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FINANCIAL LEVERAGE AND FIRMS’ VALUE: A STUDY OF SELECTED FIRMS IN NIGERIA

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ABSTRACT

The main objective of this study is to determine the relationship between financial leverage and firms’ value, as well as evaluate the effect of financial leverage on firms’ value. A sample of 5 firms listed on Nigerian Stock Exchange (NSE) for a period of 6 years from 2007-2012 was used. Data were sourced from annual reports of selected firms. The Ordinary Least Square (OLS) statistical technique was used for data analysis and hypothesis testing. The study revealed that there is significant relationship between financial leverage and firms’ value and that financial leverage has significant effect on firms’ value. The study concludes that financial leverage is a better source of finance than equity to firms when there is need to finance long-term projects. However, various economic factors may have despicable effects on the profitability of Nigerian firms, as such the use of debt financing in such firms may yield negative impact such as bankruptcy as well as low firm value. The study therefore recommends that financial leverage be optimized by firms to aid maximization of firms’ value.

Keywords: Financial Leverage, Firms’ Value, Financing, Profitability.

INTRODUCTION

Every firm whether small scale firms or large scale firms need funds to operate; especially large scale firms, they need funds to expand their operations and activities. The motive of every firm is to make profit, maximize owner’s wealth, and to achieve this motive they need to source for fund in order to finance their operations and activities. Firms have multiple financing sources to finance their investment. Basically, financing sources can be categorized into two; the internal financing sources which include reserves and retained earnings; external financing which includes long-term loans, bond issuance, ordinary and preferred stock issuance. (These sources are long-term sources of finance).

Firms must choose the best financing sources to reach the optimal capital structure so that they can make suitable financing decision that would enable them achieve positive returns. Financial leverage is the extent to which fixed income securities (debt) are used in a firm’s capital structure. A firm’s capital structure is the composition or structure of its liabilities. Furthermore, financial leverage reflects the amount of debt used in capital structure of the firm. Debt carries fixed obligation of interest payment. Thus, financial leverage increases as the fixed financial expenses of a firm increases i.e. interest expenses increases as higher amount of debt is incurred. Also with a high level of debt relative to equity, a small percentage change in earnings before interest and tax (EBIT) will lead to a large percentage change in net income.
Technically, financial leverage is defined as the percentage change in earning after tax (EAT) divided by percentage change in EBIT. An example of financial leverage is when a firm is financed with $100,000 having a capital structure of $20,000 owner equity and $80,000 loan debt having an interest rate of 5% annually. A firm can be either highly levered (having more debt than equity than debt in its capital structure) or lowly levered (having more equity than debt in its capital structure). Furthermore, having debt in a firm’s capital structure is beneficial to a firm; this is because a firm with debt in its capital structure enjoys tax savings as interest is paid before tax is deducted from the firm’s income. Financial experts also stated that financial leverage is a financial tool that is widely used to improve a firm’s rate of return and its value. However, financial leverage irrespective of its benefit to a firm, also creates financial risk such as risk to the company; if a highly levered firm is unable to make sufficient EBIT, such firm might go into liquidation as it may not be able to meet its interest obligations and also finance other expenses of the firm.

Another risk is to the stockholder; if the firm incurs losses, this will cause greater volatility in earning and therefore greater volatility in the stock price and also such firm may not be able to pay any dividend to its ordinary stockholders as it would have to pay preferred stockholders prior to ordinary shareholders. However, the objective of a firm according to James C. Van Horne (1974) is to maximize its value to its shareholders. Value of a firm is represented by the market value of the company’s ordinary shares, which in turn is a reflection of the firm’s investment, financing and dividend decisions. And since financial leverage affects the cost of capital of a firm, it will also affect the value of the firm.

It should be noted that, maximizing earnings per share usually is not the same as maximizing market price per share. The market price of a firm’s stock represents the value which the market participants place on it. Also, a firm creates value when the expected returns exceed the returns required by the financial market. The study will examine the relationship between financial leverage and firms’ value by providing answers to the following questions:

1. Is there any relationship between financial leverage and a firm’s value?
2. What is the effect of financial leverage on a firm’s leverage?

**Statement of hypotheses**

To determine whether there is a relationship between financial leverage and firms’ value, the following hypothesis would be tested:

H₀: There is no significant relationship between financial leverage and firms’ value.
H₁: There is significant relationship between financial leverage and firms’ value.
H₀: Financial leverage has no effect on a firm’s value.
H₁: Financial leverage has effect on a firm’s value.

**FINANCIAL LEVERAGE**

In general context, financial leverage is the use of debt in a firm's capital structure. In finance, capital structure refers to the way a corporation finances its assets through combination of equity, debt or hybrid securities. A firm's capital structure is then the composition of its liabilities. For example, a firm that sells N20 billion in equity and N80 billion in debt, is said to be 20% equity financed and the firm's ratio of debt to total financing 80% in this example is referred to as the firm's leverage. Hence, a firm's capital structure is an indicator of the proportion of debt to equity.
Ross, Westerfield and Jordan (1998), retreated that the use of debt in a firm's capital structure is called financial leverage. The more debt a firm has, the greater is its degree of financial leverage. To them (Ross et al 1998), debt acts as a lever in the sense that using it can greatly magnify both gains and losses. Hence, financial leverage increases the potential rewards to shareholders, but it also increases the potential for financial distress and business failures.

According to Horne (2002), the change in capital structure that is caused by an increase or decrease in the ratio of debt to equity is referred to as financial leverage. When a firm includes debt as a proportion of funds employed to finance its project, financial leverage is brought into being. Financial leverage is a company practice of the acquisition of part assets of the company with fixed interest capital with the hope of increasing ends results of the common stock holders. (Oloyede, 2000).

**BENEFITS OF DEBT IN A CAPITAL STRUCTURE (ADVANTAGES OF FINANCIAL LEVERAGE)**

The following are advantages a firm enjoys in using debt to finance its assets:

1. Interest on debt is tax deductible and as such the cost of debt is reduced.
2. Debt holders are limited to a fixed return, so stockholders do not have to share profits if the business does exceptionally well.
3. Debt holders do not have voting right over the company.

However, the use of high debt ratio leads to greater risk (financial risk) and higher required interest rates (to compensate for the additional risk). Also financial leverage increases shareholder risk as it concentrates the firm’s business risk on the shareholders, because debt-holders who receive fixed interest payments bear none of the business risk. However, financial leverage will enhance shareholders’ returns on the condition that the fixed charges funds (such as the loan, debentures) can be obtained at a cost lower than the firm’s rate of return on net assets (ROWA or ROI).

**DEGREE OF FINANCIAL LEVERAGE.**

In finance, degree of financial leverage (DFL) is a ratio that measures the sensitivity of company's earnings per share (EPS) to fluctuation in its operating income, as a result of changes in capital structure. Degree of financial leverage (DFL) measures the percentage change in EPS for a unit change in earnings before interest and tax (EBIT). DFL is superimposed on operating leverage, changes in EBIT will have positive effect on both net income available to common stock holders and EPS. Therefore, if a company uses a considerable amount of both operating and financial leverage, a small change in the level of sales will result in wide fluctuation in net income and EPS. However the main motive of firms using financial leverage is to increase shareholders return under favourable condition (Pandy, 2003). Financial risk is the additional variability of earnings induced by leverage. However, the impact of financial leverage given the relative assumption that uncertainty prevails can be reduced to three alternatives:

1. Situation in which leverage increase risk, but at the same time decreases expected EPS.
2. Neutral situation in which the increase in risk following the introduction of leverage leaves EPS unchanged.
3. Situation in which the introduction of leverage increases expected EPS and risk simultaneously.
Furthermore, DFL is a change in EPS caused by the use of fixed payment securities to finance a company's operations. DFL is the change in proposition of the earnings per share relative to EBIT.

It is mathematically represented as:

\[
\text{DFL} = \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}}
\]

It can also be represented by the equation below:

\[
\text{DFL} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest}}
\]

I.e. DFL = \( \frac{Q(p-vc)-fc}{Q(p-vc)-fc-I} \)

Where
- Q = quantity
- P = price per unit
- fc = fixed cost
- vc = variable cost per unit
- I = interest

This ratio shows that the higher the degree of financial leverage, the more volatile is EPS. Since interest is a fixed expense, leverage magnifies returns and EPS, which is good when operating income is rising. But it can be a problem during tough economic times when operating income is under pressure. Therefore, financial leverage is a two-edged sword which could either be favourable or unfavourable.

COMMON MISCONCEPTIONS ABOUT FINANCIAL LEVERAGE

1. One popular prejudice against leverage is that people who borrow a lot of money often end up badly. However, this is incorrect because this is not leveraging, it’s simply money borrowed for consumption.

In finance, the general point of leverage is to borrow money to buy asset with a higher return than interest on debt.

