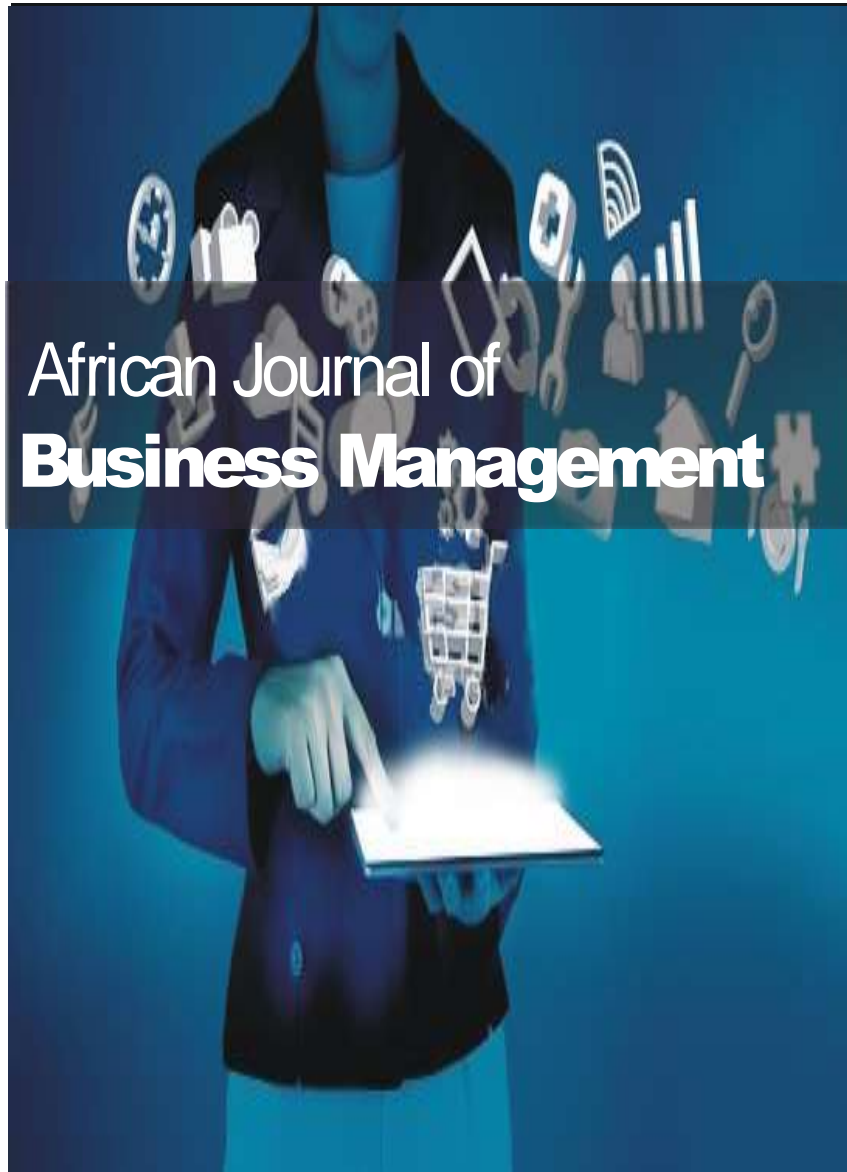


OPEN ACCESS



African Journal of **Business Management**

14 May 2019
ISSN: 1993-8233
DOI: 10.5897/AJBM
www.academicjournals.org

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Full Length Research Paper

Board gender diversity, non-executive director's composition and corporate performance: evidence from listed firms in Nigeria

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Received 1 February, 2019; Accepted 7 March, 2019

This paper examined the nexus between board gender diversity, non-executive director's composition and corporate performance (return on asset) of listed firms on the Nigerian Stock Exchange. Ex-post facto research design was employed and agency theory formed the basis of theoretical framework of the study. Data of board gender diversity, non-executive director's composition and return on asset were obtained for seventy-two listed firms during the period 2006 to 2016. The data obtained were analyzed by means of Ordinary Least Square (OLS) estimation technique. The analyses revealed that board gender diversity has substantial effect on corporate performance (return on asset) of listed firms on the Nigerian Stock Exchange. Contrarily, non-executive director's composition has no significant effect. On the basis of the findings, it was recommended that listed firms should give more value to diversity in their board composition. Also, firms should pay less attention to the composition of their board, but rather focus on quality and integrity of members of the board. More importantly, the regulatory bodies like Security and Exchange Commission and Central Bank of Nigeria, should set standards for the inclusion of reasonable number of women on the board of listed firms in Nigeria.

Key words: Board gender diversity, non-executive director's composition, return on asset, corporate governance.

INTRODUCTION

In Nigeria, the emphasis on the need for corporate governance reform sprung up with the incidence of fraudulent reporting as in the case of African Petroleum, Cardbury Plc., Oceanic Bank Plc., Afribank Nigeria Plc., among others. This was caused by poor governance, management, high gearing ratios, overtrading, creative accounting, and fraud. No doubt, corporate failures in Nigeria and the world over, have kept corporate

governance on the lens; thus making shareholders and other stakeholders to place high demand for effective corporate governance. In order to meet with the soaring demands by shareholders for effective corporate governance, numerous codes of governance were instituted aimed at resolving this concern.

Fundamental among these codes include; the Central Bank of Nigeria (CBN) reviewed Code 2014, Bank and

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Other Financial Institution Act (BOFIA) Code, Securities and Exchange Commission (SEC) reviewed Code 2011,

National Insurance Commission (NAICOM) Code 2009, and Pension Commission (PENCOM) Code 2008. These codes were established with the view to enhancing transparency and accountability in the financial sector, so that the Nigerian economy can forge ahead. Despite the provisions of the abovementioned codes of corporate governance, the roles played by board members in the recent collapse of some financial institutions have spurred series of arguments.

In Nigeria, studies like Sanda et al. (2005), Kajola (2008), and Akhalumeh et al. (2011) have studied corporate governance characteristics and firm performance, but did not consider the elements of board gender diversity, and non-executive director's composition as they affect corporate performance. In addition, prior research has shown that one stream of researchers found that board gender diversity and non-executive director's composition were able to provide impact on corporate performance (Haniffa and Hudaib, 2006; Joh, 2003; Leech and Leahy, 1991), whereas, another stream of researchers found that there is no association between board gender diversity, non-executive director's composition and corporate performance (Demsetz and Lehn, 1985; Dewatripont and Tirole, 1994). To reconcile these inconsistencies and inconclusive findings from previous studies, this study was carried out with the view to test if there is a nexus between board gender diversity, non-executive director's composition and corporate performance (return on asset) in Nigeria.

REVIEW OF RELATED LITERATURE

Board gender diversity

Board gender diversity depicts the varied personal characteristics that make the workforce heterogeneous (Robbins and DeCenzo, 2005). Board gender diversity can be said to be those varied personal characteristics and physical differences in people who are members of the board that make the board heterogeneous, and more effective in proffering wider range of solutions. Board gender diversity is a component of board diversity. It refers to the variation in the number of women on the board of corporate firms. It is worthy to note that women play an important role in compliance with legal aspects and corporate performance (Fallan, 1999; Kastlunger et al., 2010).

The Higgs Derek Report (2003) in the United States argues that board gender diversity could improve the effectiveness of the board as well as performance, depending on the masculine and feminine traits. The report thus recommends that companies can benefit from the existence of professional women in their boards.

Kastlunger et al. (2010) showed the perfectionist feminine values in corporate performance related matters. However, Adams and Ferreira (2009) suggest that women exert intensive monitoring of managers' actions and have a high percentage of attendance at meetings.

Non-executive director's composition

Non-executive director are directors not involved in the day to day management and not a full time salaried employee of the company or its subsidiaries and not meeting the criteria for independence. The UK code of corporate governance (2012) defines a non-executive director as an external director who is a member of the board of directors of a company that does not form part of the executive management team. They are not employees of the company or affiliated with it in any other way and are differentiated from inside directors (executive directors) who are members of the board who also serve or previously served as executive managers of the company. They usually stand back from the day-to-day running of the business to enable them provide dispassionate and objective criticism knowing fully-well that they have the same legal duties, responsibilities and potential liabilities as their executive counterparts.

Fundamentally, the CBN code of corporate governance provides that non-executive directors should be persons of high calibre with broad experience, integrity and credibility. They should be key members of the board that brings independent judgment as well as necessary scrutiny to the proposals and actions of the management and executive directors especially on issues of strategy, performance evaluation and key appointments. According to the Financial Reporting Council (2012), non-executive directors are appointed for an initial term of three years. The term may be renewed if both the director and the board agree. Appointments are subject to the provisions of the Companies Act and the articles of association, including those relating to election/re-election by the shareholders at annual general meetings and the removal of directors. There is an apparent presumption that boards with significant outside directors (non-executive directors) will make different and perhaps better decisions than boards dominated by inside directors (executive directors). However, the nexus between non-executive directors' composition and corporate performance has been less investigated.

Corporate performance

In this paper, corporate performance was measured by return on assets (ROA). Return on assets is a measure of an entity's performance and is the profit after tax/total assets. ROA shows how much profit an entity generates with money resulting from the utilization of asset. Prior

empirical evidences like Akpan and Riman (2012); Abdullahi (2014) and Azotoru et al. (2017) have shown that there is a significant relationship between return on assets and corporate governance characteristics measures of firms.

On the other hand, there are other studies that found no significant relationship between return on assets and corporate governance characteristics measures of firms (Abu et al., 2016; Adeusi et al., 2013). Consequently, ROA was included in the study variable as the dependent variable in order to confirm or refute prior empirical evidence on the relationship between corporate governance characteristics measures and performance of listed firms in Nigeria.

Theoretical framework

Corporate governance is dovetailed with the body of knowledge and theories as posited by several authors like Cyert and March (1963); Pound (1963); Alchian and Demstetz (1972); Agyris (1973); Jensen and Meckling (1976); Freeman (1984); Donaldson and Davis (1991); Clarkson (1995); Hawley and Williams (1996); Williamson (1996); Hillman et al. (2000). It is noteworthy that the theories of corporate governance are relevant in understanding the role of corporate governance in the performance of firms and corporate reporting. These theories range from the agency theory which was expanded into stewardship theory, stakeholder theory, resource dependency theory, transaction cost theory, political theory and ethics related theories. In spite of the bulk of theories that relate to the theme of this paper, the theoretical framework was anchored on agency theory.

The “model of man” underlying agency and organizational economics is that of self-interested actor rationally maximizing his own personal economic gain. Although the model is individualistic, it is predicated upon the notion of an in-built conflict of interest between owners and managers of resources of business firms (Donaldson and Davies, 1991). The agency theory (AGT) recognizes that business firm is made up of the principal (owners of wealth) and agent (managers of wealth). The agent is working for the principal and the principal remunerates the agent for his/her services. Vladu and Matis (2010) posit that owing to the separation of ownership from management, conflict of interest may arise “since the root of opportunistic behaviour is considered to be located in the problems that this theory raises having the fact that this particular theory is seen as theory of conflicts between managers and shareholders”.

Agency theory is based on the principle of contract which exists between the principal and the agent. The theory was expounded by Alchian and Demsetz and further refined by Jensen and Meckling (Abdullah and Valentine, 2009). The agency theory is defined as the relationship under which one or more persons (the principal) and another person (the agent) perform some

service on their behalf and delegate some decision making authority to the agent. Within the framework of a corporation, agency relationship exists between the shareholders (principal) and the company executives and managers (agents). Thus, the agent is expected to act in the best interest of the principal, but on the contrary the agent may not make decisions on the principal’s interest. This problem was highlighted by Ross (1973) and further presented by Jensen and Meckling (1976).

There are three types of agency costs as observed by Jensen and Meckling (1976) and Matos (2001), they include: bonding cost, residual cost and monitoring cost. The bonding, residual and monitoring costs in most cases reduce the profitability of business firms. The bonding cost includes the expenses associated with appointing external auditors for careful scrutiny of governance principles in a firm. The residual cost includes expenses related to the appointment of an independent board for monitoring firm’s activities and in carrying out social responsibilities. The monitoring costs are pervasive costs and are borne by the shareholders initially for supervising the activities of the managers. An efficient management incurs less monitoring costs and thereby improves shareholders’ wealth (Al-Malkawi et al., 2012), which happens to be the primary objective of business firm (wealth maximization).

The motivation to investigate the association between corporate governance and financial reporting of a firm can be seen from a dual perspective. First, in accordance with theories of costs, managers have an incentive to choose a level of governance to ensure compliance with all regulations for investors’ protection. Second, consideration should be accorded to the best governance practices, such as improved communication and a low level of vulnerability may cause investors to demand a lower risk premium, and managers can obtain an incentive to increase the efficiency, on a voluntary basis, of the company’s governance practices, with some low implementation costs. Thus, financial reporting by firms is significantly influenced by the form of implemented governance, respectively the decision makers’ ability to identify and harmonize the interests of the most significant social partners. The theoretical perspective that guided the current study is linked to the idea that firms with an efficient governance structure have better financial reporting than those without it.

Some prior studies

The review of prior studies covered governance measures like board gender diversity and non-executive director’s composition and corporate performance in both Nigeria and other countries. For instance, Olatunji and Ojeka (2011) examined the effect of the proportion of non-executive directors on the profitability of the listed banks in Nigeria. A panel data regression analysis was used in analyzing the variables under consideration. The study

discovered that a negative but significant relationship exists between return on equity and non-executive directors. The study concludes that the negative association is likely to be because non-executive directors are too busy with other commitments and are only involved with the company business on a part-time basis.

