESA 2010 framework in terms of inventory, as prescribed by IAS 2;

an increase in disclosure requirements for pension schemes analysis is made.

Table 2. ESA 2010 Non-Financial Private Sector Aggregation Accounts

Production Account	
Allocations	**Resources**
Consumption	Production
Gross Value Added	
Operations Account	
Wages	*Gross Value Added*
Other taxes on production	
Subsidies on production	
Gross Operating Surplus	
Allocation of Primary Income account	
Interests	*Gross Operational Excedent*
Distributed Income	Interests
Property Income	Distributed revenues
Primary Income	Property Income
Scondary distribution of income account	
Current taxes on income	*Primary Income*
Net social contributions	Social benefits
Other current transfers	Other current transfers
Gross Disposable Income	
Redistribution of income	
Social transfers	*Gross Disposable Income*
Gross Savings	
Use of Income account	
Fixed Assets Capital Formation	*Gross Savings*
Δ Inventories	Net lending (transfers in capital received)
Acquisitions less disposals of valuables	
Acquisitions less disposals of nonproduced assets	Net borrowing (transfers in capital paid)
Self-financing capacity	

Financial account	
Changes in assets	**Changes in debts**
Δ Receivables	*Self-financing capacity*
	Δ Payables
Fixed capital formation	

Production for trade purpose
+ Production for internal consumption
- Consumption
= *Gross Value Added*
- Wages
- Other taxed on production
+ Subsidies on production
= *Gross Operating Surplus*
- Interests (net)
- Distributed revenues (net)
- Other revenues of property (net)
= *Primary Income*
- Current taxes on income
- Net social contributions
- Other current transfers (net)
+ Social benefits
= *Gross Disposable Income*
- Social transfers
= *Gross Savings*
- Fixed Asset Capital Formation
+ Δ Inventories
- Acquisitions less disposals of valuables
- Acquisitions less disposals of nonproduced assets
+ Net lending
+ Net borrowing
= *Self-financing capacity*
+ Δ Payables
- Δ Receivables
= *Fixed Capital Formation*

Source: Tabara (2008), National Accounting. Conceptts. Systems. Models, p. 77, own revision, based on ESA 2010 adjustments

Generally, the macroeconomic indicators are affected, mainly by changes on accounting valuation models and techniques. For instance, the use of fair value, as

valuation basis for financial reporting purpose, has raised vivid discussion among the researchers, standard-setters and political factor, as some of them considered the use of fair value one of the leading factors of the global recent financial crisis (Laux & Leuz, 2010), while others considered it as an amplifier of the negative effects (Kothari & Lester, 2012). This discussion is actual even today, in spite of the effort made by IASB that has published IFRS 13. However, there remain numerous questions in terms of model valuation, as they are frequent cases that are subject to level 3 valuation data, meaning assets/liability valuation based mainly on estimations. This basis for valuation affect directly most of the components of the GDP, reason why it is extremely relevant to analyze the causal relation between those two.

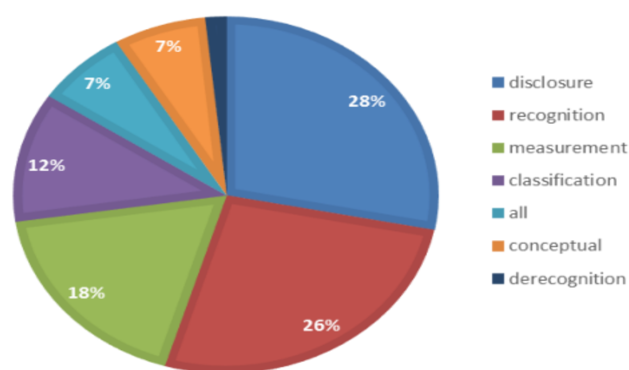

Figure 4. Types of Amendment on IASs/IRSs

Source: Own projection based on Deloitte website (www.iasplus.com)

However, classification differences between national accounts and microeconomic accounts exist as well. Conclusive example is the case that we will analyze on our study, concerning operating leases, which under IAS 17 were reported as a off-balance sheet elements, while under IFRS they are reported as financial leases.

In terms of recognition, we expect no significant differences are noted on our study, as the accounting principles used on microeconomic accounting are valid as well for macroeconomic accounting as well. The only impact on GDP, in terms of assets/liabilities recognition, is generated by the off-balance sheet elements, like the contingent liabilities and contingent assets, as defined on IAS 17 Provisions, Contingent Liabilities and Contingent Assets. However, there could come significant differences caused by the timing of the transactions, in terms of timing on assets/debts recognition, as between national accounts and microeconomic accounts there is a lag.