2. Another misconception is that the fact that collapsing firms often have lot of leverage. However, this does not mean that leverage always causes collapses

FIRMS’ VALUE

Maximizing shareholders’ wealth is one of the corporate goals that cannot be ignored. The market value of a firm is an important measure of the shareholders’ wealth. Firm’s valuation is essential for deriving stock prices, an item of significance in many models (keys and Briggs, 1990).

Determining a Firm’s Value

According to Biggs (1978), stock price sometimes, is the sole measure of performance in the model. More commonly it is a major component of a weighted average that includes other measure. The value of a firm can be obtained through different measures, each of which is likely to give a value that differs from that obtained by another. The first and most readily available measure of the value of a firm is its accounting net worth or book value. This measure is however problematic, because the accounting rule in a model may be at variance (in divergence) with generally accepted principles of financial accounting. This is because conformance with some generally accepted principles such as historical cost and conservatism,
can lead to values that are far from what is reasonable. The second measure is the market value of all its outstanding shares. This is a popular everyday-world method of valuating public corporations. It application however requires an efficient real market for shares. This condition is not met in models that do not allow participants to trade shares, and even when such trading is allowed, the trades are generally too few and too infrequent for reliable valuation. The third measure the capitalized value of its projected future performance. Modigliani and Miller (1961) pointed out that although four distinct method of capitalization can be applied for this purpose, all four give rise to precisely the same valuation when the markets are perfect. People are completely rational, and the future is known with perfect certainty. However, the capitalized valued measure has a problem as it requires at least one arbitrary parameter (m), if the Goosen’s method is applied. The fourth measure is the deductive application of human judgment. With this method, firms are rated along a psychometric scale. The results are then converted by formula to monetary values. The problem of this measure is that it requires subjective judgment. The fifth measure is the firm’s accounting net worth adjusted for intangible and the idiosyncrasies of accounting rules used in the simulation. Although general principle could be laid out for the adjustment, the specific principle must depend upon the particulars of the model.

Though, the adjusted net worth measure avoids both problems; it does not require arbitrary parameter and can be completely objective. It problem however, is that it requires detailed knowledge of imitation used in any particular model. However, the market value measure of determining firms’ value is the most reliable and straightforward way of determining a firm's value, it is also known as market capitalization i.e. total value of all shares outstanding. It should be noted that this method only works for publicly traded companies, were shares value can be easily determined. The market capitalization (market value) of a firm can be determined by multiplying the number of outstanding shares by the current stock price. For example, consider Dynamics enterprises a publicly traded manufacturing company with 5,000,000 shares outstanding. If her shares are currently traded at 50k per share, dynamics' market capitalization is 5,000,000 x 0.50; which equals N2, 500,000. The above illustration shows that the major rider of a firm’s value using this measure is the stock price. And this measure of determining a firm's value was adopted in this study.

**Equity and Firms’ Value:**

Equity unlike long-term debt includes paid-up capital, share-premium, reserves and surplus or retained earnings. Igben (2004) defines paid-up capital as the portion of called-up capital which has been paid-up by shareholders. He defined reserves as the amount set aside out of profit earned by the company, which are not designed to meet any liability, contingency, commitment or reduction in value of assets known to exist in the balance sheet. Furthermore, reserves may be voluntarily created by directors or statutorily required by law. Share premium is the excess amount derived from the issue of shares at a price that is above its par value. And finally, retained earnings are profit invested back into the business in order to create more resources for operations and invariably increase the value of the firm. From the above explanation, he (Igben) thus, opined that there is no relationship between firm's value and equity.

**Long- Term Debt and Firms’ Value**

Leland and Toft (1991) states that, the value of a firm is the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. Modigliani (1980) points out that, the value of the firm is the sum of its debt and equity.
and this depends only on the income stream generated by its assets. The value of the firm’s equity is the discounted value of its shareholders earnings called net income. That is, the net income divided by the equity capitalization rate or expected rate of return on equity. The net income is obtained by subtracting interest on debt from net operating income. On the other hand, the value of debt is the discounted value of interest on debt. Jensen (1986) suggests that, when firms have more internally generated funds than positive net present value (NPV) projects, debt forces the managers to pay out funds that might otherwise have been invested in negative net present value projects. This over-investment problem can be lessened if managers are forced to pay out excess funds for servicing debt, therefore enhancing the firms’ value.

Myers (1993) suggests that, a firm with outstanding debt may have the incentive to reject projects that have positive NPV if the benefits from accepting the project accrue to the bondholders without also increasing shareholders wealth. McConnell and Servas (1995) posit that, seeds of under-investment problem lie in the solution of over- investment of U.S firms. They discovered that for firms with high P/E ratios or for high-growth firms, value is negatively related to leverage and those firms with low P/E ratios or for low- growth firms, value is positively related to leverage. Their evidence supports the contentions that for low-growth firms, leverage acts as a monitoring mechanism to enhance firm value. Whereas for high-growth firms, leverage cause under investment and destroys the value of the firm. The above empirical studies show that there is a relationship between debt and firms’ value.

Theoretical framework.

Kumar (2007) since 1958, at least eight theories and theoretical frameworks have been developed relating to a firm’s financial leverage. These are:

1. Irrelevance theory by Modigliani and miller (M&M) in 1958.
6. The legal environment framework of capital structure by La porta et. Al in 1997
7. Target leverage framework or Mean revision theory by Fisher et al in 1989.

However, the irrelevance theory of M & M, STT and POF of Myers and Majluf basically forms the theories of financial leverage.

The study of capital structure initialing the Myers studies of capital structure and financial leverage. As the nature of knowledge that is always dynamic, Myers found that the theory of Modigliani and Miller (M&M) is not always appropriate. As such Myers and Majluf together studied the capital structure puzzle and then initiated the ‘Static trade-off theory’ and ‘Pecking order theory’ which are used as the theoretical basis of financial leverage toward capital structure. Furthermore, in his paper titled “The Capital Structure Puzzle” Myer (1984) divides the contemporary thinking on capital structure into two theories; Static trade-off theory and the Pecking order framework.

Irrelevance Theory by M&M (1958)

The theory of business finance in modern sense starts with the Modigliani and Miller (1958) capital structure irrelevance propositions. Before Modigliani and Miller, there was no generally
accepted theory of capital structure. They (M&M), started by assuming that the firm has a particular set of expected cash flow. When the firm chooses a certain proportion of debt and equity to finance its assets, all that it does is to divide up the cash flows among investors. Investors and firms are assumed to have equal access to financial markets, which allows for home-made leverage (the use of personal borrowing of investors to change the amount of financial leverage of a firm). The investors can create any leverage that was wanted but not offered, or investors can get rid of any leverage that the firm took on but was not wanted. As a result, the leverage of the firm has no effect on the market value of the firm. As a matter of fact, their paper led subsequently to both clarity and controversy and this theory can be proved under range of circumstances (Frank and Goyal, 2005).

**Static Trade-Off Theory (STT) By Myers and Majluf (1984)**

STT offers a partial explanation of the factors that determines a firm choice of leverage. The STT model is illustrated in the table below:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Hypothesis (Impact on leverage)</th>
<th>Author (Year of publication)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibility</td>
<td>Positive</td>
<td>Brierley and Bunn (2005)</td>
</tr>
<tr>
<td>Investment flexibility</td>
<td>Positive</td>
<td>Bancel and Mittoo (2004)</td>
</tr>
<tr>
<td>Profitability</td>
<td>Positive</td>
<td>Frank and Goyal (2006)</td>
</tr>
</tbody>
</table>

Source: Tariq and Hajazi (2006)

**Pecking Order Theory**

This theory was formed by Myers and Majluf (1984). Furthermore, Myers (2001) stated that in pecking order theory, the firm will borrow rather issue equity when internal cash flow is not enough to fund capital expenditure. Thus the amount of debt will reflect the firm’s cumulative need for external funds. Myers (1984) present the pecking order model as a theory both about how firms finance themselves and about the capital structures that result from pecking order financing.

This model is illustrated in the table below;

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypothesis(Impact on leverage)</th>
<th>Author (year of publication)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>Negative</td>
<td>Fama and French (2002)</td>
</tr>
</tbody>
</table>

Sources: Bancel and Mittoo (2004)
However, Bastos and Ramalho (2010) argued that pecking order theory due to information irregularities between firms’ managers and potential outside financiers, firm tends to adopt a perfect hierarchical order of financing; first, internal funds (retained earnings) are used. Next, in cases where external financing is needed, low-risk debt is issued, and only as a lender of last resort, when firms are no longer able to issue safe debt, they issue new shares. Frank and Goyal (2002) also found out that under the pecking order theory, one might expect that firms with few tangible assets would have asymmetric information problems. Thus, firms with few tangible assets will tend to accumulate more debt overtime and become more highly levered.