Ujunwa et al. (2012) investigated the impact of corporate board diversity on the financial performance of Nigerian quoted firms using a panel data of 122 quoted Nigerian firms. The aspects of board diversity studied comprise board nationality, board gender and board ethnicity. The fixed effect generalized Least Square Regression is used to examine the impact of board diversity on firm performance for the period: 1991-2008. The results show that gender diversity was negatively linked with firm performance, while board nationality and board ethnicity were positive in predicting firm performance.

Kwanbo and Abdul-Qadir (2013) investigated the impact of board composition on the performance of banks considered healthy by the central bank of Nigeria. The study revealed that; board composition do not significantly relate and impact on the return on capital employed of banks in Nigeria. Secondly, executive duality does not significantly relate and impact on the return on capital employed of banks in Nigeria.

A study by Ironkwe and Adeo (2014) was conducted on corporate governance and financial firms' performance using a total of 65 respondents from 40 financial firms in Nigeria by means of correlation analysis. Findings of the study showed that board size, chief executive status, and board composition significantly and positively influence the level of profitability among financial firms in Nigeria.

In Zimbabwe, Sandada et al. (2015) showed how board characteristics influence business performance among non-life insurance firms by means of regression statistical tool. The findings of the study showed that board characteristics (such as board composition, diversity and size) demonstrate a statistically significant positive predictive relationship with performance measures (gross premium written and customer retention) of non-life insurance firm in Zimbabwe.

Abu et al. (2016) investigated the influence of Board Characteristics on the Financial Performance of listed deposit money banks in Nigeria for the period of 2005-2014. The study categorically seeks to examine whether board characteristics (proxy by executive director, independent director, grey director, women director and foreign director) has any influence on the Performance of listed Deposit Money Banks in Nigeria. The study adopted multiple regression technique as a tool of analysis and data were collected from secondary source through the annual reports and accounts of the sampled banks. The findings show that foreign director is significantly and positively correlated or influenced the Performance of deposit money bank, while the grey

director have negative significant effect on the Performance of deposit money banks in Nigeria.

Chandrasekharan (2012) examined the influence of board diversity on financial performance of listed deposit money banks in Nigeria using fixed effect regression model. The results suggest that board diversity has significant influence on financial performance of deposit money banks in Nigeria. Also, the study showed that both female and foreign directors have positive and significant influence on return on assets. On the other hand, board ethnicity has negative and insignificant influence on bank performance.

Hykaj (2016) studied corporate governance, institutional ownership and their effects on financial performance of 105 US Equity Real Estate Investment Trusts during 2007-2012 by means of regression statistical tool. Findings showed that the existence of women on the board influences return on assets and equity. A similar study done by Tariq and Naveed (2016) on the effects of board and ownership structure on firm financial performance in South Africa using an economic value added perspective during the period 2009-2014, showed that there is a positive and significant relationship between the proportion of non-executive directors, board size and board meeting and firm performance.

Azutoru et al. (2017) assessed the effect of corporate governance measures on financial performance of insurance firms in Nigeria. Board size, board independence, executive directors' remuneration, non-executive directors' remuneration, directors' ownership, institutional ownership, foreign ownership and firm size were the variables of the study. The fixed effects model was used to evaluate the effect of these corporate governance measures on financial performance of insurance firms in Nigeria. Findings revealed that board size and non-executive directors' remuneration have negative and significant effect on financial performance (ROA) of insurance firms in Nigeria while board independence and institutional ownership showed a positive and significant impact on the financial performance. Besides, executive directors composition showed no significant impact on the financial performance of insurance firms in Nigeria.

Temile et al. (2018) examined the impact of gender diversity, earnings management practices and corporate performance of quoted firms in Nigerian. The study is motivated by the nature of the Nigerian business environment and the need for effective corporate performance by firms in different sectors of the economy. The study adopts the descriptive research design. The secondary data collection method was employed, while data were obtained from the annual financial reports of the selected 50 firms over a period of 5 years (2010-2014). The study discovered a negative but non-significant relationship between female chief executive officers, female memberships on audit committees and firms' financial performance in Nigeria. However, female

Table 1. Descriptive statistics of the dependent & independent variables.

Variable	Obs	Mean	Std.Dev	Min	Max
Retoa	792	3.056705	19.13913	-188.95	232.62
Gendiv	792	0.814141	0.0985663	-014	0.8
Nedc	792	5.847222	2.426808	-1	15
Fsize	792	6.88524	0.8147998	4.7	9

Source: Secondary Data from STATA Output (2018).

chief financial officer, proportion of females on the board and leverage had a positive impact on the corporate performance of the firms in Nigeria.

METHODOLOGY

This paper adopted the *ex-post facto* research design and the population comprised all firms listed on the Nigerian Stock Exchange during the period 2006-2016. However, there are 196 listed firms as at 31st December, 2016 (Nigerian Stock Exchange Factbook, 2016). The purposive sampling technique was adopted in selecting the sample from firms listed on the Nigerian Stock Exchange with complete dataset needed for this study. The complete dataset refers to firms that have the corporate governance characteristics measures (board gender diversity, and non-executive director's and corporate performance measure (return on asset). Thus, yearly data in respect of selected seventy-two listed firms were obtained for a period of 11years spanning from 2006-2016. The empirical model for this study was based on governance measures of non-executive director's composition and board gender diversity. The model is informed by studies conducted by Kajola (2008); Qasim (2014); Jeroh and Okoro (2015); Chandrasekharan (2012) and Badara (2016). The dependent variable is corporate performance (return on asset), dependent (board gender diversity and non-executive director's composition) and intervening variables (firm Size). Given the above, a multi-regression model was used to analyze the nexus between the variables.

$$RETOA = F(BGENDIV, FSIZE) \tag{1}$$

$$RETOA = F(NEDC, FSIZE) \tag{2}$$

$$RETOA_{it} = \beta_0 + \beta_1 BGENDIV + \beta_2 FSIZE + \epsilon_t \tag{3}$$

$$RETOA_{it} = \beta_0 + \beta_1 NEDC + \beta_2 FSIZE + \epsilon_t \tag{4}$$

Variable description

- BGENDIV = Board Gender Diversity
- NEDC = Non-Executive Director's Composition
- FSIZE = Firm Size
- RETOA = Return on Assets
- ϵ_t = Error Term

The Ordinary Least Square (OLS) statistical technique was adopted in the analysis of data and analysis was done using STATA 13.0.

RESULTS AND DISCUSSION

Table 1 reports the descriptive statistics of the dependent

(return on assets: retoa), independent (board gender diversity: gendiv; and non-executive director composition: nedc) and intervening (firm size: fsize) variables. From the table, the mean value of retoa, gendiv, nedc and fsize were 3.05671, 0.08141, 5.84722 and 6.8852 respectively while the standard deviation values were 19.13913, 0.985663, 2.426808 and 0.8147998 respectively. It is clear from the descriptive statistics that retoa recorded the highest maximum (232.62) and minimum (-188.95) values. This implies that there were significant variations in all the variables over the period under review. Also, the standard deviation is an indication that the variables are not constant over time, hence the nexus between board gender diversity, non-executive director's composition and corporate performance can be further analyzed.

The skewness/kurtosis tests of normality of the dependent and independent variables are presented in Table 2. Taking into consideration the kurtosis, fsize (11.40) is leptokurtic while all the other variables are platykurtic. This implies that there is the presence of thinner tail than the normal distribution. This suggests the presence of fatter tail than the normal distribution. The distribution of a series is said to be leptokurtic when the kurtosis is greater than three but platykurtic when the kurtosis is less than three. A variable is said to be normally distributed on the basis of the kurtosis when the value is exactly three. Since none of the variables considered satisfies the condition of the normality, it is observed that they are not normally distributed. Furthermore, we conducted heteroskedasticity test in order to resolve the problem of normality via Variance Inflator Factor (VIF) Table 3. The mean VIF for all variables did not exceed the standardized VIF level (1.06 <10.0), suggesting that there is the absence of multicollinearity among the variables. The result for the nexus between return on asset (retoa) and board gender diversity (gendiv) of listed firms in Nigeria are presented in Table 4.

From the table, the results showed that a significant nexus exists between retoa and gendiv, although, positive relationship (f5, 786 = 7.10). Thus, there is relationship between retoa and gendiv of listed firms in Nigeria. This implies that board gender diversity has significant effect on corporate performance of firms listed on the Nigerian Stock Exchange (p-value 0.013<0.05). More importantly is the fact that the t-value (t=2.50; p=

Table 2. Skewness/Kurtosis tests of normality of the dependent and independent variables.

Variable	Obs	Pr (Skewness)	Pr (Kurtosis)	Joint	
				Adj chi 2 (2)	Prob> chi 2
Retoa	792	0.0000	0.0000	-188.95	232.62
Gendiv	792	0.0000	0.0000	-014	0.8
Nedc	792	0.0000	0.0023	-1	15
Fsize	792	0.7554	0.0005	4.7	9

Source: Secondary Data from STATA Output, 2018.

Table 3. Variance inflator factor test.

Gendiv	1.02	0.976454
Mean VIF	1.06	

Source: Secondary Data from STATA Output, 2018.

Table 4: Summary for Return on Assets and Board Gender Diversity

Source	ss	df	ms
Model	12528.5468	5	2505.70935
Residual	277219.859	786	352.697022
Total	289748.406	791	366.306455

	Coef.	Std. Err.	t	p>(t)	95% conf. interval
retoa					
gendiv	17.12079	6.855802	2.50	0.013	3.662946 30.57864

$R^2 = 0.0432$, $f(5, 786) = 7.10$, $adj.r^2 = 0.0372$, $p = 0.013$

Source: Secondary Data from STATA Output, 2018

Table 5: Summary for Return on Assets and Non – Executive Directors Composition

Source	ss	df	ms
Model	12528.5468	5	2505.70935
Residual	277219.859	786	352.697022
Total	289748.406	791	366.306455

	Coef.	Std. Err.	t	p>(t)	95% conf.interval
retoa					
nedc	0.0809222	0.2876245	0.28	0.779	-0.4836809 0.6455254

$R^2 = 0.0432$, $f(5, 786) = 7.10$, $adj.r^2 = 0.0372$, $p = 0.779$

Source: Secondary Data from STATA Output, 2018

0.013<0.05) implies that board gender diversity is statistically significant in explaining corporate performance (retoa) of listed firms in Nigeria.

The result for the nexus between return on asset (retoa) and non-executive director composition (nedc) of listed firms in Nigeria are presented in Table 5. From the table, the results showed that a significant relationship exists between retoa and nedc, although, positive relationship ($f_5, 786 = 7.10$). Thus, there is relationship

between retoa and nedc of listed firms in Nigeria. Besides, the t-value ($t=0.28$; $p= 0.779>0.05$) implies that non-executive director's composition is not statistically significant in explaining corporate performance (retoa).

CONCLUSION AND RECOMMENDATIONS

This study examined the nexus between board gender

diversity, non-executive director's composition and corporate performance (return on asset) of listed firms on the Nigerian Stock Exchange. The study thus concludes that board gender diversity has substantial effect on corporate performance measure (return on asset) of listed firms on the Nigerian Stock Exchange while non-executive director's composition has no significant effect on corporate performance measure of the study. The findings of the study are in agreement with prior studies conducted by Kyereboah-Coleman (2008), Kajola (2008), Enobakhare (2010) and Johl et al. (2015).

On the basis of the findings, it was recommended that listed firms in Nigeria should give value to diversity in their board composition, as gender diversity in the board increases corporate performance. In addition, listed firms in Nigeria should pay less attention to the composition of their board, but rather focus on the quality and integrity of members of the board. More importantly, that regulatory bodies such as Security and Exchange Commission and Central Bank of Nigeria, should set standards for the inclusion of reasonable number of women on the board of listed firms.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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Full Length Research Paper

Determinants of financial performance in private banks: A case in Ethiopia

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Received 11 February, 2019; Accepted 4 April, 2019

The objective of this study is to empirically assess the effect of bank-specific and macroeconomic determinants of Ethiopian private commercial banks financial performance using three measures namely, return on assets (ROA), return on equity (ROE) and economic value added (EVA) for the period 2006 to 2015 by using multiple regression on a sample of seven private commercial banks. The results indicated that performance persists to some extent, indicating the existence of relatively fair competitive market in private commercial banking environment. Regarding the explanatory variables from bank-specific determinants, Capital adequacy (CAP has a significant and positive relation with ROA and significant and negative relation with ROE and EVA. In addition, ASQ has a significant and negative relation with ROA and insignificant and negative relation with ROE and EVA. Whereas ME affect bank performance (ROA, ROE and EVA) significantly and negatively. On the other hand, LIQ and BS affect bank performance (ROA, ROE and EVA) significantly and positively. Furthermore, GDP has an outsized positive and significant effect on both ROE and EVA but an insignificant effect on ROA. Therefore, Ethiopian commercial banks policy makers and managers should give high emphasis on CAP, ASQ, ME, LIQ, BS and GDP as these were found to have significant effect on private commercial banks financial performance.

Key words: Financial performance, return on assets (ROA), return on equity (ROE) and economic value added (EVA).