Nonetheless, changes on accounting standards, concerning disclosure requirements, do not affect directly the macroeconomic key figures, just give a better image of how

the microeconomic financial information is obtained. However, specialized institutions base their process of data collection, mainly on surveys and transfer of data from institutions engaged on collecting primary data. Hence, they do not focus on details revealed by additional disclosure requirements, as they want just an overall image of the economic national balance.

At last, but not the least, we consider the conceptual differences between national accounts and microeconomic accounts will persist, as long as the aggregation is not aligned with microeconomic financial statements objective. For instance, even if the materiality concept was recently defined more accurately, the aggregation process of the microeconomic financial figures make irrelevant, in most of the cases, the split of an element on the financial statement into specific structure.

Table 3. Count of Changes on Standard Level

Area of reporting	Stan dard	Description	No. changes
Assets reporting	IAS 16	Property, Plant and Equipment	4
	IAS 2	Inventories	0
	IAS 36	Impairment of Assets	3
	IAS 38	Intangible Assets	5
	IAS 40	Investment Property	3
	IAS 41	Agriculture	2
	IFRS 5	Non-current Assets Held for Sale and Discontinued Operations	3
	IFRS 6	Exploration for and Evaluation of Mineral Assets	0
	IFRS 8	Operating Segments	2
Compensation reporting	IAS 19	Employee Benefits	5
	IFRS 2	Share-based Payment	6
Consolidated reporting	IAS 24	Related Party Disclosures	2
	IFRS 10	Consolidated Financial Statements	4
	IFRS 11	Joint Arrangements	3
	IFRS 12	Disclosure of Interests in Other Entities	4
	IFRS 3	Business Combinations	5
Fair value measurement	IFRS 13	Fair Value Measurement	2
Financial Instrument reporting	IAS 32	Financial Instruments: Presentation	4
	IAS 39	Financial Instruments: Recognition and Measurement	16
	IFRS 17	Insurance Contracts	0
	IFRS 7	Financial Instrument: Disclosures	9
	IFRS 9	Financial Instruments	8
Financial Policy reporting	IAS 20	Accounting for Government Grants and Disclosure of Government Assistance	1

	IAS 23	Borrowing Costs	3
	IFRS 16	Leases	0
Reporting framework	IAS 1	Presentation of Financial Statements	10
	IAS 10	Events After the Reporting Period	0
	IAS 29	Financial Reporting in Hyperinflationary Economies	1
	IAS 33	Earnings Per Share	1
	IAS 34	Interim Financial Reporting	3
	IAS 7	Statement of Cash Flows	3
	IAS 8	Accounting Policies, Changes in Accounting Estimates and Errors	1
	IFRS 14	Regulatory Deferral Accounts	0
	IFRS 15	Revenue from Contracts with Costumers	1
	IAS 27	Separate Financial Statements	6
Tax reporting	IAS 12	Income Taxes	4
Transition guidance	IFRS 1	First-time Adoption of International Financial Reporting Standards	11

Source: Own projection, based on Deloitte website (www.iasplus.com)

In the light of recent studies, we underline the need of more studies that analyze how GDP and other macroeconomic indicators can be predicted based on microeconomic financial information. Studies like the ones of Konchitchki & Pataoukas (2014), Gaertner et. al. (2015), or Nallareddy & Ogneva (2017) reveal econometric models that check how microeconomic/aggregate earnings variation impact the GDP forecast accuracy. However, in order to understand the source of GDP forecast accuracy, it is essential for us to understand how microeconomic data is reflected on the GDP methodology of calculation.

It is obvious that the process of aggregation can affect financial information accuracy. This can be detected through gradual economic models construction, associated to each step of aggregation and considering different panels of data that enclose homogenous groups of data. This is way we believe, as a first step, we need to understand how any change on an accounting standard translate in the national accounts. For this, we will proceed with three illustrative examples, through which we will make the correlation between the microeconomic financial information and the main macroeconomic indicator.

Operational Leases recognition issue and impact on GDP

In order to illustrate such an example, we will refer to one of the main changes made once IFRS 16 has superseded IAS 17[1]. This amendment ask the operational leases

[1] beside this change on leases accounting standard, there are enhancements on disclosure requirements, as well, in order higher financial information comparability to be ensured; in the end, especially in case

to be accounted same as financial leases. This means the entity will report higher total fixed assets value and proportional increase in long-term debts, as under IAS 17 those elements where reported as off-balance sheet elements. Those changes are integrated in the value of gross fixed capital formation national account.