**THEORY OF CAPITAL STRUCTURE: EFFECT OF FINANCIAL LEVERAGE**

There are two main theories of capital structure as to the effect of financial leverage or financial gearing (debt financing) on cost of capital and hence market value of a firm. The two main theories are:

1. Traditionalist theory
2. Modigliani and Miller theory (M&M)

**The Traditional View**

The traditional theory states that as a company gearing increases above zero, the weighted average cost of capital (WACC) will fall initially, because of the higher proportion of lower cost debt capital in the firm’s capital structure, but eventually increase when gearing gets above a certain level because of the rising cost of equity offsets the higher proportion of low cost debt. According to this view, a judicious mix of debt and equity capital can increase the value of the firm by reducing the WACC up to certain level of debt. A firm has an optimum capital structure when the WACC is at minimum and thereby maximizing the value of the firm. However, the traditional theory was criticized for inferring that investors value levered firms than unlevered firms. This means that they pay premium for the shares of levered firms. The contention of the traditional theory that moderate amount of debt does not really add very much to the riskiness of the share is not defensible. There does not exist sufficient justification for the assumption that investor’s perception about risk of leverage is sufficient at different levels leverage.

**Modigliani and Miller (M&M) Theory**

M&M did not agree with traditional view. They argued based on the following assumption:

1. Perfect capital market.
2. No taxation.
3. No transaction cost.

With this assumption, they debated that a firm’s value and cost of capital remains invariant to the changes in the capital structure i.e. the capital structure does not affect the firms’ value and its WACC. They indicated that the value of the firm depends on the earnings and risk of its assets (business risk) rather than the way it finances it assets. Since the form of financing (debt or equity) can neither change the firm’s net operating income nor its operating risk, the value of levered firm and unlevered firm ought to be same. They also stated that financing changes the way in which the net operating income is distributed between equity holders and debt holders and concluded that firms with identical net operating income and operating risk, but different capital structure should have same total value. However, M&M reversed their decision with the introduction of tax. Also, both theories agreed that:
1. The cost of equity is higher than the cost of debt; this is because of the higher investment risk.
2. The cost of equity will increase as a company’s level of financial gearing rises, because of the higher financial risk as debt rises.

EMPIRICAL REVIEWS

Kajola (2008), higher financial leverage decrease firm value by increasing bankruptcy risk. Therefore, an optimal capital structure is necessary for every firm to enhance the market value the firm. Gill, Biger and Mathur (2011), an optimal capital structure includes some debt, but not 100% debt. It is a ‘best’ debt/equity ratio for the firm that minimizes the cost of financing and reduces the chances of bankruptcy. Cuong and Canh (2012) found that the optimal debt ratio (total debt to total assets ratio) should not exceed 59.27% because a higher debt ratio will have negative impacts on firm value. Financial leverage plays an important role in increasing market value of the firm (Black 2001, Gompers et al 2003, Gill and Mathur 2011). Bancel and Mittoo (2004) found in their sample survey of managers from 16 European countries that over 40% of the managers issued debt when interest rate are low or when the firm’s equity is undervalued by the market. These findings suggest that managers use windows of opportunity to raise capital. They further reasoned that managers issue convertible debt because it is less expensive than straight debt, or to attract investors who are unsure about the riskiness of the firm. Nolan {2002}, in his study of leverage changes of UK adopted what can be regarded as a behavioural approach to leverage behaviour using the framework of Stein (1989). He claimed to have used managerial utility function in his model. Implicit in his model is that a low debt (D) implies that the cost of short run behaviour is low.

At low debt (D), he opined that the extra probability of going bankrupt is low also. As the debt level rises, the loss should also rise. According to Pandy (2008), the variance and covariance and therefore beta depend on three fundamental factors:
1. The nature of the business.
2. The operating leverage.
3. The financial leverage.

As suggested by their names, operating leverage and financial leverage are comparable concepts. In his words, operating leverage is the use of fixed costs, the degree of which is defined as the change in a company’s earnings before interest and tax (EBIT) due to change in sales. Going by his words on the other hand, financial leverage is seen as the existence of debt in a firm’s capital structure. Hence, a levered firm is the one that has debt in its capital structure. He also opined that financial leverage increases the firm’s (financial) risk and hence, the equity beta of the firm. Ojo (2012) in his study of financial leverage on corporate performance in Nigerian firms, opined that financial leverage causes variability in the returns of shareholders, thus, adds financial risk. Consequently, beta (risk) of a levered firm’s equity will increase as debt is introduced in the firm’s capital structure.

Firms can finance their assets through a combination of debt and equity. The higher the proportion of debt in the capital structure of a firm, the higher it is default risk because debt carries a fixed cost which has to be paid irrespective of its operations performance. Thus, a high proportion of debt makes a firm vulnerable of default, with a slight decline in operations performance. It is therefore important to be clear what figures are being taken from a firm’s financial statements for computing this correlation (Zubairi 2010). Rajan and Zingales (1995) believe that firms with high market-to-book ratio have higher costs of financial distress which
is why they expect a negative correlation. But, there may be other potential reasons for why the market-to-book ratio is negatively correlated with leverage.

For instance, the shares of firms in financial distress (high leverage) may be discounted at a higher rate because of distress risk and price [as suggested by Fama and French 2002]. If this is the dominant explanation, the negative correlation should be driven largely by firms with low market-to-book ratios. But in fact, the negative correlation appears to be driven by firms with high market-to-book ratios rather than by firms with low market-to-book ratios. It is unlikely that financial distress is responsible for the observed correlation. Read, Jr and Myers (2012) explained; by following the trade-off theory that the tangibility of asset have a positive sign towards debt ratios in the cross sectional test and this result seem reasonable. Large firms ought to borrow more; they are presumably safer and more likely to pay taxes. Firms with more tangible assets are less likely to be damaged in financial distress and should therefore have higher target debt ratios. According to Tariq and Hijazi (2006) Interest payment are tax-deductible expense and decrease the tax liability thus providing cash savings. Therefore firms will use a higher level of debt to take advantage of tax benefits if the tax rates are higher. If the firm incurs losses, this tax benefit will fade away. So, if its operating earnings are enough to meet the interest expense, then firms will get the benefit of tax deductibility of interest expenses.

Also, the chance of default increases as the level of debt increases, so there exists an optimal level of debt. If the firm goes beyond this optimal point, it is more likely that the firm will default on the repayment of the loan. Sharma (2006) took a sample of Indian manufacturing firms and found that there is a direct relationship between firm’s value and financial leverage. Adeyemi and Oboh (2011) took a sample size of 90 firms from Nigeria and found that the market value of a firm is positively influenced by its choice of capital structure (financial leverage). Cheng and Tzeng (2011) collected data from 645 companies listed in the Taiwan Securities Exchange (TSE) from 2000 – 2009 and found a positive relationship between leverage and firm value. A recent study on the relationship between financial leverage and financial crisis in Nigeria using co-integration technique, vector error correction mechanism (VECM), Granger causality and exponential generalized autoregressive conditional heteroscedascity (EGARCH) methodology shows that there is an equilibrium relationship between macro-economic financial leverage and the financial soundness.

It was recognized that the underinvestment problem by noting that shareholders of firms with risky debt will invest only when or up to the point at which, the expected return on investment is at least as great as the promised payment to bondholders. When the expected return is less than the promised payment, shareholders fail to exercise the investment option or invest less than the optimal amount, which reduces firm value. It is this decline in firm value which limits the amount of debt a given firm can issue (Myers, 1977).

**METHODOLOGY**

**Research Design**

This is a non experimental research setting based on survey design. It involves the gathering of information about the relationship between financial leverage and firms’ value. The study population used in this research was taken from the manufacturing sector of the Nigerian economy. Data considered for the study were selected mainly from secondary sources. The data were collected from annual reports and statement of account of the companies under consideration covering a period of 6 years from 2007-2012. The sample size of 5 firms from
the manufacturing sector listed on the Nigerian Stock Exchange. The study covered a period of 6 years from 2007-2012. Simple random sampling method was adopted in selecting the sample size of 5 firms. This method was adopted because it is easy, cost less and understanding.

**Method of Data Analysis**

Data gathered were analyzed using regression analysis method. Regression analysis is a statistical tool for estimating relationships among variable especially when focus is on the relationship between a dependent variable and one or more independent variables. Regression is also used to understand if the independent variable is related to the dependent variable and to explore the form of this relationship and also infer the causal relationship (effect) between the variables (dependent and independent). However, the simple linear regression method was specifically employed, using the Ordinary Least Squares (OLS) method to estimate the parameters. The Ordinary Least Squares (OLS) method was employed because it is the best linear unbiased estimator.

**Model Specification**

The model to be regressed in this study is presented in a relation form as follows:

Firm value = F [Debt/Financial leverage]

Linear expression of the model=>

F-val = b_0 + b_1 Lev + ε

I.e. Y = β_0 + β_1 X_1 + ε

Lev = Total debt/Total equity

Y = Dependent variable i.e. Firms’ value.

X_1 = Independent variable i.e. Financial leverage.