INTRODUCTION

In any economy there are five basic components of financial environment. These are money, financial markets, financial instruments, rules and regulations. Among the various financial institutions, banks are the most active players and fundamental components in the financial system (Dhanabhakya and Kavitha, 2012). According to Rashid (2010), a bank is a financial

institution that receives deposits from the public or depositor and gives loans to the deficit units and the borrowers, in the process gaining from the spread of the different interest charged. Concerning the scope of their advantages, banks are very important to economic growth of any economy. Moreover, banks are basic components of the financial system and significant

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players in financial markets (Guisse, 2012). According to Brigham and Houston (2009), banks have control over a large part of the supply of money in circulation. Through their influence over the volume of bank money, they can influence nature and character of production in any country.

Finance literature indicated banks' performances get a great deal of attention, that realizing the sector serve a crucial role in the economy. The performance of a bank is explained in different terms such as profitability, efficiency, competition, concentration and productivity. To resist negative shocks and contribute to the stability of the financial system, banks acquire better performances and better implementation ability (Athanasoglou et al., 2008). In the financial environment, profitability of the banking system has been one of the hot issues. Since, the banking industry play a major role in the financial system of a country and it supports the competitiveness of the financial institution.

In different countries, many researchers have made investigation on this area by considering the importance and the hot issue of profitability in banking sector. Goddard et al. (2004), suggested that among modeled determinants of profitability incorporate, size, capital asset ratio, credit risk and ownership were the major determinants of banks profitability. In addition to the above, Al Karim and Alam (2013), stated that it has been marked that there is a positive relation of economic value added (EVA) with bank size and asset management while negative relation with the operational efficiency and credit risk.

In the case of Sub-Sahara African (SSA) countries banking sector, the profitability of the commercial banking industries are affected by different internal and external factors. Munyambonera (2010) confirms the importance of bank level factors such as assets, operational efficiency, capital adequacy and liquidity, and macroeconomic factors such as growth in GDP and inflation in explaining bank profitability in SSA. He recommended that the findings call for a number of policy interventions in SSA, given the low poor performance in terms of profitability. Low profitability levels reflected lack of competitiveness and inefficiency in the SSA banking sector. In addition, policies would probably need to be directed at strengthening supportive information and bank supervision, improving risk management and technology, developing inter-banking relationship, equity markets and securities, and at sustaining macroeconomic stability.

For the past decades, the banking environment in Ethiopia has undergone regulatory and financial reforms like other African countries and the rest of developing world. These reforms have brought about many structural changes in the banking sector of the country and have also encouraged private banks to enter and expand their operations in the industry (Tesfaye, 2014). A study by Amdemikael (2012) on seven commercial banks in Ethiopia, covering the period of 2000-2011 and using a

mixed methods research approach finds out that in the Ethiopian banking industry there was excess liquidity ratio. In contrary to this, the existence of a very serious liquidity problem in the Ethiopian banking industry, particularly in the case of private banks which may result from some regulations imposed by the government like the credit cap and the forced investment on bonds which amounts 27% of their total loan, that is, both these regulations are exercised on private banks only.

A study by Zerayehu et al. (2013) using qualitative, descriptive and econometric techniques have found that in Ethiopia, the financial system is dominated by banking sector even though the sector is relatively underdeveloped, closed and under-banked economy compared to those of other countries in the world. In most cases, commercial bank of Ethiopia is one of the leading banks in Ethiopia and still seizes quasi-monopoly power. The Ethiopian banking industry can be characterized as highly profitable, concentrated and moderately competitive. However, the banking industry in Ethiopia is characterized by operational inefficiency, little and insufficient competition, and perhaps can be distinguished by its market concentration towards the big government owned commercial bank and having undiversified ownership structure.

In light of these facts, a lot of research work has so far taken place concerning the issue of determinants of bank performance. For example, the studies on the determinants of Ethiopian commercial banks profitability (Birhanu, 2012) used a mixed approach, and without including the recently established banks like, lion international bank, cooperative bank of Oromia, Zemen bank and Oromia International bank, have concluded that bank's capital, liquidity status, bank size and macro-economic variables such real GDP growth rates have significant impact on banks' profitability. On the other hand, Tesfaye (2014), by adopting a quantitative approach and without including the recently established banks like, Oromia International bank, lion international bank, cooperative bank of Oromia and zemen bank, concluded that bank's capital, liquidity status, bank size and macro-economic variables such real GDP growth rates have no significant impact on banks' profitability.

Based on the above discussions, the purpose of this study was to evaluate the determinants of financial performance and to find out the impact of accounting measures (return on assets (ROA), return on equity (ROE) and EVA) of Ethiopian private commercial banks financial performance (EPCBFP) for the period 2006-2015.

REVIEW OF LITERATURE

Economic Value Added (EVA)

EVA is a financial performance measure that was

developed by Stern Steward to calculate the true economic profit produced by a company. It helps to measure the true profitability of the company by considering the cost of equity (Brigham and Houston, 2009). Traditional financial measures reflect historical performance, which consider only the effects of using the invested capital into affair and not the cost of capital too. Some of the traditional financial measures are ROA, ROE and EPS. Most companies have better financial performances. However, their activities do not generate value but drive to a permanent loss in value. The modern measures are based on the concept 'to create value'. It can be confirmed theoretically that EVA is superior to other measures of performance because it accounts for the full cost of capital, including the cost of equity (Dumitru and Dumitru, 2009).

The connection between ROE and EVA

According to Brigham and Houston (2009), EVA is different from traditional accounting profit because EVA reflects the cost of equity as well as the cost of debt. Indeed, using the previous example, we could also express EVA as net income minus the dollar cost of equity.

$$[EVA = \text{Net Income} - [\text{Equity capital} \times \text{Cost of equity capital}]]$$

This expression can be rewritten as follows:

$$[EVA = \text{Equity capital} \left(\frac{\text{Net income}}{\text{Equity capital}} \right) - \text{Cost of equity capital}]$$

$$[EVA = (\text{Equity capital})(\text{ROE} - \text{Cost of equity capital})]$$

The last expression indicates that EVA depends on three factors; rate of return (as reflected in ROE), risk (which affects the cost of equity), and size (which is measured by the equity employed).

Link between EVA and MVA

According to Stewart (1991), EVA comes closer than any other measure to capture the true economic profitability of an enterprise and is the performance measure, which is most directly linked to the shareholder value over time. Whereas MVA is a cumulative measure of corporate performance and that it represents the stock market's assessment from a particular time onwards of the NPV of all of a company's past and projected capital projects. EVA can be calculated as follows:

$$EVA = (\text{ROIC} - \text{WACC}) \times \text{IC}$$

Where: ROIC = return on invested capital
WACC = weighted average cost of capital

IC = invested apital (at the beginning of the year)

The ROIC minus the WACC is also called the return spread. When the company is generating surplus returns above its cost of capital and this translates into a higher MVA, EVA and related measures attempt to improve on traditional accounting measures of performance by measuring the economic profits of an enterprise. The link between EVA and MVA is that MVA is the present value of all the future EVAs a company is expected to generate, discounted at the WACC.

Measurements of financial performance

The two broad approaches to the measurements of financial performance are the traditional accounting-based profitability measurements and economic-based value measurements of financial performance. Flamini et al. (2009) pointed out that return on assets (ROA) is a measure of bank profitability which reflects the ability of a bank's management to generate profits from the bank's assets. ROE reflects how effectively a bank management is using shareholders' funds. Banks with lower leverage will generally report higher ROA, but lower ROE. A bank's ROE is affected by its ROA as well as by the bank's degree of financial leverage. Since returns on assets tend to be lower for financial intermediaries, most banks utilize financial leverage heavily to increase return on equity to a competitive level (Ommeren, 2011). Moreover, Mushtaq et al. (2014) study scrutinizes the impact of bank-specific and macro-economic determinants on Pakistan private commercial banks financial performance. For the financial performance measurement, two different measures are used, which are; accounting based measure (ROE) and value based measure (EVA). Pooled regression is applied on balanced data set. Assets quality (ASQ), capital adequacy ratio (CAR), efficiency (EFF), deposits and assets ratio (TDTA) and operating efficiency (OPEFF) are taken as bank-specific variables. Economic growth (GDP) and inflation (INF) are taken as macro-economic variables. Results of the study showed that CAR and GDP were significant and positively related with both the measures that is, EVA and ROE. Other than these variables, EFF and ASQ are significant and have positive association with EVA. Inflation and TDTA are found insignificant in both models.

In line with previous studies that scrutinized the determinants of commercial banks' financial performance, this research relied on three measures of commercial banks' financial performance by using the traditional accounting method (ROA and ROE) and economic measurement method (EVA).

Conceptual framework

This conceptual framework describes the relationship of

financial performance with bank specific and macro-economic determinants based on the theoretical and empirical perspective.

RESEARCH METHODOLOGY

Research design

This empirical study was based on secondary data that was obtained from published and unpublished reports of financial statements and audited annual financial reports of the selected private commercial banks in Ethiopia, and NBE publications for ten years (2006-2015). Panel method of data analysis has been used due to the advantage that it has, as it helps to study the behavior of each bank over time and across space (Gujarati, 2004). The study employed both descriptive and econometrics techniques. Descriptive statistics was applied for trend analysis and the econometrics method was used to assess the effect of selected internal and external variables on the performance of the banking sector.

Model specification

The researchers used a multiple linear regression model of ordinary least square (OLS) method. Modeling was based on panel data techniques. Panel data comprises of both time-series and cross-sectional elements. The cross sectional elements were reflected by the different (the seven) EPCBs and the time-series element was reflected by the period of the study (2006-2015). To examine the determinants of the EPCBFP, the random effects model has been used after testing the correlated random effects using Hausman

$$\Pi_{it} = \alpha + \beta_1(CAP)_{it} + \beta_2(ASQ)_{it} + \beta_3(ME)_{it} + \beta_4(LIQ)_{it} + \beta_5(BS)_{it} + \beta_6(GDP)_{it} + \beta_7(INF)_{it} + \varepsilon_{it}$$

Where: $\beta_1 - \beta_7$ are coefficients for the respective explanatory variables, from this

$\beta_1 - \beta_5$; represent coefficient of bank specific variables,

β_6 and β_7 represent coefficient of macroeconomic variable.

CAP = Capital Adequacy,

ASQ = Asset Quality,

ME = Management Efficiency,

LIQ = Liquidity,

BS= Bank Size,

GDP = Gross Domestic Product (Economic Growth),

INF = Inflation.

The study used three measures to evaluate the determinants of EPCBFP. ROA, ROE, and EVA. Therefore, three econometrical models have been derived as follows:

ROA Model: Return on Assets as dependent variable

$$ROA_{it} = \alpha + \beta_1(CAP)_{it} + \beta_2(ASQ)_{it} + \beta_3(ME)_{it} + \beta_4(LIQ)_{it} + \beta_5(BS)_{it} + \beta_6(GDP)_{it} + \beta_7(INF)_{it} + \varepsilon_{it} \quad (4)$$

ROE Model: Return on Equity as dependent variable

$$ROE_{it} = \alpha + \beta_1(CAP)_{it} + \beta_2(ASQ)_{it} + \beta_3(ME)_{it} + \beta_4(LIQ)_{it} + \beta_5(BS)_{it} + \beta_6(GDP)_{it} + \beta_7(INF)_{it} + \varepsilon_{it} \quad (5)$$

EVA Model: Economic Value Added as dependent variable

$$EVA_{it} = \alpha + \beta_1(CAP)_{it} + \beta_2(ASQ)_{it} + \beta_3(ME)_{it} + \beta_4(LIQ)_{it} + \beta_5(BS)_{it} + \beta_6(GDP)_{it} + \beta_7(INF)_{it} + \varepsilon_{it} \quad (6)$$

Test for the validity of the assumptions of the models. The study used the estimated general least squares (EGLS) of a panel regression technique to analyze the impact of bank specific and macroeconomic determinants on EPCBFP. The general model that was estimated has the following linear form, which was adopted from Davydenko (2010).

$$\Pi_{it} = \alpha + \sum \beta_k X^n_{it} + \varepsilon_{it} \quad (1)$$

Where: Π_{it} is the financial performance of bank i at time t , with $i = 1 \dots N$; $t = 1 \dots T$, α is a constant term, β is coefficient for the respective variables X , X_{it} are k explanatory variables, superscript n denote both internal and external determinants of performance and ε_{it} is the disturbance with v_i of the unobserved individual bank-specific effect and u_{it} is the idiosyncratic error or varies over time and entities. The explanatory variables X_{it} were grouped, according to the above discussion, into bank-specific and macroeconomic variables.

The general specification of model (1) with the X_{it} separated into these two groups of determinants of financial performance was described as follows:

$$\Pi_{it} = \alpha + \sum_{j=1}^J \beta_{kj} X^j_{it} + \sum_{m=1}^M \beta_{km} X^m_{it} + \varepsilon_{it} \quad (2)$$

Where: - The X_{it} with superscripts J and M denote bank-specific and macroeconomic determinants of financial performance respectively.

The equation that account for individual explanatory variables, which was specified for this particular study, is given as follows:

Table 1. Correlated random effects - Hausman test.

Equation: - ROA			
Test cross-section and period random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000
Period random	0.000000	5	1.0000
Cross-section and period random	0.000000	5	1.0000
Equation: - ROE			
Test cross-section and period random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000
Period random	0.000000	5	1.0000
Cross-section and period random	0.000000	5	1.0000
Equation: - EVA			
Test cross-section and period random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000
Period random	0.000000	5	1.0000
Cross-section and period random	0.000000	5	1.0000

Source: Eviews computed result (Null hypothesis: $H_0 = RE > FE$; against $H_a = FE > RE$).