Let's consider an example. On date 01.01.N, entity Trevis SRL is selling an industrial equipment to entity Vigos SRL, through an operational leasing contract, for an annual payment of 12,011 lei. The contract is signed for 6 years. The interest rate of the leasing contract is of 5.5%. Concerning entity's Trevis SRL financial position, we have available the following information:

Fixed assets	210.000
Current assets	180.000
Equity capital	120.000
Long-term debts	145.000
Short-term debts	125.000

The payments involved by this contract are similar with a long-term debt contract, with constant annual payments. The relation that give the value of the annual payment is $= \frac{C \cdot d}{1-(1+d)^{-n}}$, where A – annual payment, C – discounted value of the debt, d – interest rate and n – period of the debt contract. From this, we obtain the discount value of the debt to be reimbursed, given by relation $C = \frac{1-(1+d)^{-n}}{d} \cdot A$.

In our case, entity Trevis SRL will pay along the operational leasing contract the sum of $C = \frac{1-(1+0{,}055)^{-6}}{0{,}055} \cdot 12.011\ lei = 72.064\ lei$. Under IAS 17, this value was just disclosed on the notes to the financial statements. However, based on IFRS 16 requirements, this value has to be capitalized to PPE (Plant, Production, and Equipment) on the financial position statement, as shown in Table 4. Such a change on the financial position imply an increase on the leverage Trevis SRL is described by, increasing from a value of 1,21 to 1,71. This rate, used frequently as covenant by banks for debt contracting conditions, will increase and deteriorate entity's perspectives for better cost of debt contracting. But this change has to be analyzed in parallel with the change on the fixed assets value, which increase with the value of 72.064 lei.

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of transnational corporations, together with IFRS 16, decision-making process in the area of optimal financing decision is improved, as a better and more qualitative tracking is possible;

Table 4. Annual Payments Generated by the Lease Contract

Year	Annual payment	Interest	Principal	Balance
N	-			60.000
	12.011	3.300	8.711	51.289
N+1	12.011	2.821	9.190	42.099
N+2	12.011	2.315	9.695	32.404
N+3	12.011	1.782	10.229	22.176
N+4	12.011	1.220	10.791	11.385
N+5	12.011	626	11.385	0
Total	72.064	12.064	60.000	

All those changes translate, automatically, into the national accounts as well. The value of the discounted debt payments will affect P.2 Intermediate Consumption national account, with an annual increase of 5.000 lei in total value. However, let's observe those payments are not included on the P.51g Gross Fixed Capital Formation account, like is the case of the acquisitions through financial leasing contracts. Hence, the treatment on the national accounts still follow the model drawn-up y IAS 17, in terms of recognizing an asset from operational leasing contract. That is why we have to underline the criteria of classification for assets and liabilities is essential.

Table 5. Trevis SRL Financial Position

Value reported	Under IAS 17	Under IFRS 16
Fixed assets	210.000	270.055
Current assets	180.000	180.000
Equity capital	120.000	120.000
Long-term debts	145.000	205.055
Short-term debts	125.000	125.000
Leverage rate	1,21	1,71

If we refer to the impact of GDP of operational leases, let consider for analysis the expenditures approach of GDP definition, as given on Table 1. We observe easily that the treatment of recording on the accounting an asset derived from an operational leasing contract does not affect GDP. But this is explained by the fact that GDP itself is an aggregate measure of flows in the economy. Instead, the stock accounts are affected as P.51g Gross Fixed Capital Formation national account has an increase with the sum of all discounted payments for this leased asset, namely 72.064 lei. On those circumstances, the rate of investment, determined by relation $R_i = \frac{Self-financing\ capacity}{Gross\ Domestic\ Product}$ will decrease, relating to the arithmetical model described on

The topic of economic earnings versus accounting earnings, underlining the negative effect of the accounting choice on economic value added reporting, represent one controversial aspect of IAS 16 and IAS 38 accounting standards. The difficulty raise from missing an accurate model that ensure proper correlation between the benefits obtained from using an asset and the corresponding expense with depreciation for a specific time period (IAS 16, par. 60).

On the Annual Improvements 2010–2012 cycle has been included an amendment to IAS 16 and IAS 38, that forbids using depreciation method based on revenue. In order to reflect the effects of such a choice, we will proceed to consider the previous problem, but with some additional information. Because of IFRS 16, the leaser has to consider depreciation expenses as well. Additional information is given about production volumes and market price evolution. Also, the entity reported on the annual report the information that production equipment family is described by an average 6 years economic lifetime. Instead, the sector the entity operate in announced statistics revealing an average of 4 years economic lifetime.