β_0 and β_1 are parameters to be estimated.

ε = Error term.

Firm value = Market value of firm’s shares.

Financial leverage = Total debt/Total equity

**A priori Expectation**

Considering the empirical studies by past financial analysts, it was expected that financial leverage has a significant relationship with firm’s value and also that financial leverage has significant impact on firm’s value.

**Statistical Criteria**

It is necessary to check the goodness of fit of the model and the statistical significance of the estimated parameter; the statistical criterion used to check the goodness of fit was the coefficient of determination (R^2) and the T-test, Durbin Watson and F-test were the criteria used to check the statistical significance of the estimated parameters. The criteria are further explained below:

1. **T- Test**: This test was used to test the significance of the parameters estimated at (n-k) degree of freedom, where n= number of observations and k= parameters.

2. **Coefficient of Determination (R^2)**: This shows the percentage of the total variation of the dependent variable the can be explained by the independent variable(s). R^2 shows
the extent to which the independent variable influences the dependent variable. A high value shows a high degree of influence and vice versa.

\[ R^2 = \frac{\text{Explained variation}}{\text{Total Variation}} = \frac{\text{RSS}}{\text{TSS}} \]

3. F-test: This is used to test the significance of \( R^2 \) and thus test the significance of the model as a whole. It is always at \( F_{0.05} \) at the degree of freedom of \( F \) table with
\[ V_1 = (k-1). \]
\[ V_2 = (N-K) \]
If \( F \)-calculated is greater than \( F \)-tabulated, reject the \( H_0 \) and if \( F \)-calculated is less than \( F \)-tabulated accept \( H_0 \) at 5% level of significance.

4. Durbin-Watson statistic: This is mostly relevant when using time series data. This criterion was used to tests whether there is any evidence of autocorrelation in the residuals of the time series regression. The statistics ranges from zero to four, a value of two or close to two indicates no autocorrelation in the sample. A value far less than two indicate positive correlation while a value greater than two indicate negative correlation.

5. Data presentation
Below, are the data used for the analysis of this study. Financial leverage connoted by (LEV) is estimated by total debt/total equity, and its value is given in ratio. Firms’ value connoted by (FVAL) is estimated using market value of the shares of sampled firms, and its value is given in kobo.
DATA
Sources: Annual reports of sampled firms

<table>
<thead>
<tr>
<th>S/N</th>
<th>SECTOR</th>
<th>Name of Companies</th>
<th>Year</th>
<th>FVAL</th>
<th>LEV</th>
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</thead>
<tbody>
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<td></td>
<td>Avon Crowncaps &amp; Containers (Nig) Plc</td>
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<td>374</td>
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<td>1.081935007</td>
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<td></td>
<td>2010</td>
<td>765</td>
<td>0.905684653</td>
</tr>
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<td></td>
<td>2011</td>
<td>657</td>
<td>0.889203192</td>
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<td></td>
<td></td>
<td></td>
<td>2012</td>
<td>511</td>
<td>0.072508215</td>
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<td>2</td>
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<td>NEIMETH Int. Phar. Plc</td>
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<td>2008</td>
<td>11.2</td>
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<td>2009</td>
<td>2</td>
<td>0.757271481</td>
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<td>2010</td>
<td>1.85</td>
<td>1.036426363</td>
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<td>1.275513447</td>
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<td></td>
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<td>2012</td>
<td>1.13</td>
<td>1.275513447</td>
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<td>3</td>
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<td>Nigerian Breweries Plc</td>
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<td>49</td>
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<td>0.213272794</td>
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<td>2012</td>
<td>2.04</td>
<td>0.133738396</td>
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<td>5</td>
<td></td>
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<td>70</td>
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<td>650</td>
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<td></td>
<td></td>
<td></td>
<td>2011</td>
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<td>-0.050574581</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>2012</td>
<td>900</td>
<td>0.095321008</td>
</tr>
</tbody>
</table>

Data analysis and interpretation

The results of the OLS regression are analysed in the table below:

Table 4.3.1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FVAL</td>
<td>284.4177</td>
<td>386.6451</td>
<td>30</td>
</tr>
<tr>
<td>LEV</td>
<td>0.297789</td>
<td>0.597186</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: E-view, 7.0 Appendix 1
Interpretation

Table 4.1 above highlights descriptive statistics of variables. Firm Value (FVAL) which is the dependent variable has a mean of 284.4177 and a standard deviation value of 386.6451. The mean value of Leverage (LEV) stood at 0.297789 and a standard deviation of 0.597186. The last column represents the number of samples in our observation.

Table 4.3.2: Correlations of Variable

<table>
<thead>
<tr>
<th></th>
<th>FVAL</th>
<th>LEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>FVAL</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>0.573287</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: E-view, 7.0 Appendix 1

Interpretation

The table shows that the co-efficient of correlation of a variable with respect to itself is 1.000. This indicates that there exists a perfect Correlation between a variable with respect to itself. The correlation co-efficient between the dependent variable and independent variables are discussed below:

The result showed that there exist a positive relationship between Leverage (LEV) and Firm Value (FVAL). The correlation co-efficient between Leverage (LEV) and Firm Value (FVAL) is about with a value of 0.073287 which means the strength of relationship between them is about 0.57% which shows an average positive relationship between Leverage (LEV) and Firm Value (FVAL).

MODEL SUMMARY AND ANALYSIS OF RESULT

The result obtained from the preliminary ordinary least square estimation technique is presented below:

Table 4.4.1 Ordinary Least Square Regression Result (Initial Output)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FVAL</td>
<td>C</td>
<td>270.287</td>
<td>80.33592</td>
<td>3.364470</td>
<td>0.0022</td>
</tr>
<tr>
<td>LEV</td>
<td></td>
<td>47.44923</td>
<td>122.0266</td>
<td>0.388843</td>
<td>0.7003</td>
</tr>
</tbody>
</table>

Source: E-views software (Appendix 1)

R-Squared = 0.05
R- Bar Squared = 0.03
F-Stat. = 0.15
DW-Statistic = 0.44

Interpretation of Result

The coefficient of determination (R²) with a value of 0.05 shows that about 0.05% of the total systematic variations in the dependent variable (FVAL) have been explained by the explanatory variables taken together. The adjusted R-Square shows that after adjusting for the degree of freedom, the model could still explain about 0.03% of the total systematic variations in Firm Value (FVAL), while about 97% of the systematic variation in Firm Value (FVAL)
was left unaccounted for, which has been captured by the stochastic disturbance term in the model. This indicates a low fit of the regression line and also the model has a low forecasting power. On the basis of the overall statistical significance of the model as indicated by the F-statistic, it was observed that the overall model was statistically significant since the calculated F-value of 0.15is less than the critical F-value of 4.17 at 5% level of significance. This implies that there no significant linear relationship between Firm Value (FVAL) and the independent variables Leverage (LEV). On the basis of the individual statistical significance, as shown by the t-statistic, it was observed that Leverage (LEV) is positive but highly insignificant, since its calculated t-value of 0.38 is less than the critical t-value of 1.701 at 5% level of significance. The DW-statistics of 0.44 showed that there is the presence of first order auto-correlation in the model. Hence the model was re-estimated.

Table 4.4.2: Ordinary Least Square Regression Result (Final Output)

<table>
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<tr>
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</thead>
<tbody>
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<td></td>
<td>LEV</td>
<td>40.84653</td>
<td>19.4391</td>
<td>2.11850</td>
<td>0.0455</td>
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</tbody>
</table>

Source: E-views software (Appendix 2)

R-Squared = 0.70
R-Bar Squared= 0.63
F-Stat. = 19.19
DW-Statistic = 1.78

Interpretation of Result

The coefficient of determination (R²) with a value of 0.70 shows that about 0.70% of the total systematic variations in the dependent variable (FVAL) have been explained by the explanatory variables taken together. The adjusted R-Square shows that after adjusting for the degree of freedom, the model could still explain about 0.63% of the total systematic variations in Firm Value (FVAL), while about 37% of the systematic variation in Firm Value (FVAL) was left unaccounted for, which has been captured by the stochastic disturbance term in the model. This indicates a moderate fit of the regression line and also the model has a high forecasting power. On the basis of the overall statistical significance of the model as indicated by the F-statistic, it was observed that the overall model was statistically significant since the calculated F-value of 19.19233 is greater than the critical F-value of 4.17 at 5% level of significance. This implies that there a significant linear relationship between Firm Value (FVAL) and the independent variables Leverage (LEV). On the basis of the individual statistical significance, as shown by the t-statistic, it was observed that Leverage (LEV) is positive and highly significant, since its calculated T-value of 3.82670 is greater than the critical T-value of 1.701 (n – k= 28) at 5% level of significance. The Durbin-Watson (DW) statistics value of 1.78 is a significant improvement on the preliminary OLS.