Davydenko (2010) and Athanasoglo et al. (2005) explained that bank profits indicated a tendency to persist over time, reflecting impediments to market competition, informational symmetry, and sensitivity to macroeconomic shocks. But, in the case of EPCBs profitability determinants, since this area is not well known, the persisting of profit is unknown. The researcher of this study has considered this issue in the empirical result and discussion part.

EMPIRICAL RESULTS AND DISCUSSION

Model specification test

To test the relationship between the private commercial banks financial performance measures (ROA, ROE and EVA) and the identified determinants, the theoretical model is developed based on the finance theory from the methodological part of this study. The main issue from Equation 1 panel model is that it is not specified whether it is fixed effects or random effects model that is going to be implemented. Thus, there are two general classes of panel data estimation methods that can be employed in empirical research; random effects models and fixed effects models. The focal point that the researchers need to be concerned here is to test whether individual effects are fixed or random. Moreover, this requires a high concern when the researchers employ the panel data approaches. Thus, it is of interest to determine whether the random effects model passes the Hausman test for the random effects being uncorrelated with the explanatory variables.

According to Hausman test, random effects model is appropriate than the fixed effects model (Brooks, 2008). As shown in Table 1, the Hausman test results for each of the three models (ROA, ROE and EVA), the p-value for each of the three models test is highly insignificant and greater than 1% indicating that the fixed effects model is not appropriate and that the random effects specification is to be preferred since the null hypothesis is accepted. As a result, for this study the researchers employed RE rather than FE for all the three models as the random effects model is the appropriate for this study.

Heteroskedasticity test

Based on the OLS assumptions, Heteroskedasticity test is the first diagnostic test that was analyzed in this study. This is expressed by Brooks (2008), as $\text{var}(u_t) = \sigma^2 < \infty$. It has been assumed thus far that the variance of the errors is constant, σ^2 . This is known as the assumption of homoscedasticity. If the errors do not have a constant variance, they are said to be heteroskedastic. It is the most popular test of homoscedasticity.

Table 2 indicates that the f-statistic versions of the test statistics gave evidence for the presence of Heteroskedasticity (for ROA, ROE and EVA). The Chi-Square test statistics gave the same conclusion that there is no evidence for the presence of Heteroskedasticity (for ROA) and concludes for the presence of Heteroskedasticity (for ROE and EVA).

Table 2. Heteroskedasticity tests: white.

ROA Heteroskedasticity Test: - White			
F-statistic	1.834978	Prob. F(35,34)	0.0399**
Obs R-squared	45.76973	Prob. Chi-Square(35)	0.1052
Scaled explained SS	46.17003	Prob. Chi-Square(35)	0.0981*
ROE Heteroskedasticity Test: - White			
F-statistic	3.408325	Prob. F(35,34)	0.0003***
Obs R-squared	54.47401	Prob. Chi-Square(35)	0.0190**
Scaled explained SS	55.92664	Prob. Chi-Square(35)	0.0138**
EVA Heteroskedasticity Test: - White			
F-statistic	3.876868	Prob. F(35,34)	0.0001***
Obs R-squared	55.97446	Prob. Chi-Square(35)	0.0136**
Scaled explained SS	69.81929	Prob. Chi-Square(35)	0.0004***

Null hypothesis: Ho = there is no Heteroskedasticity; against Ha=there is Heteroskedasticity; *, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews computed results.

The third version of the test statistic (Scaled explained SS), which as the name indicates is based on a normalized version of the explained sum of squares from the auxiliary regression, gave the same conclusion that there is an evidence for the presence of Heteroskedasticity problem since the p-values are less than 10, 5 and 1% for ROA, ROE and EVA, respectively. Consequently, the above tests have proven that there is a Heteroskedasticity problem, that is, the variance of the errors is not constant in ROA, ROE and EVA models. This has been proved by both χ^2 and Scaled explained SS versions rejecting the null hypothesis even at 10% significance level for ROA. The three χ^2 , Scaled explained SS and F-test versions fail to accept the null hypothesis even at 5% significance level for ROE and EVA models. According to Eviews 8 User's Guide II (2013), even though there is the presence of Heteroskedasticity in these models, it can be relieved by implementing an OLS estimation type of method that can treat Heteroskedasticity problems in an OLS equation estimation, known as Estimated General Least Squares, EGLS, (the Random Effect model in this case).

Autocorrelation test

Autocorrelation test is the second vital diagnostic test which was employed in this research. As revealed in Table 3, both the F-statistic and Chi-Square versions of the test statistic provided the same conclusion that there is indication for the presence of a higher order serial correlation in ROA, ROE and EVA models since the p-values are significant at 5% significance level.

According to Gujarati (2004), the existence of a higher order autocorrelation in a given regression model can be

corrected by introducing the first difference of the dependent variable. Similarly, in this research the authors used one period lagged dependent variable to solve the problem of autocorrelation. The result of this study is also consistent with other earlier studies that examined the determinants of commercial banks' profits. Berger et al. (2000), Athanasoglou et al. (2005), Davydenko (2010) and Birhanu (2012) explained that bank profits show a tendency to persist over time (serial correlation between a given time series and a lagged version of itself over successive time intervals), reflecting impediments to market competition, informational symmetry and sensitivity to macroeconomic shocks. To see this empirical fact, the study adopted a dynamic specification of the model by including a one year lagged dependent variable (Π_{it-1}) on the right hand side of the previous equation. The equation augmented with lagged dependent variable is:

$$\Pi_{it} = \alpha + \gamma(\Pi_{it-1}) + \sum_{j=1}^J \beta_{kj}X_{it}^j + \sum_{m=1}^M \beta_{km}X_{it}^m + u_{it}\varepsilon_{it} \quad (7)$$

Where Π_{it-1} is the one-period lagged financial performance and γ is the speed of adjustment to equilibrium. The value of the coefficient of the lagged profitability variable or γ between zero and one implies that performance persists, but they will eventually return to their normal level. The value close to zero means that the industry is competitive, while a value of γ close to one indicates less competitive structure (Athanasoglou et al., 2005). The regression equation of model that includes the lagged dependent variables and all explanatory variables are:

Table 3. Autocorrelation tests.

ROA autocorrelation test			
Breusch-Godfrey serial correlation LM test:			
F-statistic	3.295257	Prob. F(2,60)	0.0439**
Obs R-squared	6.927954	Prob. Chi-Square(2)	0.0313**
ROE autocorrelation test			
Breusch-Godfrey serial correlation LM test:			
F-statistic	4.223293	Prob. F(2,60)	0.0192**
Obs R-squared	8.638284	Prob. Chi-Square(2)	0.0133**
EVA autocorrelation test			
Breusch-Godfrey serial correlation LM test:			
F-statistic	4.775111	Prob. F(2,60)	0.0119**
Obs R-squared	9.611983	Prob. Chi-Square(2)	0.0082***

Source: Eviews computed results (Ho = There is no autocorrelation; against, Ha = There is autocorrelation)

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

$$\begin{aligned}
 & \text{ROA Model} \\
 ROA_{it} = & \alpha + \gamma(ROA_{it-1}) + \beta_1(CAP)_{it} + \beta_2(ASQ)_{it} + \beta_3(ME)_{it} + \beta_4(LIQ)_{it} + \\
 & \beta_5(BS)_{it} + \beta_6(GDP)_{it} + \beta_7(INF)_{it} + \varepsilon_{it}
 \end{aligned} \tag{8}$$

$$\begin{aligned}
 & \text{ROE Model} \\
 ROE_{it} = & \alpha + \gamma(ROE_{it-1}) + \beta_1(CAP)_{it} + \beta_2(ASQ)_{it} + \beta_3(ME)_{it} + \beta_4(LIQ)_{it} + \\
 & \beta_5(BS)_{it} + \beta_6(GDP)_{it} + \beta_7(INF)_{it} + \varepsilon_{it}
 \end{aligned} \tag{9}$$

$$\begin{aligned}
 & \text{EVA Model} \\
 EVA_{it} = & \alpha + \gamma(EVA_{it-1}) + \beta_1(CAP)_{it} + \beta_2(ASQ)_{it} + \beta_3(ME)_{it} + \beta_4(LIQ)_{it} + \\
 & \beta_5(BS)_{it} + \beta_6(GDP)_{it} + \beta_7(INF)_{it} + \varepsilon_{it}
 \end{aligned} \tag{10}$$

Multicollinearity test

According to Kennedy (2008), multicollinearity problem exists when the correlation coefficient among the variables are greater than 0.70. However in this study there is no correlation coefficient that exceeds or even close to 0.70. For this reason, in this study there is no problem of multicollinearity which enhanced the reliability for regression analysis.

Descriptive statistics

The descriptive statistics analyzed after checking the normality of the data, the presence of non-normality probably results in biased means and standard deviations when incorporated in the descriptive statistics. Table 4 indicated the mean, median, maximum, minimum,

standard deviation observation and of each variable in the sample.

As indicated in Table 5, the financial performance measurements (ROA, ROE and EVA) indicated that the EPCBs have an average positive financial performance. Table 5 indicated the mean of ROA, ROE and EVA equals 0.027, 0.222, and 0.039 with a minimum of -0.019, -0.034 and -0.220 and a maximum of 0.050, 0.380 and 0.195 respectively. This revealed the most profitable bank of the sample banks earned 0.050 cents of net income from a single birr of asset investment, 0.38 cents of net income from a single birr of equity capital investment and added 0.195 cents of economic value-added from a single birr cost of equity capital invested. In addition, the maximum losses incurred by some of the sample banks were a loss of -0.019 cents on each birr of asset investment, -0.034 cents on each birr of equity

Table 4. Correlation analysis among explanatory variables.

	Correlation probability						
	CAP	ASQ	ME	LIQ	BS	GDP	INF
CAP	1.000000 -						
ASQ	0.288835 0.0153	1.000000 -					
ME	0.085085 0.4837	0.055738 0.6467	1.000000 -				
LIQ	-0.065318 0.5911	0.286658 0.0161	-0.132672 0.2736	1.000000 -			
BS	-0.535529 0.0000	-0.601054 0.0000	0.073360 0.5462	-0.209636 0.0815	1.000000 -		
GDP	0.148641 0.2194	0.399403 0.0006	-0.245436 0.0406	0.063610 0.6009	-0.509637 0.0000	1.000000 -	
INF	-0.008089 0.9470	0.165761 0.1703	-0.188249 0.1186	0.236296 0.0489	-0.185782 0.1236	0.295529 0.0130	1.000000 -

Source: Eviews computed results.

Table 5. Descriptive statistics of variables.

Statistic	ROA	ROE	EVA	CAP	ASQ	ME	LIQ	BS	GDP	INF
Mean	0.03	0.22	0.04	0.14	0.05	0.54	0.34	22.5	0.105	17.6
Med	0.03	0.22	0.05	0.12	0.04	0.53	0.33	22.7	0.104	12.1
Max	0.05	0.38	0.19	0.54	0.15	0.74	0.56	23.9	0.118	43.8
Min	-0.02	-0.03	-0.22	0.08	0.006	0.34	0.12	19.2	0.088	7.5
Std.	0.01	0.08	0.07	0.06	0.03	0.09	0.11	0.91	0.009	11.7
Obs.	70.00	70.00	70.00	70.0	70.00	70.0	70.0	70.0	70.00	70.0

EVA is not presented in absolute terms of Ethiopian birr rather it has been standardized by means of dividing it by invested capital.

capital investment and -0.220 cents on each birr cost of equity capital invested. That is, the bank's shareholders actually earned -0.220 cents less than they could have earned elsewhere by investing in other shares with the same risk. In line with Habtamu (2012), Birhanu (2012) and Amdemikael (2012), there is less variation in financial performance revealed by the difference between the mean and median. The seven explanatory variables that are displayed in Table 5, asset quality, capital adequacy, liquidity, managerial efficiency, bank size, GDP and inflation rate, also have different characteristics.

Regression

This section contained over all the empirical results of the

regressions and discussions undertaken in order to accomplish the research objective that has been stated to determine the impact of the major internal and external factors on financial performance measures of Ethiopian Private commercial banks. Tables 6 to 8 show the random effects regression results for ROA, ROE, and EVA models respectively. While Tables 9 to 11, report the dynamic model regression results for ROA, ROE and EVA models respectively.

As described in the econometric analysis of autocorrelation test section, the researchers mentioned the presence of higher order autocorrelation in the model. This indicates that financial performance of private commercial banks of Ethiopia is not only explained by internal and external determinant factors. Instead, variability in private commercial banks financial

Table 6. Random effects regression result of all determining variables for ROA model.

Dependent variable: ROA				
Method: Panel EGLS (Two-way random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAP	0.076477	0.028360	2.696593	0.0090*
ASQ	-0.102698	0.042780	-2.400615	0.0194**
ME	-0.037130	0.010090	-3.679755	0.0005***
LIQ	0.041398	0.011100	3.729446	0.0004***
BS	0.006280	0.002255	2.785187	0.0071***
GDP	0.205715	0.160940	1.278211	0.2059
INF	-0.000498	0.000103	-0.482210	0.6314
C	-0.119644	0.063072	-1.896945	0.0625
Weighted statistics				
R-squared	0.661128	F-statistic		17.27997
Adjusted R-squared	0.626752	Prob(F-statistic)		0.000000
S.E. of regression	0.005387	Durbin-Watson stat		1.599459

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews computed results

Table 7. Random effect regression result of all determining variables for ROE model.