Table 5. Depreciation method and financial information value relevance

Year	Production on PBU	Price evolution	Turnover on PBU
N	12.000	1,30	15.600
N+1	14.000	1,50	21.000
N+2	20.000	1,60	32.000
N+3	18.000	1,65	29.700
N+4	14.000	1,65	23.100
N+5	10.000	1,60	16.000
Total	88.000		137.400

The calculation determined bellow reveal an essential conclusion, using income-based proportional depreciation method could deter financial reporting quality. The volumes that the equipment can produce are clear, from the specification catalogue, concerning maximum lifetime in terms of maximum units of production. In addition, the entity has under control the level of volumes that are planned to be produced with the equipment. Instead, the entity does not have complete control on product market price (only in case of monopoly), reason why the estimation generated using depreciation based on income patterns are described by higher variation (lower quality) on an yearly basis (higher coefficient of variation with approximately 4,46%). Moreover, in case of hyperinflation, the accounting treatment for depreciation expenses become even more complex and volatile.

Table 7. Implication of Income Patterns on Calculating Lease Asset Depreciation

Year	Annual depreciation (linear)	Asset value (net)	Annual depreciation (production based)	Asset value (net)	Annual depreciation (income based)	Asset value (net)
N		60.000		60.000		60.000
	10.000	50.000	8.182	51.818	6.812	53.188
N+1	10.000	40.000	9.545	42.273	9.170	44.017
N+2	10.000	30.000	13.636	28.636	13.974	30.044
N+3	10.000	20.000	12.273	16.364	12.969	17.074
N+4	10.000	10.000	9.545	6.818	10.087	6.987
N+5	10.000	0	6.818	0	6.987	0
Total	60000	-				
Variance in annual depreciation deflated with the asset initial value			25,39%		29,85%	

If we look on the national accounts, we realize that this amendment (rejected by IASB) does not have any impact on the consumption of fixed capital. Indeed, the depreciation method of fixed assets is quite different from the models used in business accounts. Consumption of fixed capital is estimated on the basis of the stock of fixed assets and the expected average economic life of the different categories of those goods (ESA, 2010). Gross Fixed Capital Formation account (P.51g) consist of Consumption of Fixed Capital account (P.51c) and Net Fixed Capital Formation account (P.51n). The national account of fixed capital consumption include the depreciation, but the disposals of damaged assets as well.

The depreciation of our equipment will be integrated on the aggregate account P.51c, meaning a decrease on depreciation will translate into an increase in GDP, according to the model reflected on Table 6. However, there is an inconsistency between the business account for depreciation and the national account for depreciation. The inconsistency is generated by the way the depreciation is calculated at macroeconomic level. Unfortunately, to calculate depreciation based on the stock of fixed assets and the expected average economic life of the assets, means we have to make an estimation that could incorporate the variance effect of a heterogeneity on a class of assets, for the economic lifetime. First, of all, this heterogeneity is led by entity-based specific activities. Secondly, there could be significant sector-based assets management practices, generated by different acquisition, use or maintenance of PPEs. Third, using survival analysis could help national accountants to improve depreciation measure quality, but only in case they are familiar with such data mining advanced techniques. Partial solution could be the assumption asked in ESA 2010 framework, the one that suppose assets depreciation is calculated mainly on the linear method of depreciation.

Let us consider the information that our entity has an equipment family with an average lifetime of 6 years, while the sector the entity operate in reported for similar equipment family an average lifetime of 4 years. As ESA 2010 framework assume

the depreciation is calculated using the linear method, we will consider the linear method, meaning a pro-rata of 16,67% for Trevis SRL equipment, while for the national account we will have to consider a pro-rata of 25%. This translate into a significantly higher depreciation reported on the national account, compared to the depreciation recognized on the business account.

Conclusions

The correlation between macroeconomic data and business accounts is essential for decision-making factors. Opportune and effective institutional strategies and policies can be drawn-up only if they base on accurate national balance sheet. Any adjustments within the aggregation process of business accounts has to be minimal. Otherwise, there will appear the risk the national budget will be, either overestimated or underestimated. The higher risk is even more serious in case of GDP overestimation.

In order to avoid this risk, there has to be made a reconciliation between the financial statements structure and the ESA 2010 framework, in order inconsistencies can be eliminated the inconsistencies. Only this way the microeconomic data could predict fairly the perspective of GDP, and consequently the economic growth potential. There have to be reduced the number of exceptions from general treatment prescribed by ESA 2010 framework. Both ESA 2010 framework and IFRSs have to be oriented, within the revision project, towards an improvement on reporting better economic value added information. Both pillars have to reconcile in terms of disclosure of information concerning sustainability reporting.

However, there remain questions without a clear prospective solution, like is the case of how business accounts standard-setters will start cooperating closer with national accounts standard-setters. Are they any perspectives on preparing a guideline containing a core set of tools that can ensure proper and effective controls on the quality of aggregate financial information? Is it a priority of IPSASB and IASB to reach a high degree of harmonization and which would be the timeline they consider to this objective? Is it possible a convergence of the Conceptual Framework for Financial Reporting issued by IASB with the framework derived from ESA 2010?

We invite for reflection as this area of study seem to be less important on researchers and professionals short to mid-term priorities.

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