TEST OF HYPOTHESES

In order to test the hypotheses of the study, the t-statistic obtained from the regression result were used. The study adopted 5% level of significance under the one-tailed test. Our decision rule is to accept the alternative hypothesis if the T-calculated is greater than the T-critical value otherwise we reject alternative and accept the null. The t-critical value is 1.701 at 5% (0.05) significant level and at 28 degree of freedom (one-tailed test).
Hypothesis 1:
H₀: There is no significant relationship between Leverage and Firm Value.
H₁: There is a significant relationship between Leverage and Firm Value.

From the empirical analysis it was observed that Leverage with a calculated t-value of 3.82670 is greater than the critical t-values of 1.701 at 5% level of significance. We therefore reject the null hypothesis and accept the alternative hypothesis which states that there is significant relationship between Leverage and Firm Value.

Hypothesis 2:
H₀: Financial leverage has no effect on a firm’s value.
H₁: Financial leverage has effect on a firm’s value.

The empirical analysis shows that financial leverage with a calculated t-value of 3.82670 is greater than the critical t-value of 1.701 at 5% level of significance. We therefore reject the null hypothesis and accept the alternative hypothesis which means that financial leverage has effect on a firm’s value.

SUMMARY OF FINDINGS

The research work examined the relationship between financial leverage and firms’ value, using 5 selected firms from the manufacturing sector for the year 2007-2012. With the result of the analysis and the hypotheses tested, the following were the findings:

1. It was observed that there is a significant relationship between financial leverage and firms’ value. Since the t-test calculated is greater than the t-test tabulated at 5% level of significance.
2. It was also found that the level of debt a firm has in its capital structure is a factor that will affect its value. Since the second hypothesis “financial leverage has no effect on a firm’s value” was found to be negative.
3. Also the data above showed that while some of the sampled firms had high market value of their shares as the leverage ratio increase, for other firms, as the leverage ratio increases the market value of their shares decreases.

CONCLUSION

The main objective of the study was to find out the relationship between financial leverage and firms’ value. Financial leverage (debt) is a good source of finance to firms as it enables firms to carry out long-term projects and also reduce the tax payable by the firm. It has also been observed that the large amount of debt (high leverage ratio) have negative effect on firms that makes low profit, thus the investors may receive little or no earnings (dividend). Investors’ faith in both the companies and the capital market is shaken; hence the market value of firms’ shares will fall same as its value. This study has however established that there is a relationship between financial leverage and firms’ value and also financial leverage has effect on firms’ value, both positive and negative effects.

However, the researcher is hoping that if companies/firms can implement the recommendations stated below, it is expected that they would be able to enjoy the positive effects of financial leverage and avoid the negative effects of financial leverage.
RECOMMENDATIONS

Based on this research work, the researcher made the following recommendations:

Corporate financial decision makers (in large firms) should employ more of long-term-debt than equity in their financial option. This is in line with the pecking order theory. Also firms are strongly advised to always compare the marginal benefit of using long-term-debt to the marginal costs of long-term-debt before concluding on using it in financing their operations. This is because as shown by this work, long-term-debt has impact on firms’ value. Also, firms should ensure to use optimal level of debt in their capital structure, as this will lead to optimum capital structure and thus maximization in firms’ value.

Finally, traditional theory states that as a company gearing increases above zero, the weighted average cost of capital (WACC) will fall initially, because of the higher proportion of lower cost debt capital in the firm’s capital structure, but eventually increases when gearing gets above a certain level because of the rising cost of equity which offsets the higher proportion of low cost debt. The researcher advises companies to reduce their use of debt at the point where the weighted average cost of capital begins to increase, thus making the firms’ value to fall.

APPENDIX ONE

<table>
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<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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<td>80.33592</td>
<td>3.364470</td>
<td>0.0022</td>
</tr>
<tr>
<td>LEV</td>
<td>47.44923</td>
<td>122.0266</td>
<td>0.388843</td>
<td>0.7003</td>
</tr>
</tbody>
</table>

R-squared 0.005371
Mean dependent var. 284.4177
Adjusted R-squared -0.030151
S.D. dependent var. 386.6451
S.E. of regression 392.4308
Akaike info criterion 14.84694
Sum squared resid 4312053.
Schwarz criterion 14.94035
Log likelihood -220.7041
F-statistic 0.151199
Durbin-Watson stat 0.440670
Prob.(F-statistic) 0.700333

CORRELATION

<table>
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</table>

APPENDIX TWO

Dependent Variable: FVAL
Method: Least Squares
Date: 05/29/14  Time: 03:41
Sample(adjusted): 2 30
Included observations: 29 after adjusting endpoints
Convergence achieved after 8 iterations
### Variable Coefficient Std. Error t-Statistic Prob.

<p>| | | | |</p>
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</tr>
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<td>0.132842</td>
<td>6.090065</td>
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### REFERENCES


Manufacturing Sector Firm in India”. The Business Review, 6(2).


www.cies.org/.../project statement sample…www.sagepub.com/booksprodDesc-nav?....

FORENSIC ACCOUNTANT'S RESPONSIBILITY COMPETENCY A PANACEA TO NARROWING AUDIT EXPECTATION GAP AMONG NIGERIA MONEY DEPOSIT BANKS

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Department of Economics, Accounting and Finance, Jomo Kenyatta University of Agriculture and Technology
Juja, Nairobi, KENYA

ABSTRACT

The main focus of the study was to examine the relationship between forensic Accountant's responsibility competency and audit expectation gap among Nigerian Money Deposit Banks. Several hypotheses were formulated based on the constructs of the Independent Variable. The study specifically seeks to establish the relationship between accounting information reliability responsibility, fraud investigation and detection responsibility and audit expectation gap in Nigeria Money Deposit Banks. A survey design was used to gather the information needed to achieve the objectives. A census was carried out in twenty one Nigeria Money Deposit Banks which had operating licenses from the Central bank of Nigeria. Open ended and closed ended questionnaires were used to collect the data. A total of 453 questionnaires were distributed to sampled respondents who were the staff of the Nigeria Money Deposit Banks, stratified into: Management team, Finance and Account department, Audit and Inspection and the Shareholders of the listed banks. Completed questionnaires received were 402 in number which represented 88.74% response rate and 51 questionnaires were not received which represented 11.26% of the total questionnaires distributed. The data were subjected to various statistical screening for reliability of the instrument and validity of the variables (in terms of Construct and Convergent validity). Structural Equation Model (SEM) was employed to analyse the data vide SPSS 23 and SmartPLS packages in order to obtain the statistical significance and the direction of the relationships between Inner and Outer models of the study. The study revealed that there was significant and negative relationship between forensic Accountant's responsibility competency audit expectation gap among Nigeria Money Deposit Banks. Therefore, the study finally recommended that there is the need for continued sensitization of the public, by both the auditing profession and other stakeholders on the role and duties of the auditor in the area of prevention and detection of fraud to avoid unreasonable expectation by the public. This can easily be achieved by the amendment on traditional Auditor's scope of responsibility in other to accommodate forensic accounting services.

Keywords: Forensic Accountant's Responsibility, Audit Expectation Gap, Accounting Information Reliability, Fraud Investigation and Detection, Reasonableness Gap.

INTRODUCTION

The widespread of frauds and other unethical activities in modern organizations have made conventional auditing inefficient and ineffective techniques in the detection and prevention of the various types of frauds confronting businesses globally. The increasing frauds and financial malpractices in corporate organizations have placed financial and accounting issues as top concern for both the international community and policy makers (Jonanthan et al., 2010). Accountants and Auditors may be expected to report financial irregularities in company's accounts by enhancing transparency, accountability and developing techniques for fraud detection and prevention. However, an emerging body of literature argues that...
accounting professionals have increasingly used their expertise to conceal and promote anti-social practices (Hunton, Wright and Wright, 2004). Most banks failure are a result of corporate financial frauds and other misappropriation done by the management and other bank staff hinder the good corporate governance that spread within banking. The bank's failure have generated serious attention focused on the responsibility of Accountants and Auditors who have been involved in the preparation, presentation and auditing the financial report of the state affairs of the company (Sikka, 2008). However, Auditors have refused to accept the responsibility of preventing and detecting financial statement fraud, rather they claimed that primary function of external auditors is to attest to the fairness of the financial statements of a company and also responsible credence to financial statement by confirming the compliance of the accounting records with the General Accepted Accounting Standards (GAAP), Auditing standards and company accounting policy. This has generated expectation gap between the accounting profession and users of accounting information expecting auditor to prevent and detect fraud (Adeniji, 2004).