Dependent variable: ROE				
Method: Panel EGLS (Two-way random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAP	-0.432250	0.154637	-2.795246	0.0069***
ASQ	-0.279876	0.379480	-0.737526	0.4636
ME	-0.228255	0.079147	-2.883955	0.0054***
LIQ	0.379519	0.085283	4.450122	0.0000***
BS	0.085076	0.027892	3.050218	0.0034***
GDP	3.941625	2.185189	1.803791	0.0761*
INF	-0.000296	0.001497	-0.198054	0.8437
C	-2.124895	0.782619	-2.715110	0.0086
Weighted statistics				
R-squared	0.731630	F-statistic		21.71573
Adjusted R-squared	0.691871	Prob(F-statistic)		0.000000
S.E. of regression	0.037762	Durbin-Watson stat		1.736446

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews computed results.

performance (ROA, ROE and EVA) could be attributable to those variables and its own past trend. The dynamic regression model was developed so as to test the serial correlation between financial performance and its own one-year lagged value. The regression result of this model is described in the Tables 9 to 11.

According to Tables 9 to 11 regression results, the coefficients for the lagged financial performance variables (γ for lag ROA, lag ROE and lag EVA), 0.3532, 0.4559 and 0.4390 were statistically highly significant at 5, 1 and 1% significance level respectively. The relatively low

values of the coefficients of the lagged performance variables indicate the low market power of a single bank in the industry. In the meantime, a series of private banks are being established suggesting that the industry is moving to a competitive structure. In this study γ has a value of approximately 0.35, 0.46 and 0.44 for the three models respectively. Based on the above-mentioned empirical description, the coefficient value of γ indicates that financial performance seem to persist to a moderate extent and implying that it is an indication for the existence of a fairly competitive market structure in the

Table 8. Random effects regression result of all determining variables for EVA model.

Dependent variable: EVA				
Method: Panel EGLS (Two-way random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAP	-0.444019	0.159539	-2.783145	0.0071 ***
ASQ	-0.252012	0.375152	-0.671759	0.5042
ME	-0.249918	0.087717	-2.849143	0.0059 ***
LIQ	0.383307	0.083695	4.579779	0.0000 ***
BS	0.081018	0.029724	2.725715	0.0083 ***
GDP	3.703256	2.192963	1.688700	0.0963 *
INF	-0.000328	0.001465	-0.223649	0.8238
C	-2.190411	0.830350	-2.637937	0.0105
Weighted statistics				
R-squared	0.706354	F-statistic		21.30553
Adjusted R-squared	0.673201	Prob(F-statistic)		0.000000
S.E. of regression	0.037585	Durbin-Watson stat		1.741499

*, **, and *** denotes significance level of 10, 5 and 1%, respectively. EVA is not presented in absolute terms of Ethiopian birr in fact it has been standardized by dividing to invested capital.

Source: Eviews computed results.

Table 9. Dynamic effect regression result of all determining variables for ROA model.

Dependent variable: ROA				
Method: Panel least squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lag ROA	0.353195	0.145010	2.435667	0.0182**
CAP	0.030869	0.012198	2.530743	0.0143**
ASQ	-0.073002	0.036427	-2.004081	0.0501**
ME	-0.031644	0.011735	-2.696677	0.0093***
LIQ	0.024799	0.008271	2.998165	0.0041***
BS	0.002718	0.001940	1.400950	0.1669
GDP	0.026572	0.095521	0.278182	0.7819
INF	-0.000026	0.000057	-0.455899	0.6503
C	-0.037662	0.045130	-0.834534	0.4077
R-squared	0.674913	F-statistic		14.01366
Adjusted R-squared	0.622868	Prob(F-statistic)		0.000000
S.E. of regression	0.005603	Durbin-Watson stat		1.921255

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews computed results.

current Ethiopian private commercial banking sector. Moreover, this makes Ethiopian banks lose their absolute monopoly power on pricing of their services and enjoy the new era of competition. The result of this study is supported by Amdemikael (2012) and Birhanu (2012), that there exists statistically significant persistence of financial performance in Ethiopian commercial banking sector. However, this finding is in contrast with Belayneh (2011), who found that there is no significant evidence for the presence of persistence in financial performance in Ethiopian commercial banks.

The previous Tables 6 to 11 show the empirical results of the estimation of equation model and random effect and dynamic regression models respectively. Accordingly, the regression result for the three random effect regression tables show the higher explanatory power as well as the higher f-statistic values of the equations. The DW statistic result for the three random effects models ROA, ROE and EVA is 1.60, 1.74, and 1.74 respectively. According to the DW, statistic results do not show autocorrelation that occurred between the variables and their respective lagged value.

Accordingly, considering the validity of the models, a model with the highest adjusted R^2 , highest f-statistic values and consisting of more significant variables was selected as the valid model to explain financial performance. In view of this, each determinant was described and analyzed based on the random effects regression output. The results of the estimations are based on equation model 2 using random effects regression.

$$\text{ROA} = - 0.119 + 0.076*\text{CAP} - 0.1023*\text{ASQ} - 0.037*\text{ME} + 0.041*\text{LIQ} + 0.006*\text{BS} + 0.206*\text{GDP} - 0.000050*\text{INF}$$

The discussion of the analysis results for the independent variables is presented subsequently.

Capital adequacy (CAP): The coefficient of capital adequacy was positive and statistically significant (p-value=0.009). Based on the finding, we can conclude that capital adequacy is one of the main determinants of financial performance ROA of private commercial banks in Ethiopia. The finding was consistent with the result of (Athanasoglou et al., 2008; Pasiouras and Kosmidou, 2007; Trujillo, 2011; Belayneh, 2011).

Asset quality (ASQ): The coefficient of asset quality was negative and statistically significant (p-value=0.0194). Based on the finding, we can conclude that ASQ is the main determinant of Ethiopian private commercial banking sector's profitability. In addition, the finding was consistent with the results of (Athanasoglou et al., 2005; Ommeren, 2011; Flamini et al., 2009; Belayneh, 2011; Birhanu, 2012; Amdemikael, 2012; Habtamu, 2012; Tesfaye, 2014).

Management efficiency (ME): The efficiency of the management regarding expenses relative to income, had statistically significant (p-value=0.0005) relationship with financial performance ROA. This has indicated that minimizing private commercial banks expenses would certainly improve the banks financial performance in general and ROA in particular. This finding is supported by (Sufian and Chong, 2008; Athanasoglou et al., 2008; Sastroswito and Suzuki, 2011).

Liquidity ratio (LIQ): For this study, liquidity level of banks had positive and significant (p-value=0.0004) relationship with financial performance ROA, witnessing that better financial performance to some extent also stems from liquid assets other than loans and advances. The significant and outsized negative coefficient for the ratio of non-performing loans to total loans and advances (AQ = -0.102698) to affect ROA, also confirms the above argument proving that bank financial performance ROA stems or drops mainly from loans and advances. There

Random effects regression analysis between ROA and explanatory variables

The first regression analysis conducted to examine the relationship between performance measure ROA and explanatory variables was presented in Table 6. The regression model R-squared and adjusted-R squared statistics was 66.11 and 62.67% respectively. The result shows that the changes in the independent variables explain 62.67% of the changes in the dependent variable. The regression estimation equation applied was:

are studies which found out significant and positive relationship such as (Tefaye, 2014), negative relationship such as (Berger et al., 2000), and even no or insignificant relationship such as (Said and Tumin, 2011).

Bank size (BS): The natural logarithm of total asset, which measures the bank size of banks had statistically significant (p-value=0.0071) relationship with financial performance ROA, indicates that any increase in this variable leads to a little increase in financial performance ROA of private banks in Ethiopia. The result indicates that larger banks enjoy better profit than smaller banks in Ethiopia banking sector. The result of this study is supported by Athanasoglou et al (2005) and Ramlall (2009).

Gross domestic product (GDP): The impact of the economic growth GDP rate on bank performance ROA is positive. But, it appears an insignificant driver of private commercial banks performance ROA even at 10% significance level. The result is supported by Nassreddine et al. (2013) and Athanasoglou et al (2005). Nevertheless, these authors are consistent to this conclusion, Tesfaye (2014) who studied the situation in Ethiopia fail to reach this conclusion and found that in Ethiopia the impact is zero on commercial banks financial performance ROA.

Inflation (INF): The coefficient of inflation was negative. However it was statistically insignificant as explained by the large (p-values = 0.758). This may be because of that, the existence of a lower real interest rate that is obviously lower than the real inflationary rate, resulting in costs increased faster than revenues. The result is consistent with the result found by (Amdemikael, 2012), that the effect of inflation is negative but insignificant on EPCBFP (ROA).

Random effects regression analysis between ROE and explanatory variables

The second regression analysis undertaken to investigate

Table 10. Dynamic effect regression result of all determining variables for ROE model.

Dependent variable: ROE				
Method: Panel least squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lag ROE	0.455880	0.102395	4.452158	0.0000***
CAP	-0.633632	0.162379	-3.902186	0.0003***
ASQ	-0.619103	0.423118	-1.463191	0.1492
ME	-0.152912	0.042643	-3.585835	0.0007***
LIQ	0.133094	0.052285	2.545538	0.0138**
BS	0.001092	0.018903	0.057762	0.9542
GDP	0.201085	0.760334	0.264470	0.7924
INF	-0.000022	0.000579	-0.038083	0.9698
C	0.226305	0.469887	0.481616	0.6320
R-squared	0.710294	F-statistic		18.40181
Adjusted R-squared	0.677585	Prob(F-statistic)		0.000000
S.E. of regression	0.044349	Durbin-Watson stat		2.117878

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews computed results.

the relationship between performance measure ROE and independent variables was presented in Table 7. The model R-squared and adjusted-R squared statistics were 73.16 and 69.19% respectively. The result revealed that

$$\text{ROE} = -2.1249 - 0.4322 \cdot \text{CAP} - 0.2799 \cdot \text{ASQ} - 0.2283 \cdot \text{ME} + 0.3795 \cdot \text{LIQ} + 0.0850 \cdot \text{BS} + 3.9416 \cdot \text{GDP} - 0.0003 \cdot \text{INF}$$

The discussion of the analysis results for the independent variables is presented below.

Capital adequacy (CA): Even if the relationship with financial performance as indicated in the a priori expectations will be positive, it is interesting to see the unexpected significant negative and unpredicted moderate coefficient to influence the profit level ROE of private commercial banks. The coefficient of the CA was statistically significant at 1% significance level. This fact revealed that banks with higher profitability ROE would have more advantage in their capital structure, which is in contrary to the findings (positive CA coefficient) of the regression result for ROA. The correlation coefficient for bank size and capital adequacy of -0.535529 (p value=0.0000) indicating bank size is closely related to the capital adequacy of a bank, has also supplemented the above argument that relatively large banks tend to raise less equity capital, and hence it acts in enhanced performance ROE. Furthermore, this negative CA coefficient for ROE, in contrary to ROA, indicated that although using more debt lowers profits and thus the ROA, it does not have the same negative effect on ROE for the reason that debt lowers net income, but it also lowers the bank's equity, and the equity reduction can offset the lower net income as well. These are the most probable reasons behind the negative relation between

the changes in the independent variables explain 69.19% of the changes in the dependent variable. The regression estimation equation applied was:

CA and ROE. This finding is consistent with previous study of (Habtamu, 2012) Figure 1.

Asset quality (ASQ): The ratio of nonperforming loans to gross loans, which measures how much a bank is not collecting in year relative to its gross loans disbursed, was used to measure the impact of nonperforming loans on EPCBFP (ROE). The negative coefficient of this ratio that was in line with the previous theory for that matter indicated the existence of an inverse relationship between financial performance ROE and asset quality. But, the coefficient of the variable was statistically insignificant, even at 10% significance level. This indicates the insignificant contribution of the ratio of nonperforming loans to gross loans to ROE and that AQ is not the determinant factor of private commercial banks financial performance ROE. In addition, the finding was consistent with the results of (Habtamu, 2012; Tesfaye, 2014; Belayneh, 2011).

Management efficiency (ME): The results revealed that the ratio of total expenses to total income is negative and highly significant, at 1% significance level and determinant of EPCBFP (ROE). It is obvious that efficient cost management is essential for improved profitability of banks. This has indicated that minimizing private commercial banks' expenses would positively improve

Table 11. Dynamic effects regression result of all determining variables for EVA model.