It’s crystal clear that conventional auditors still issue reports that are materially fraudulent as true and fair views which it fails to divulge existing fraud and narrow the audit expectation gap. However, the general expectation is that forensic accounting offer reliefs to the existing vulnerability of conventional accounting and auditing systems to financial fraud. Moreover, the need for forensic accounting services have been ascribed to the fact that the audit system in an organization had failed to detect certain errors and fraud in the managerial system. Failure of internal audit and audit committee to unearth hidden aspects of corporate fraud and also the incapability of Auditors' responsibilities in meeting the public expectation are some of the major determinants responsible for the growth of forensic Accountants' responsibilities which fuelled the audit expectation gap (Okoye and Gbegi, 2013). Hence the interest in audit expectation gap is propelled by the recent corporate failures, in emerging economies. Therefore, the incorporation of modern forensic accounting techniques in any industry is necessary in order to prepare the accounting profession to deal effectively with the problem of unearthing imaginative fraud. Injection of forensic accounting techniques in auditing could be used to reverse the leakages that caused corporate failure. This can be attributed to the fact that proactive forensic accounting seek out errors and deviant transaction before they crystallize into fraud (Association of Certified Fraud Examiner, 2012).

Research Problem

Lack of confidence on statement audit report (SAR) of Auditors by the public has become a multi-trillion affair, consequently, this is a key concern to both bank regulators and government. Statutory auditing is a mandatory requirement for all public organizations and it is assumed that unqualified audit reports should be free frauds and material errors. Auditors' reports add credibility to the financial reporting by ensuring that accounting statement follow the generally accepted guidelines and are accurate, but when the auditor's performance in his responsibility is below public expectation then the contents of the report will no longer be useful to decision makers. Over the years, the empirical evidences on audit expectation gap have revealed that the major determinant of audit expectation gap in many banks is that there are differences in perceptions about the role and responsibilities of auditors with regard to management and other accounting frauds in the banks (Dixon et al., 2006, Suddiqui and Nasreen, 2004). The audit expectation gap is a dangerous issue to the auditing profession as the larger the expectation gap, lesser will be the credibility, earnings potential and the prestige associated with the conventional auditor's responsibility. The audit expectation gap is a great menace to the public, to the investors and other stakeholders. Many studies among are
as follows; Ojo (2006), Chariri (2007), Anwar (2008), Onuorah (2012), had established the existence of audit expectation gap and that of forensic accounting. They argued that forensic accounting services now appears as the major approach for the management to narrow expectation gap. Therefore, it has become crucial to investigate the core responsibilities of forensic Accountant and how can the approach narrow audit expectation gap.

Objective of the Study

The objective of the study is to examine the relationship between forensic Accountant's responsibility competency and audit expectation gap among Nigerian Money Deposit Banks. In order to achieve this aim, the study seeks to:

a) Establish the relationship between accounting information reliability responsibility and audit expectation gap in Nigeria Money Deposit Banks.

b) Investigate the relationship between fraud investigation and detection responsibility and audit expectation gap in Nigeria Money Deposit Banks.

Research Hypotheses

In order to address the above objectives, the following research hypotheses were formulated and tested.

a) \( H_0 \): There is no significant relationship between accounting information reliability responsibility and audit expectation gap in Nigeria Money Deposit Banks.

b) \( H_0 \): Fraud investigation and detection responsibility has no significant relationship with the audit expectation gap in Nigeria Money Deposit Banks.

LITERATURE REVIEW

Theoretical Framework

The study was underpinned on a number of theories. These theories, which are briefly discussed and related to the study include: (i) The Role Theory and (ii) The Agency Theory

The Role Theory

Role Conflict Theory provides a theoretical explanation for the existence of an expectation gap. The theory is developed by Rizzo, House and Lirtzman in 1970. Role Conflict Theory is based on the following assumptions: the auditor is required to monitor the client’s financial statements and the public expects the auditor to faithfully carry out that role (Koo and Sim, 1999). The auditor is in conflict because he or she must firstly serve the professional regulations and rules governing auditor independence. Then, this must be balanced against his or her role as the ‘watch dog’ who should be serving the interests of the users and the client as well as looking after his or her own self – interest (Alleyne and Devonish 2006). The role of the auditor is subject to the interactions of the normative expectations of the various interest groups in the society having some direct or indirect relationship to the role position (Davidson 1975). He noted that these different groups may hold varying expectations of the auditor and these expectations may change from time to time depending on their specification of their own role requirements and the interaction of other forces in the society. Hence, the auditors are placed in multi-role and multi expectation situations. Furthermore, Koo and Sim (1999) argue that role conflict may arise because of the expectation gap that exists between the auditors and users. Users expect auditors to serve the public and to uncover management fraud (Mills and Bettner, 1992). There is role conflict when the auditor is unable to satisfy all
the responsibilities expected by users. The relevance of this theory is that the audit expectation gap may arise out of a role conflict where the forensic accountant is expected to perform a role for which he is not competent with.

**The Agency Theory**

Agency theory is a concept that explains why behavior or decisions vary when exhibited by members of a group. Specifically, it describes the relationship between one party called the principal, that delegates work to another called the agent. It explains their differences in behavior or decisions by noting that the two parties often have different goals and, independent of their respective goals, may have different attitudes toward risk. The concept originated from the work of Adolf Augustus Berle and Gardiner Coit Means, who were discussing the issues of the agent and principle as early as 1932. Berle and Means explored the concepts of agency and their applications toward the development of large corporations. They saw how the interests of the directors and managers of a given firm differ from those of the owner of the firm, and used the concepts of agency and principal to explain the origins of those conflicts (Murtishaw and Sathaye, 2006). The relevance of this theory is that it is the role of the auditor to supervise the agency relationship between the manager and the owners. A gap expectation occurs when the distribution of the responsibility is not well defined. The responsibility of every part is well defined in the regulation. The manager and the owners have to realize that the auditor does not have responsibility of the accounting, but only see that the auditing is done properly.

**Concept of Forensic Accounting Services**

Forensic Accounting is certainly not a new field. Indications showed the profession has been in existence a long time ago though during that time the profession has been in existence a long time ago though during that time the profession was not called Forensic Accounting. The discipline was dated back to the ancient Egyptian scribes who were responsible for maintaining all of the Pharaoh's assets were called 'eyes and ear' of Pharaoh. They were responsible for calculating and maintaining the daily records. Another evidence of forensic accounting can be traced back to the year 1817 when the accountant who examined the bankrupt's account applied the principles of Forensic Accounting when it was needed to testify in the court case (Crumbly,2001).Empirical evidences show that, Maurice E. Peloubet a partner in a New York accounting firm was the first person to published the phrase of 'forensic accounting' in an article in 1946. He started stated that, "during the war both the public and industrial accountant have been and now engaged in the practice of forensic accounting" (Peloubet, 1946).

Forensic accounting is a new and rapidly growing area of accounting mostly in developing countries and majorly focus on the detection and prevention of financial fraud and white-collar crimes. Due to the lapses from the independent operation of accounting, auditing and investigation services in preventing and detecting frauds and other malicious act that hinder public expectation, this call for emergency of a new advance service that compliment all the services together. Gottschalk, (2010) noted that forensic accounting is the integration of accounting, auditing, and investigative skills combined to give birth to the specialty known as Forensic Accounting, which focuses very closely on detecting or preventing economic and financial crimes and area that required complex uncover suspicious sophisticated scandal. "Forensic," according to the Webster's Dictionary means, "Belonging to, used in or suitable to courts of judicature or to public discussion and debate." The word accounting is defined as
"a system of recording and summarizing business and financial transactions and analyzing, verifying, and recording the results." The term ‘forensic accounting’ refers to financial fraud investigation which includes the analysis of accounting records to prove or disprove financial fraud and serving as an expert witness in Court to prove or disprove the same. Thus, basically, forensic accounting aims at using accounting report in a form suitable for legal purposes (Dhar and Sarkar, 2010). Forensic accounting may be one of the most effective and efficient approach to reduce and prevent fraudulent activities as it is concerned with the evidentiary nature of accounting data, and as a practical field concerned with accounting fraud and forensic auditing; compliance, due diligence and risk assessment; detection of financial misrepresentation and financial statement fraud (Rasey, 2009).

The forensic accountants draw conclusions, calculate values and identify irregular patterns or suspicious transactions by critically analyzing the financial data. It provides an accounting analysis to the court for dispute resolution in certain cases and it also provides the courts with explanation the fraud that has been committed (Kimani, 2011). Forensic accountants investigate beyond the figures, make him different traditional accountants and auditors, in fact, while the traditional accountants look at the numbers, Forensic Accountants look behind the numbers and the mind of the culprits. The word forensic has nothing to do with the dead as is erroneously believed. It is the application of scientific knowledge to legal problems and legal proceedings. Forensic Accounting is a concept that link accounting system to legal system. Thus, we can say that forensic accounting is an accounting that is used to help the court to arrive at the truth about a particular case in a court of law. Enron scandal was one of the high-profile cases in the recent past; where large numbers of American forensic accountants were deployed. Forensic accounting services have rooted in developed countries. Forensic accounting expertise are utilizing to address the financial fraud cases, and economic crimes in developed countries. United States and Canada are pioneers in the development & implementation of Forensic Accounting and it has gain ground in both the public and private sectors.