Dependent variable: EVA				
Method: Panel least squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lag EVA	0.439072	0.070986	6.185298	0.0000***
CAP	-0.484633	0.130014	-3.727554	0.0005***
ASQ	-0.572893	0.420568	-1.362190	0.1788
ME	-0.138919	0.049358	-2.814538	0.0068***
LIQ	0.142732	0.045983	3.104009	0.0030***
BS	-0.0000561	0.017410	-0.003223	0.9974
GDP	0.019025	0.773491	0.024596	0.9805
INF	-0.000039	0.000602	-0.063909	0.9493
C	0.139688	0.471145	0.296486	0.7680
R-squared	0.666335	F-statistic		13.47989
Adjusted R-squared	0.616903	Prob(F-statistic)		0.000000
S.E. of regression	0.043915	Durbin-Watson stat		2.097939

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews computed results

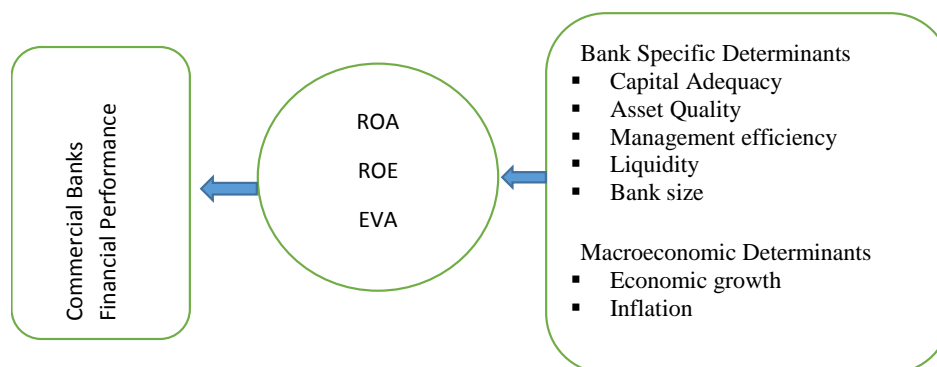


Figure 1. Relation between financial performance and its determinants.

the banks' financial performance in general and ROE in particular. This is consistent with prior empirical evidence of (Abu, 2005; Athanasoglou et al., 2005; Birhanu, 2012; Tesfaye, 2014), suggesting that management efficiency appears to be an important determinant of EPCBFP.

Liquidity ratio (LIQ): The results confirmed that the liquidity level of banks has revealed a positive and significant (p -value=0.0000) relationship with financial performance (ROE). The possible reason for the existence of a positive and reasonable coefficient may be that because the revenue generated from investment securities is low compared to that from loans and advances. Likewise, the result has clearly showed that EPCBs will be profitable and efficient if they also hold optimal liquid assets.

Bank size (BS): Bank size that is measured by the natural log of total assets had a positive and significant

impact on the performance ROE of Ethiopian banks and conforms to a prior restriction. The variable was also statistically significant in the model even if its low coefficient indicates that the size had little impact on the performance of Ethiopian private banks. The result was consistent with the research by Belayneh (2011).

Economic growth (GDP): This study revealed that GDP was statistically significant at 10% significance level (p value= 0.0761) and great positive (3.94) impact on private commercial banks financial performance (ROE). This result is consistent and in support of the argument about the positive association between economic growth and commercial banks' performances. The result of the study was supported by (Zerayehu et al., 2013; Athanasoglou et al., 2005).

Inflation (INF): The annual inflation rate is found to have a negative and insignificant driver of profitability. This is in

line with the expected result as banks in Ethiopia do not seem to be influenced by the change in real interest rate as the variation in interest rate in both the asset and liability side is constant and usually has fixed nature. Hence, as the collected data shows, currently despite a high inflation rate that existed in the country the amount of deposits made by customers is increasing from time to time. As a result, the result of both the regression and the data clearly reveals as EPCBFP is not influenced by inflation. The result of the study supports the previous research by (Tesfaye, 2014).

$$\text{EVA} = -2.190411 - 0.444019 \cdot \text{CAP} - 0.252012 \cdot \text{ASQ} - 0.249918 \cdot \text{ME} + 0.383307 \cdot \text{LIQ} + 0.081018 \cdot \text{BS} + 3.703256 \cdot \text{GDP} - 0.000328 \cdot \text{INFLATION}$$

The discussion of the analysis results for the independent variables is presented below.

Capital adequacy (CA): The coefficient of the CA is negative and it was significant determinant of financial performance EVA at 1% significance level. The possible suggestion for the significant negative relation of CA ratio with financial performance EVA may be that when banks acquire assets, they must find capital from other banks or other sources, and capital is expensive. Thus, if banks have too much equity capital, their cost of equity capital will be too high, which will depress their profits (ROE). This in turn depresses their economic value added to their shareholders EVA. This finding was in contrast with previous studies of (Mushtaq et al., 2014; Al Karim and Alam, 2013).

Asset quality (ASQ): literatures support that increased exposure to asset quality is basically connected with decreased commercial banks financial performance (EVA). Consistent with those literatures, this study also found a negative coefficient for this ratio which was in line with the prior anticipation and theory for that matter indicated the existence of an inverse relationship between financial performance (EVA) and nonperforming loans to gross loans ratio. But, the coefficient of the variable was statistically insignificant, even at 10% significance level. This indicates the insignificant contribution of AQ to EVA. In addition, the finding was consistent with the findings of (Dang, 2011).

Management efficiency (ME): The ratio of total operating expenses to total operating income, which is a proxy measure of management efficiency regarding controllable expenses, has a negative and strong significant, at 1% significance level, relationship with financial performance (EVA). The result was consistent with the findings of (Al Karim and Alam, 2013; Abu, 2005; Athanasoglou et al., 2005).

Liquidity (LIQ): Concerning the liquid assets to deposit

Random effects regression analysis between EVA and explanatory variables

The third regression analysis undertaken to examine the relationship between performance measure EVA and independent variables was presented in table 8. From Table 8, the R-squared and the adjusted-R squared statistics of the model were 70.63% and 67.32% respectively. This means the changes in the independent variables explain 67.32% of the changes in the dependent variable. The regression Estimation Equation applied was:

ratio, which measures the liquidity level of banks has a positive and statistically significant (p-value=0.0004) relationship with financial performance EVA. The regression results in this research imply that liquid banks have higher financial performance EVA. This finding was supported by (Ongore, 2011; Olweny and Shiphoo, 2011).

Bank size (BS): Concerning bank size, this research has found a positive and significant at 10% significance level relationship between banks' financial performance EVA and size of the banking. This finding was supported by (Nassreddine et al., 2013; Mushtaq et al., 2014), who found size has positively related to financial performance EVA.

Gross domestic product: As expected, EPCBFP (EVA) was positively associated to the GDP growth. The growth of GDP has statistically significant (p value =0.0963) relationship with financial performance (EVA). The parameter, 3.70 of GDP in the random effects panel regression model, indicated that the business cycle was a quite substantial factor of private commercial banks' financial performance (EVA) in Ethiopia as far as the Ethiopian banks profitability shows a parallel increase as the economy grows up. This finding was supported by (Zerayehu et al., 2013).

Inflation (INF): Concerning inflation this research has found a negative but statistically insignificant coefficient of inflation pointing the effect of inflation on EPCBFP (EVA) is insignificant. The finding of this study is consistent with (Mushtaq et al., 2014; Nassreddine et al., 2013), who have concluded that inflation has an insignificant negative impact on financial performance (EVA).

Impact of accounting performance measures ROA and ROE on EVA

The regression analysis undertaken to investigate the impact of accounting performance measures ROA and

Table 12. Random effects regression of ROA and ROE on EVA.

Dependent variable: EVA				
Method: Panel EGLS (Two-way random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ROA	0.001514	0.000595	2.544607	0.0133**
ROE	0.999862	0.0000727	13753.61	0.0000***
C	-0.183245	0.007542	-24.29605	0.0000
Weighted statistics				
R-squared	1.000000	Mean dependent var		1.25E-05
Adjusted R-squared	1.000000	S.D. dependent var		0.071319
S.E. of regression	2.85E-05	Sum squared resid		5.44E-08
F-statistic	2.16E+08	Durbin-Watson stat		2.050055
Prob(F-statistic)	0.000000			

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews calculated output

ROE on value performance measures EVA was presented in Table 12. From the table, the R-squared and the adjusted-R squared statistics of the model was 100.0000% and 100.0000% respectively. The result shows that the changes in the independent variables, ROA and ROE, explain 100.0000% of the changes in the dependent variable EVA. That is, net income to total assets and net income to equity ratio collectively explain 100.0000% of the changes in EVA. Thus, these variables collectively, are supposed to be the very valuable variables to explain the performance EVA of private commercial banks in Ethiopia.

As it was depicted in the regression output, ROA has a coefficient of 0.001514 that is significant at a 5% significance level (p -value=0.0133). This indicated that ROA has a very small positive contribution for a unit change in EVA. On the other hand, the coefficient value for ROE was a significant 0.999862 at 1% significance level (P value= 0.0000). This implied that ROE has a great responsibility for change of EVA. From these results, one can conclude that ROE is strongly related with EVA. This finding is supported by (Kosalathevi, 2013), that EVA has a significant relationship with ROE.

Correlation analysis between EVA and the accounting measures ROA and ROE

The other analytical method that was employed to use in order to evaluate the level of relation between the accounting measures (ROA and ROE) and the value measure EVA was the correlation analysis. Based on this the correlation matrix for the three measures is presented in Table 13. According to the output results, the value of correlation, t-statistic and probability between ROA and EVA was 0.82846, 12.19839, and 0.0000 respectively. On the other hand, the value of Correlation, t-Statistic

and probability between ROE and EVA was 0.948493, 24.68906, and 0.0000 respectively. From these results, a conclusion has been made that there was a strong significant correlation between the accounting-based measure ROE and the value-based measure EVA, as the coefficient of correlation and f-statistic value were larger than that of ROA and EVA. The result of this research was consistent with the findings made by Haddad (2012) and Kosalathevi (2013), stating that besides EVA has impact on financial performance ROE, EVA is highly focused by the equity base. Due to that, ROE is highly influenced by the EVA but not by ROA.

Conclusion

The main objective of this study was to assess the effect of bank-specific and macroeconomic determinants on Ethiopian private commercial banking industry's financial performance and the emphasis was to find out the impact of economic value added on traditional based measures (ROA and ROE) for the period 2006-2015 of financial performance. The major findings of the study results from econometrics analysis of empirical data are presented in Table 13.

According to the dynamic regression results, the empirical data pointed out that the coefficient of lagged variables, (γ) for lag ROA, lag ROE and lag EVA were statistically highly significant. Thus, pointing out the existence of performance to persist to a moderate extent in EPCBs and are indicators for the presence of fairly competitive market structure in the current Ethiopian private commercial banking sectors.

According to the random effects regression results in relation to ROA, all explanatory variables have similar relations in agreement with the hypothesis as they were expected with return on asset. As a result, capital

Table 13. Correlation matrix for ROA, ROE and EVA.

Correlation analysis: Ordinary			
Correlation			
t-Statistic			
Probability	EVA	ROA	ROE
	1.000000		
EVA	-		
	-		
	0.828461	1.000000	
ROA	12.19839	-	
	0.0000***	-	
	0.948493	0.771115	1.000000
ROE	24.68906	9.987146	-
	0.0000***	0.0000***	-

*, **, and *** denotes significance level of 10, 5 and 1%, respectively.

Source: Eviews computed results.

adequacy, bank size and liquidity have significant positive impact on the financial performance ROA of private commercial banks. But, asset quality and managerial efficiency have significant negative impact on ROA of private commercial banks. However, both the macroeconomic determinants, GDP growth rate and inflation rate have insignificant impact on ROA.

Regarding ROE as a financial performance measure for the study, capital adequacy and managerial efficiency have a negative significant impact on return on equity. Bank size and liquidity have a positive significant impact on return on equity. Level of GDP also has a positive significant impact on ROE. On the other hand, the regression analysis result indicated that capital adequacy have a negative relationship with return on equity. However, there is negative relationship between capital adequacy and return on equity showing that it is significant. This means that the more capital adequacy the bank, the lower the financial performance, ROE. However, asset quality and inflation rate have insignificant impact on the financial performance, ROE, of private commercial banks.

Concerning EVA, similar to ROE, the explanatory variables like capital adequacy and managerial efficiency have a negative and statistically significant impact on economic value added (EVA). Liquidity and bank size have a positive and statistically significant relationship with EVA. GDP also has a positive and statistically significant impact on EVA. Against the hypothesis, the regression analysis result indicated that capital adequacy has a negative relationship with EVA. Though, there is negative relationship between economic value added and capital adequacy, it is significant, which means the more capital adequacy the bank, the lower the financial performance, EVA. However, asset quality and inflation rate, have insignificant impact on the financial performance (EVA), of private commercial banks. The

findings of the research have also showed that the accounting-based measure of financial performance ROE has more impact on the value-based measure of financial performance (EVA) as compared to the accounting-based measure of financial performance ROA.

Furthermore, it has also been found that the accounting-based measure of financial performance ROE outperforms the other two of financial performance measures ROA & EVA, and it was placed the best over the two performance measures that were used in this study. Next to ROE, notching very close to ROE in adjusted R^2 , f-statistic value, and number of significant regressors, EVA has put itself at the second-best position over ROA, which was found to be ordered on the third position. However, even if EVA was very close to ROE, it could have been EVA to be regarded as the best one, if there were a stock market in Ethiopia. Hence the data used for this particular research was an estimated one based on some historical data. This indicates the need for further research of the area in Ethiopia.

Recommendation

According to the random effects regression results for the three financial performance measures, the positive and highly significant relationship of CA with ROA indicated that using more debt (external financing) lowers performance, ROA. Therefore, Ethiopian private commercial banks need to determine the optimum level of capital adequacy ratio that can enable them achieve their long-term strategy and short-term objectives with reference to the required capital position. Private commercial banks need to develop their credit risk (non-performing loan) management capacity. Beside the existing single borrower loan limit directive, the policy makers need to consider improving poor enforcement of

creditor rights and obligations (if there is), and strengthening the legal environment of the business.