Forensic accounting is yet to be fully deployed by the government and the private sector in Nigeria, despite the terrifying increase in complex financial crimes and incapability of conventional auditor to investigate them. The Institute of Chartered Accountants of Nigeria, not quite long ago created its Forensic Accounting Faculty in order to jump start the training of specialist in this all important field. Growing financial fraud cases, bank failures, despite regular inspections, recent stock marker scams, and the almighty allegation of world-wide-wipe-out of the finances of the Nigerian Stock Exchange, failure of non banking financial companies, and failure of the regulatory mechanism to curb it requires extra investment in forensic accounting skills. However, the main important law enforcement agency involved directly in combating white-collar crimes is the Police Special Fraud Unit, EFCC and ICPC, but not fully equipped with proper forensic accounting responsibilities. From the above it could be said that conventional Auditors' responsibilities are like "watchdog and not be the bloodhound". But responsibility of forensic Accountant is a bloodhound of Bookkeeping. These bloodhounds sniff out fraud and criminal transactions in banks, corporate entity or from any other organization’s financial records. They hound for the conclusive evidences. Forensic accountants in their responsibilities takes a more proactive, skeptical approach in examining the books of Accounting. They ignore management integrity and show less concerns for the arithmetical accuracy have nothing to do with the Accounting or Assurance standards but are keen in exposing any possibility of fraud (Mayur, 2006).
Concept of Audit Expectation Gap

The main objective of an audit practice is to enable auditors to express an opinion whether the financial statement prepared, picture a true and fair view and to ensure that the contents on the financial records on which the auditor is reporting are not misleading with high quality and reliable in order to safeguard the interest of stakeholders. Society, financial and business community expect auditors to detect all (or at least all material) corporate fraud as auditors alone have legal right of access to all company’s accounts, books and records and right to seek explanations and information from company’s officers/employees to mitigate the existence of agency conflict between the management and the public. (Sikka et al, 1992). It is these high expectations on the part of users of financial statements that create a gap between auditors’ and users’ expectations of the audit function. In addition, the users also place the responsibility for narrowing the gap on auditors and others involved in preparing and presenting financial statements. Therefore, when the perception of the accounting information users as regard the responsibility of the auditor does not in line with what the users expect the auditor does, an expectation exists between users and auditors (Porter, 1993).

Liggio (1974) is the first to define the expectation gap as the difference between the actual and the expected performance. This definition is extended by the Cohen commission (Commission on auditors responsibilities, 1978) where the expectation gap is represented by the gap between the public expectations and needs, and the expected accomplishment of the auditors. Moreover, the expectation gap could be defined as `the difference between what the public and financial statement users believe auditors are responsible for and what auditors themselves believe their responsibilities are' (AICPA, 2007). Monroe and Woodliff (1993) defined the expectation gap as the difference between the beliefs of auditors and those of the public concerning the auditors' responsibilities and duties. Jennings et al. (1993) argued that the expectation gap represents the difference between the public expectations about the responsibilities and duties of the auditing profession and what the auditing profession actually provides. The Canadian Institute of Chartered Accountants (1988) sponsored a study on the public’s expectations of audit (the MacDonald Report). The commission developed a detailed audit expectation gap model that analyzed the individual components of the expectation gap into unreasonable expectation, deficient performance and deficient standard, this model is presented in Figure 1. Based on Figure 1, three components of the expectation gap can be identified as follows: (1) Reasonableness gap: A gap between what the society expect auditors to achieve and what they can reasonably be expected to accomplish. Such a gap exists because of misunderstanding of users, users’ over expectations, uneducated users, miscommunication of users, and miss-interpretation of users and unawareness of users from the audit practice limitations. (2) Deficient standards gap: A gap between the duties, which can reasonably be expected of auditors, and auditors existing duties as defined by law and professional promulgations. Kinney (1993) states that one of the major causes of the profession’s expectation gap is the difference between what the standards of the profession provide and what users might desire. In addition, such a gap existed because of lack of sufficient standards to covering all of audit practices or the existence of the insufficient standards for audit responsibilities, detection of fraud and illegal acts. In short, the deficient standards gap is only because of insufficient or poor standards to audit functions. (3) Deficient performance gap: A gap between the expected standard of performance of auditors existing duties, and performance as expected and perceived by society (Porter et al., 2003). Such a gap also confirmed by scholars and researchers in a lot of countries. The main reasons of such a gap may be classified as follows: Non-audit services practicing by auditors, self-
interesting auditors and economical relationship with clients, unqualified auditors, and
dependent auditors.

<table>
<thead>
<tr>
<th>Perceived performance of auditor</th>
<th>Gap</th>
<th>Society's expectation</th>
<th>Reasonableness gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance gap</td>
<td>Standard gap</td>
<td>Unreasonable expectations</td>
<td></td>
</tr>
<tr>
<td>Reasonable expectation of auditor performance</td>
<td>Reasonable expectation of standard</td>
<td>Over-expectation of audit performance</td>
<td>Over-expectation of standard</td>
</tr>
</tbody>
</table>

### Reasons of Audit Expectation Gap

<table>
<thead>
<tr>
<th>Causes of Audit Expectation Gap</th>
</tr>
</thead>
</table>
| Sharhk and Talha, (2003), viewed some of the reasons contributed to audit expectation gap. The expectation gap has been attributed to many numbers of different causes: 1) the probabilistic nature of auditing; 2) the ignorance, naivety, misunderstanding and unreasonable expectations of non-auditors about the audit function; 3) The evaluation of audit performance based upon information or data not available to the auditor at the time the audit was completed; 4) The evolutionary development of audit responsibilities, which creates time lags in responding to changing expectations. Another literature reviewed point out that audit expectation gap is as a result of corporate crises which lead to new expectations and accountability requirements. The profession attempting to control the direction and outcome of the expectation debate to maintain the status quo. Best, Buckby and Tan (2001) noted that major cause of this gap is due to the expectation of public on auditor's responsibility in relation to detection and prevention of management and other accounting frauds. In view of this, when a company encounters problems as a result of undiscovered unethical or illegal acts either perpetrated by management, other insiders or third parties, the external auditors is blamed. Other reasons, for this gap are inadequate audit standards, deficient performance of auditors, unreasonable expectations of users of audited financial statements, perception that audit profession can be trusted to serve public interest, inadequate education of public about auditing and misinterpretation of audit report (Albrecht,2003; Lin and Chen , 2004;Lee and Ali, 2008).

### Responsibilities of Conventional Auditors and Audit Expectation Gap

Wells (2008), noted that, the early primary responsibility of Auditors is to detect frauds and prevent errors. In view of this, the issue of frauds detection and prevention serve as the main duty and responsibility of both Accountants and Auditors. This can be traceable to the Accountants' predecessors i.e. the scribes of an ancient Egypt, who kept the pharaoh's books. They stock grain, gold and other assets. Due to the advent of the huge conglomerates and profuse amount of transactions involved as a result of complex diversification of business of
organizations. It is impracticable and unrealistic for the Accountant and Auditor to engage in full vouching of all these transactions and a proper record to facilitate the prevention and detections of frauds. Based on this premises, the primary responsibility of an Auditor shifted from prevention and detection of fraud to the reasonable assurance of accounting records. The responsibility of Prevention and detection of frauds Auditor was relegated to secondary responsibility for Auditor. The demotion of Auditor’s responsibility from prevention and detection of fraud to the reasonable assurance of accounting records ignite the intention of fraudsters as an opportunity to involve in fraud perpetrations which led to various dimension of fraud as against the expectation of the public and other stakeholders that make use of financial statement for decision making (Malaysia Institute of Accountant, 2009).

As the management frauds emerged due to the relegation of Auditor's responsibility, it has become the nightmare for an Auditor as night mare frauds are very intractable because, management can easily override internal control. Therefore, primary responsibility of an auditor is to verify whether the financial statements exhibit a true and fair view of state of affair of the business and their secondary responsibility is the prevention and detection of errors and frauds. The primary responsibility for the prevention and detection of fraud and error rests with both those charged with governance and the management of an entity in spite of the fact that financial statements are the representations of the management. The investing public has high expectation on auditor's responsibility to monitor and assure the reliability of financial reporting. The ‘expectation gap’ materialized as the profession has failed to respond (Gwilliam, 1992; Francis, 1994). In another literature, it was noted that, the ‘expectation gap’ is derived for a loose juxtaposition between the idealization of auditing and the actual audit practices as regard Auditors responsibility. However, the ‘expectation gap’ in relation to auditor’s responsibility is mainly a time lag effect (Power, 1998). There is element of accord between responsibilities of auditors and the expectation gap. The expectation gap is due to over- anticipation of the auditing function from the public perception. This perception of public has been challenged by the profession on the grounds that audits are designed to assure the conformity of financial statements with GAAP and fraud prevention and detection should be the responsibility of management who bear a legal obligation for truthful financial reporting [Nair and Rittenberg, (1987); Goldberg, (1988); CICA, (1988); Chapman, (1992).