Private commercial banks should engage themselves in cost control activities like presenting more technology based banking services and utilizing operating, administrative and personnel expenses efficiently. But, the private banks should properly manage the utilization of employees through fair employment practices not only to sustain the efficiency and productivity of employees but also to improve the bank's performance.

Liquidity risk has significant effect on private commercial banks performance in Ethiopia. This implies the existence of extra liquidity permits banks to diversify their income via engaging themselves in nontraditional banking services like foreign operations and short-term investments. Hence, banks should invert their attention towards maintaining the proper mix between nontraditional banking services and their loan exposures. The impact of bank size on profitability is always positive because it makes large banks capable of providing extended banking service for large number of customers. As a result, private commercial banks will be able to make better performance by opening more and more number of branches and expanding their operations in an effective and efficient manner.

Direction of further research

The study sought to examine the factors that affect performance of private commercial banks in Ethiopia. But, the variables used in this study did not contain all factors that can influence performance of private commercial banks in Ethiopia. Therefore, future research could incorporate other factors such as government regulation, bond-purchasing principle imposed on the banks by the government, ownership, and exchange rates.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

The influence of internal marketing and job satisfaction on quality service delivery in a public health sector: A case study of a local government organization in Uganda

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Received 13 March, 2019; Accepted 25 April, 2019

The major objective of this study is to examine the combined influence of internal marketing and job satisfaction on quality health service delivery in Greater Iganga Local Government. A case study research strategy is used in which data are collected using self-administered questionnaire administered to 635 respondents. A sample of 127 health centres was drawn from a population of 205 health facilities from the Ministry of Health. Health directors, head of health facilities, district health inspectors, health educators, drug inspectors, laboratory administrators, human resource directors and drug inventory managers formed the unit of inquiry on internal marketing and job satisfaction while health service clients formed the unit of inquiry on the quality of health services offered. The responses were aggregated to the respective units of analysis. The time horizon of this study was two years spanning from 2016 to 2018. SPSS was used to perform correlation and regression analysis. The correlation results indicate that independently internal marketing and job satisfaction are positive and statistically significantly associated to quality health service delivery at $r=0.695$; $p<0.001$ and $r=0.720$; $p<0.001$ respectively. Furthermore, the combination between internal marketing and job satisfaction is positively and significantly associated with quality health service delivery ($r=0.728$; $p<0.001$). Results of the correlation analysis which showed that the relationship between the three study variables (internal marketing, job satisfaction and quality health service delivery) were positive and statistically significant were supported by results of the regression analysis. This resulted in the acceptance of the three research hypotheses.

Key words: Internal marketing, job satisfaction, service delivery, public health sector, local government.

INTRODUCTION

All over the World, local governments are considered crucial centres for health service delivery. Owing to this

mandate, local governments are required to rise to a high level in as far as the delivery of quality health services is

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concerned (Sudhahar and Selvam, 2008). Service quality delivery in the health sector is associated with improved human participation capability in the social economic development process of the country (Kimenyi, 2013).

However, despite the fundamental role of quality health service delivery as articulated above, the quality of health service delivery in Uganda is poor and continues to deteriorate at an alarming level (MOH, 2013; Wane and Gayle, 2013; WHO, 2015). Limited access to skilled health care, perennial absence of drugs from health facilities, poor health infrastructure, and poor supervisory arrangements within the sector have combined in various ratios to worsen the health service delivery situation (MOH, 2013; Wane and Gayle, 2013). This situation has persisted despite numerous interventions and reforms such as improved resource allocation by the Central Government and other funding agencies, refurbished infrastructures in the health sector, drug inventory management techniques, health performance improvement plans, enhanced remuneration of health staff, and strengthened health framework like the health sector plan, community and health worker dialogue, and improved stewardship/governance (MOH, 2013; UNHCO, 2014). Health service provision in Uganda has always been guided by the Health Sector Strategic Plan (HSSP). The major aim is to ensure that all actions are aimed at improving the health of all people in a manner that is responsive to their legitimate health needs.

According to reports published in 2013 by the Ministry of Health (MOH) and the Uganda National Health Consumers Organisation (UNHCO), service delivery in the health sector is evidently poor. A study by UNHCO in 2013 as cited by Medicines Transparency Alliance (MeTA) in 2014 ranked Iganga District amongst the worst performing districts in as far as quality health service delivery (QHSD) is concerned. Inadequate drugs in health facilities, staff absenteeism, dilapidated health facilities, non-responsive and unreliable staff, and massive corruption among health workers were cited as the major causes of the decline in service quality. Consequently, there has been high level of mortality rate, low life expectancy, weak health conditions among others (MOH, 2013; WHO; 2015). Considering the above situation, internal marketing has been considered a unique attribute to improved service quality delivery (Wambugu, 2015). Similarly, job satisfaction has been considered a significant predictor of quality service delivery (Shabbir and Salaria, 2014).

The major objective of this research is to examine the combined influence of internal marketing and job satisfaction on quality health service delivery in the public sector within the context of Greater Iganga Local Government in Uganda. In line with this major objective, this research has two minor objectives: first, to establish the influence of internal marketing on quality health service delivery and second, to establish the influence of job satisfaction on quality health service delivery.

The empirical investigation is done using data drawn from 635 respondents in a sample of 127 health facilities drawn from a population frame of 205 health facilities for a period between 2016 and 2018.

This research contributes to literature in a way that it extends previous research but in a new and different context. Despite the usefulness of internal marketing and job satisfaction in fostering quality health service delivery in the health sector (Amjad and Alshurideh, 2012), this link has not been empirically tested in Uganda's health sector. The closest was by Omagor et al. (2012), but this was in the in the airline service industry sector and Kakooza et al. (2015) who studied management practices and performance of public hospitals in Uganda.

LITERATURE REVIEW

The influence of internal marketing on quality service delivery

Internal marketing is defined as "a planned effort using a marketing-like approach directed at motivating employees for implementing and integrating organisational strategies towards customer satisfaction" (Ahmed and Rafiq, 2002).

According to Amjad and Alshurideh (2012), internal marketing dimensions include: employee motivation and reward, effective communication, employee recruitment, employee selection, employment development, support system, and a healthy work environment. This concept emerged from the development of business structures and services marketing (Varey and Lewis, 2000). In particular, internal marketing has been perceived as a means of creating a sustainable competitive advantage in the market through the provision of high service quality (Cronin and Taylor, 1992). Although originating within the services marketing literature, internal marketing is now viewed as applicable in all industry contexts (Cahill, 1995).

Internal marketing supports a great role of service organisations in achieving quality service delivery. Owing to this, managers in organisations should employ strategic plans to enhance internal marketing if service quality is to be achieved (Sadeghloo and Tirgar, 2013). Kotler and Armstrong (2006) developed a Service Marketing Triangle which explains the relation between organisations, its employees and its customers. In this triangle, they propose three forms of marketing each of which is considered a main factor in the success of an organisation. These forms are: External Marketing, Interactive Marketing, and Internal Marketing.

Reaching customers and winning their satisfaction is achieved through reaching a level of quality required in all marketing relations between organisations and customers. Lings (2000) explains that workers' satisfaction is a basic condition and first step to achieve

customers' satisfaction. He further points out that customers' feeling of quality of service provided to them by individuals working in organisations with which they become in contract is affected by the level of those workers' performance.

The influence of job satisfaction on quality service delivery

Spector (1985) suggested that there are nine constituents of job satisfaction namely: salary, promotion, benefits, bonus, operating procedures, colleagues, work, communication and relationship with supervisor. The Job Satisfaction Survey (JSS) conducted by Spector in 1985 focused on examining employees of human resource companies, public companies, and non-profit organisations. Snipes (1996) added customer satisfaction as a factor to JSS because many studies revealed that employees' perception of customer satisfaction will ultimately affect service quality and job satisfaction. Brown et al. (1993) classified all factors affecting job satisfaction into the following four constructs: job consequences, personal differences, role awareness and organisational factors.

A previous study carried out by Yoon and Suh (2003) shows that satisfied employees are more likely to work harder and provide better services. Employees who are satisfied with their jobs tend to be more involved in their organisations, and more dedicated to delivering services with a high level of quality. Previous studies have also suggested that loyal employees are more eager to and more capable of delivering a higher level of service quality (Loveman, 1998; Silvestro and Cross, 2000; Wambugu, 2015; Amjad and Alshurideh, 2012).

Some researchers argue that service quality is influenced by the job satisfaction of employees (Bowen and Schneider, 1985; Hartline and Ferrell, 1996 and Wambugu, 2015). Other researchers have also found evidence that job satisfaction is associated with service quality. These include: Hartline and Ferrell (1996) and Kakooza et al. (2015).

Quality service delivery

According to Parasuraman et al. (1988), service quality unveils the totality of the overall judgement of a service to ascertain whether it meets customer's satisfaction. Zeithmal et al. (1990) defined service quality as the difference between client expectation and the outcome (achievement). In view of this, there are incidences where clients expectation exceed service performance hence the revelation of dissatisfaction is experienced (Parasuraman et al., 1985).

Wambugu (2015) points out that researcher do not agree upon the essence of service quality dimensions because it is difficult for service organisations to put

forward observational procedures to define standards of service quality provided to customers. However, according to Parasuraman et al. (1988), service quality has the following ten dimensions: credibility, responsiveness, reliability, security, understanding, tangibles, accessibility, courtesy, competence and communication. Studies have shown that both internal marketing and job satisfaction improve quality service health delivery (Omagor et al., 2012; Shabbir et al., 2014; Wambugu, 2015; Kakooza et al., 2015).

CONCEPTUAL FRAMEWORK

The conceptual framework shown in Figure 1 is based on the literature review. This study has two independent variables namely: internal marketing and job satisfaction. The dependent variable is quality health service delivery. The control variables are gender, education, age and tenure. The dimensions used for each variable are drawn from previous research. The gist captured in the above figure is three fold: first, it is postulated that internal marketing influences quality health service delivery. Second, job satisfaction is assumed to influence quality health service delivery, and lastly internal marketing and job satisfaction jointly influence quality health service delivery.

HYPOTHESES DEVELOPMENT

Based on the literature review and conceptual framework, the following research hypotheses were formulated:

- (i) H₁: There is a positive and significant relationship between internal marketing and quality health service delivery
- (ii) H₂: There is a positive and significant relationship between job satisfaction and quality health service delivery
- (iii) H₃: The combined effect between internal marketing and job satisfaction positively and significantly influences quality health service delivery

MATERIALS AND METHODS

Sample and data selection

Data for this study were collected using self-administered questionnaires from 635 respondents in 127 health facilities drawn from a total population frame of 205 health facilities in Greater Iganga Local Government using simple random sampling technique. The responses were aggregated to the respective unit of analysis. Greater Iganga Local Government is composed of the following districts: Mayuge, Bugiri, Namutumba, Luuka, Namayingo and Iganga. Greater Iganga Local Government health sector is layered along a continuum of four levels: health centre II, health centre III, health centre IV and a referral hospital. These formed the units of analysis. The respondents comprised the following: District Directors of Health Services, Head of Health facilities, District

Health Inspectors, Health Educators, Drug Inspectors, Laboratory Administrators, Human Resource Directors, Drug Inventory Managers and Health Clients. The time horizon for this research was two years.

Measurement of variables

In order to tap the domain of internal marketing, the model used by Amjad and Alshurideh (2012) was adopted. Accordingly, internal marketing dimensions include the following: employee motivation and reward, effective communication, employee recruitment, employee selection, employment development, support system and a healthy work environment.

In order to tap the domain of job satisfaction, Spector's model was adapted. Spector (1985) suggested that there are nine constituents representing job satisfaction namely: salary, promotion, benefits, and relationship with supervisors, bonus, operating procedures, colleagues, work and communication. To unearth the domain of service quality, three different service quality models were reviewed. The SERVQUAL model by Parasuraman et al. (1988), the SERPERF model by Gronroos (1984) and the P-C-P model by Philip and Hazlett (1997). Notably, all the items/dimensions/constituents from the study variables were anchored on a five point Likert scale (1-5) ranging from Strongly Disagree to Strongly Agree.

Data processing and analysis

The study employed quantitative techniques in data analysis. Data from the questionnaires were subjected to the Statistical Product and Service Solutions, SPSS, an IBM software (Hejase and Hejase, 2013). SPSS was used for coding, editing and analysis. Descriptive statistics arising from SPSS manipulation of data from questionnaires are presented. Correlation analysis was done to generate correlation coefficients in order to determine the direction and extent of association of the study variables. Regression analysis was performed to ascertain the predictive potential of the independent variables (internal marketing and job satisfaction) on the dependent variable (quality health service delivery).

RESULTS AND DISCUSSION

Presentation of results

The reliability of the three scales of internal marketing, job satisfaction and quality health service delivery were determined by Cronbach alpha coefficient as generated by SPSS. The results indicate that for all the three variables, the coefficients are above the threshold of 0.70 as recommended by Nunnally (1978). Accordingly, it was concluded that the scales for measuring internal marketing, job satisfaction and quality health service delivery were reliable (Table 1).

Correlation analysis

Pearson's product moment correlation coefficient was calculated to determine the extent/degree and direction of relationship between the study variables. A summary of the results is displayed in Table 2. The results presented in the above table indicate the following:

(i) The relationship between internal marketing and quality health service delivery is statistically significant and positive ($r=0.695$; $p < 0.01$).

(ii) The relationship between job satisfaction and quality health service delivery ($r=0.720$; $p < 0.01$) is statistically significant and positive.

(iii) There is a positive and statistically significant relationship between internal marketing and job satisfaction ($r=0.897$; $p < 0.01$).

(iv) There is a positive and statistically significant relationship between the combined influence of internal marketing and job satisfaction on quality service delivery ($r=0.728$; $p < 0.01$)

Multiple regression analysis

The results of the multiple hierarchical regression analysis are shown in Tables 3, 4 and 5.

Correlation analysis

The result in Table 2 indicate a positive and statistically significant relationship between internal marketing and quality health service delivery which is consistent with Balemba and Bugandwa (2016) who posit that effective internal marketing can enhance desired service quality. Similarly, a study by Amjad and Alshurideh (2012) earmarked internal marketing as a significant predictor to quality service delivery.

The results also show a positive and statistically significant relationship between job satisfaction and quality health service delivery is in line with the study of Wambugu (2015) who argued that service quality is influenced by job satisfaction of employees. Similarly, Hartline and Ferrell (1996) and Kakooza et al. (2015) found evidence that job satisfaction is associated with service quality. The results also depict a positive and statistically significant relationship between internal marketing and job satisfaction. This is in line with several previous studies which have shown that adopting internal marketing through specific techniques like: training and development, autonomy, motivation, communication, empowerment, healthy working environment and reward will all have a positive impact on employee job satisfaction. These studies include the following: Al-Hawary et al. (2013) and Amjad and Alshurideh (2012). Lastly, the results portray a positive and statistically significant relationship between the combined influence of internal marketing and job satisfaction on quality health service delivery which is in line with the findings of Omagor et al. (2012).

Regression analysis

It was hypothesized that there is a significant and positive relationship between internal marketing and quality health

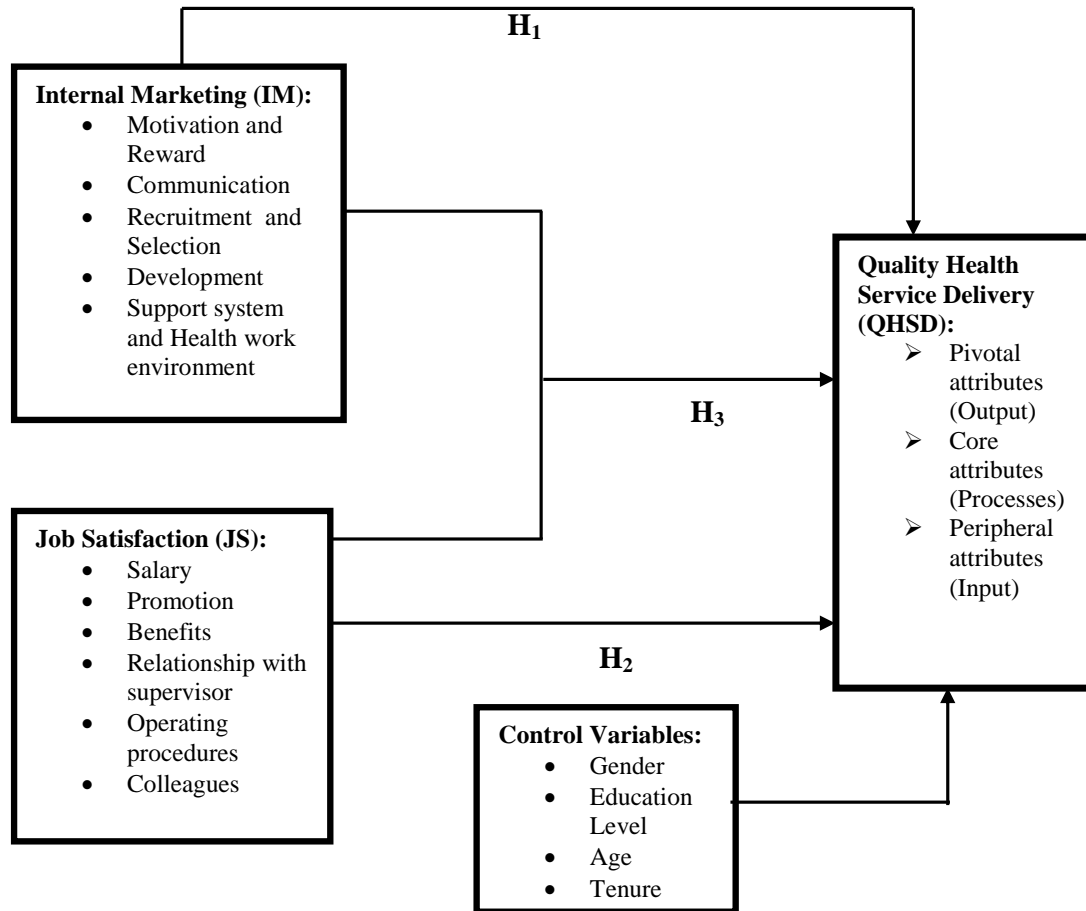


Figure 1. Conceptual framework showing the relationship between internal marketing, job satisfaction and quality health service delivery.

Source: Adapted and moderated from Amjad and Alshurideh (2012), Spector (1985), Philip and Hazlett (1997), Sein Min et al. (2014), Al-Khali and Mahmoud (2012).

Table 1. Reliability analysis statistics for the study variables.

Variable	Cronbach's alpha coefficient	Number of items
Internal marketing	0.959	50
Job satisfaction	0.980	49
Quality health service delivery	0.968	23

Source: Primary data.

Table 2. Zero-order correlation analysis results between internal marketing, job satisfaction and quality health service delivery.

Variable	QHSD	IM	JS	IM&JS
Quality Health Service Delivery (QHSD)	1			
Internal Marketing (IM)	0.695**	1		
Job Satisfaction (JS)	0.720**	0.897**	1	
Internal Marketing & Job Satisfaction (IM&JS)	0.728**	0.967**	0.980**	1

Source: Primary data, N=127, **p<0.01.

Table 3. Regression analysis results of the influence of internal marketing on quality health service delivery.

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	R ²	Adjusted R ²	ΔR ²	ΔF	Sig. ΔF
	B	Std. Error	Beta							
Gender										
Age	0.05	0.176	0.026	0.285	0.776					
Education Level	-0.019	0.142	-0.015	-0.134	0.894					
Tenure	0.222	0.151	0.137	1.469	0.144					
	-0.155	0.116	-0.143	-1.335	0.184	0.032	0.000	0.014	1.781	0.184
Gender										
Age	-0.04	0.124	-0.021	-0.324	0.746					
Education Level	0.08	0.1	0.063	0.806	0.422					
Tenure	0.112	0.107	0.069	1.053	0.295					
Internal marketing	-0.259	0.082	-0.239	-3.151	0.002					
	0.945	0.084	0.713***	11.26	0	0.527	0.508	0.496	126.795	0

Source: Primary data, N=127, **p<0.001, Dependent Variable: Quality Health Service Delivery.

service delivery. Table 3 depicts that Model 1 which controlled for gender, age, educational level and tenure (demographic variables) explained 3.2% of the total variation in quality health service delivery. This implies that the contribution of demographic variables to quality health service delivery in Greater Iganga Local Government is statistically insignificant ($R^2=0.032$, $p>0.05$).

However, the regression analysis results displayed in Model 2 revealed that 52.7% of the total variation in quality health service delivery is explained by the variation in internal marketing ($R^2=0.527$, $p<0.001$). The regression coefficient of change in quality health service delivery due to a change in internal marketing was significant ($\beta=0.713$, $t=11.260$, $p<0.001$). The positive and significant correlation between internal marketing and quality health service delivery ($r=0.0695$, $p<0.001$), and the regression coefficient ($\beta=0.713$, $t=11.260$, $p<0.001$) led to the acceptance of hypothesis H_1 .

This finding is consistent with a previous study by Sadeghloo and Tirgar (2013), suggesting that internal marketing supports a great role of service organisations in achieving quality service delivery. Owing to this, organisations need Strategic Plans to enhance internal marketing if service quality is to be achieved. It was also hypothesized that there is a significant and positive relationship between job satisfaction and quality health service delivery. Table 4 depicts that Model 1 which controlled for gender, age, educational level and tenure (demographic variables) explained 3.2% of the total variation in quality health service delivery. This implies that the contribution of demographic variables to quality health service delivery in Greater Iganga Local Government is statistically insignificant ($R^2=0.032$,

$p>0.05$).

The correlation analysis results in Table 2 indicate a positive and statistically significant relationship between job satisfaction and quality health service delivery ($r=0.720$, $p<0.01$). This finding is strengthened by the regression results shown in Table 4 for Model 2 which indicates that 54.8% of the total variance in QHSD was explained by the variation of job satisfaction ($R^2=0.548$, $p<0.001$). The regression coefficient of change in quality health service delivery due to a change in job satisfaction was significant ($\beta=0.731$, $t=11.747$, $p<0.001$). Based on this, hypothesis H_2 was accepted. These results are consistent with Yoon and Suh (2003) showing that satisfied employees are more likely to work harder and provide better services.

Lastly, it was hypothesized that there is a significant and positive relationship between the combined influence of internal marketing and job satisfaction on quality health service delivery. Correlation analysis results in Table 2 depict a positive and statistically significant relationship between the combined influence of internal marketing and job satisfaction on quality health service delivery ($r=0.728$, $p<0.01$). This finding is strengthened by the hierarchical multiple regression results shown in Table 5 for Model 2 which indicates that 56.3% of the total variance in quality health service delivery was explained by the combined influence of internal marketing and job satisfaction ($R^2=0.563$, $p<0.001$). The regression coefficient of change in quality health service delivery due to a combined change in internal marketing and job satisfaction was significant ($\beta=0.739$, $t=12.129$, $p<0.001$). The correlation and regression analysis results led to the acceptance of hypothesis H_3 .

This result is in consonance with Omagor et al. (2012)

Table 4. Regression analysis results of the influence of job satisfaction on quality health service delivery.

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	R ²	Adjusted R ²	ΔR ²	ΔF	Sig. ΔF
	B	Std. error	Beta							
Model	0.05	0.176	0.026	0.285	0.776	0.032	0	0.014	1.781	0.184
	-0.019	0.142	-0.015	-0.134	0.894					
	0.222	0.151	0.137	1.469	0.144					
	-0.155	0.116	-0.143	-1.335	0.184					
	-0.194	0.122	-0.101	-1.583	0.116					
	0.056	0.097	0.044	0.587	0.565					
	0.135	0.104	0.083	1.296	0.197					
	-0.168	0.08	-0.155	-2.107	0.037					
	0.759	0.065	0.731***	11.747	0					

Source: Primary data, N=127, **p<0.001, Dependent Variable: Quality Health Service Delivery.

Table 5. Hierarchical multiple regression analysis results of the combined influence of internal marketing and job satisfaction on quality health service delivery.

Model	Unstandardized coefficients		Standardized coefficients	T	Sig.	R ²	Adjusted R ²	ΔR ²	ΔF	Sig. ΔF
	B	Std. Error	Beta							
Gender										
Age	0.05	0.176	0.026	0.285	0.776	0.032	0	0.014	1.781	0.184
Education	-0.019	0.142	-0.015	-0.134	0.894					
Level	0.222	0.151	0.137	1.469	0.144					
Tenure	-0.155	0.116	-0.143	-1.335	0.184					
Gender										
Age	-0.134	0.12	-0.07	-1.119	0.265	0.0563	0.545	0.531	147.113	0
Education	0.071	0.096	0.056	0.743	0.459					
Level	0.12	0.102	0.074	1.173	0.243					
Tenure	-0.211	0.079	-0.195	-2.687	0.008					
Combination of marketing and job satisfaction	0.883	0.073	0.739***	12.129	0					

Source: Primary data, N=127, **p<0.001, Dependent variable: Quality Health Service Delivery.

who argued that internal marketing and job satisfaction improve service quality delivery. This is due to the enhancement of training with an emphasis on the specific service tasks that employees have to accomplish, employee empowerment, sharing information pertaining to customer needs and rewarding employees based on the customer service level they offer as well as prompt payment of employees and promotion (Amjad and Alshurideh, 2012; Shabbir and Salaria, 2014).

Conclusion

The major objective of this research is to examine the

combined influence of internal marketing and job satisfaction on quality health service delivery in Greater Iganga Local Government. In line with this major objective the study had two minor objectives. Firstly, to examine the influence of internal marketing on quality health service delivery in Greater Iganga Local Government; secondly, to examine the influence of job satisfaction on quality health service delivery in Greater Iganga District Government.

Based on the results of the correlation and regression analysis, this study has empirically demonstrated the following: Firstly, that internal marketing is a predictor of quality health service delivery in Greater Iganga Local Government; secondly, that job satisfaction is critical for

quality health service delivery. Thirdly, that internal marketing is an antecedent for job satisfaction. The research has implications for local governments through the Ministry of Health. Local governments should review and update the existing marketing practices and strengthen them through policy implementation. The Ministry of Health through local governments should promote and sensitize effective employee satisfaction. It should also promote effective internal marketing practices to ensure a high level of job satisfaction.

Despite the fact that this study has made some contributions to literature, it has some limitations that provide avenues for future research. The study's findings were accrued from a cross sectional research strategy. Future studies should consider using other research strategies. Since the study was carried out in public sector health organisation (Greater Iganga Local Government) valuable information relating to the private health sector was not captured. It is therefore proposed that future studies should consider incorporating private sector health facilities as units of inquiry.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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