Therefore, the responsibility debate has positively affected the development of auditing standards and practices in the developed world. By identifying society’s need over time, the debate has enabled the profession to realize ‘a duty to continuously asses auditing standards in light of the expectations concerns and criticisms of others and develop new standards to bring the auditors’ responsibility and performance closer to public expectation’ (Porter, 1996).

**Responsibilities of Forensic Accountant and Audit Expectation Gap**

In an exertion to determine whether forensic accountant's responsibility are more able than auditor's responsibility to assess fraud risk effectively in narrowing audit expectation gap, Accounting researchers have begun to examine efficiency and effectiveness of forensic Accountant's responsibility in narrowing audit expectation gap. In the studies Asaolu and Owojori (2009) noted that, failure of the conventional Auditor in performing statutory auditing and default in determine sophisticated fraudulent activities had call for emergency need for detection and prevention responsibility of forensic Accountant. Thus, the forensic Accountant could be said to have special skills for conducting investigation responsibility as to detect detection and prevention of management and other sophisticated financial frauds.
Zimblen et al (2012), states that the forensic Accountant's responsibility involve analysis, identifying the kinds of fraud that could occur and their symptoms. Thus, from this perception forensic Accountant is regarded as fraud detector which enhance him to analyze financial transactions and help him to easily detect errors, fraudulent activities and omissions that may be presented for litigation or sent to the audit committee as to enable audit committee to evaluate the quality of financial statement audit, this will help in narrowing audit expectation.

In another literature, it has been confirmed that Shareholders' and Partnership Disputes responsibility of forensic Accountant involve a detailed analysis of accounting records of several years to quantify the issues in dispute. For example, a common issue that often arises is the compensation and benefits received by each of the disputing shareholders or partners, which may be due to the demise of a partner or legal heirs of the deceased (Mehta and Mathur 2007; Ghosh and Banerjee 2011). This has contributed in meeting the expectation of public. Buckhoff and Schrader (2000) noted that, the responsibility of forensic Accountant in embezzlement investigation and provision of documentation of insurance settlement assist bank auditing to in detecting the culprit and amount embezzlement in the bank. The study further stated the other responsibilities of auditors that enhance narrowing audit expectation gap: fraud detection, documentation and presentation in criminal trials and claims, calculate economic damages; trace income and assets, often in attempt to find out hidden assets or income; reconstruction of financial statement that may have been destroyed or manipulated, and expert witness. The above responsibilities carried out by the forensic Accountant requires the forensic Accountant being a fraud professional specialist possesses certain characteristics which enables him to carry out his responsibilities effectively.

Knowledge Gap

The studies carried out have focused so much on the existence of an audit expectation gap in developed and developing countries. Other researchers have also concentrated at details about the origin and solution to the problem of audit expectation gap. A few other studies have examining the causes of audit expectation gap. This study will interrogate the responsibility competence of forensic Accountant in narrowing audit expectation gap.

Methodology of the Study

Research design constitutes the outline for the collection, measurement and analysis of data and has a great bearing on the reliability of the results arrived at and constitute the firm foundation of the research work (Kothari, 2004). The main aim of this study was to determine the relationship between forensic Accountants' professional skepticism and audit expectation gap in Nigeria Money Deposit Banks. A survey research design was employed. A survey design was appropriate for this study because it allows collection of information for both independent and dependent variables using questionnaires (Orodho, 2003). The population of this study was all the Money Deposit Banks in Nigeria, that are duly registered, licensed and regulated by the Central Bank of Nigeria. The study’s target population for the this study constituted 21 head offices of all the Money Deposit Banks in Nigeria. The respondents were stratified into management staff (Involve in Finance and Risk management ), Finance and Account department staff, Audit and Inspectorate department staff, and Shareholders with 500,000,001 units shareholding and above. The sampling frame was selected from the targeted population that required and most sensitive to the information. Sampling technique used for this study was stratified random sampling, the stratification was based on the
respondents and the department that are sensitive to the study in the banks. Each stratum was sampled as an independent sub-population, out of which individual sample elements was selected. Stratified sampling allowed the researcher to target firms based on a number of attributes. The sample size will be constituted of all the 21 head offices of Money Deposit Banks in Nigeria, that are duly registered, licensed and regulated by the Central Bank of Nigeria, stratified into management staff( Finance and Risk management ), Finance and Account department, Internal Audit and Inspectorate department and Shareholders with 500,000,001 units shareholding and above. Since the population is small, the study used census for the study of all 21 head offices of Money Deposit Banks in Nigeria. The data were subjected to various statistical screening for reliability of the instrument and validity of the variables (in terms of Construct and Convergent validity). Structural Equation Model (SEM) was employed to analyse the data vide SPSS 23 and SmartPLS packages in order to obtain the statistical significance and the direction of the relationships between Inner and Outer models of the study.

**ANALYSIS AND DISCUSSION OF SURVEY FINDINGS**

**Data Analysis, Results and Discussions**

This study used structural equation modeling (SEM) partial least squares (PLS) approach. SEM-PLS is an approach for testing multivariate models with empirical data. SEM–PLS regression uses a two stage procedure to test predictive models. The initial step is the evaluation of the outer or measurement model to determine the validity and reliability of the construct used to measure the variables in the study. The next step is the assessment of the inner or structural model. The measurement models address the reliability and validity of the indicators in measuring latent variables or hypothetical constructs, while the inner or structural model specifies the direct and indirect relations among the latent variables (LV) and describes the extent of explained and unexplained variances in the model. The SEM was developed and analyzed in two stages. Initially the measurement model was developed and measurement properties of multi-item constructs were analyzed for Construct Reliability, Convergent Validity, Discriminant validity and Unidimensionality of Construct by conducting confirmatory factor analysis (CFA). The second stage involved analysis of the proposed structural model for hypotheses testing.

**Development of Measurement Model**

**Construct Reliability**

Construct reliability was assessed by computing the composite reliability and the Cronbach Alpha of the constructs using SmartPLS. The Cronbach Alphas were all above the 0.6 threshold as specified for PLS analysis (Hair et al., 2014) and ranged from 0.753 and 0.949 which indicates good to excellent reliability and composite reliability of reflective items were all above the acceptable 0.7 threshold which means all the variables in the study Accounting Information Reliability Responsibility of forensic Accountant [AIRR], Fraud Investigation and Detection Responsibility of [FIDR]and Audit Expectation Gap exhibited construct reliability. All constructs were viewed to have acceptable reliability levels because the composite reliability scores for all constructs were above the 0.7 threshold. Details of construct reliability are presented in Table 4.1
Table 4.1. Reliability of Constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Composite Reliability</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Info Reliability Responsibility [AIRR]</td>
<td>0.961</td>
<td>0.949</td>
</tr>
<tr>
<td>Fraud Investigation and Detection Responsibility [FIDR]</td>
<td>0.835</td>
<td>0.753</td>
</tr>
<tr>
<td>Audit Expectation Gap [AEG]</td>
<td>0.902</td>
<td>0.836</td>
</tr>
</tbody>
</table>

Convergent Validity

Confirmatory Factor Analysis (CFA) was conducted to assess the convergent validity of the constructs. Convergent validity was assessed using the value of standard loadings of the indicators for the underlying construct. According to Nunnally (1978), the scores are to be statistically significant and above 0.5. The CFA results of item loadings and their respective t-values are reported in Table 4.2. The items were significantly loaded on the proposed factors with loading higher than 0.5. Convergent validity was also assessed using average variance extracted (AVE). The AVE of all constructs were above the 0.5 threshold indicating that the latent constructs account for at least fifty percent of the variance in the items. This indicates that the measurement scales exhibited adequate measurement validity (Hair et al., 2014).

Table 4.2: Convergent Validity of outer model

<table>
<thead>
<tr>
<th>Outer Model</th>
<th>Sample Estimate</th>
<th>Sample Mean (M)</th>
<th>Std Error (Se)</th>
<th>t-Statistics</th>
<th>p-values</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR</td>
<td>0.929</td>
<td>0.931</td>
<td>0.007</td>
<td>131.078</td>
<td>0.000</td>
<td>0.830</td>
</tr>
<tr>
<td>AIR1</td>
<td>0.940</td>
<td>0.940</td>
<td>0.013</td>
<td>74.325</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>AIR2</td>
<td>0.889</td>
<td>0.887</td>
<td>0.030</td>
<td>29.803</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>AIR3</td>
<td>0.910</td>
<td>0.909</td>
<td>0.023</td>
<td>40.156</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>AIR4</td>
<td>0.887</td>
<td>0.888</td>
<td>0.012</td>
<td>72.504</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>AIR5</td>
<td>0.728</td>
<td>0.724</td>
<td>0.058</td>
<td>12.533</td>
<td>0.000</td>
<td>0.564</td>
</tr>
<tr>
<td>FID</td>
<td>0.574</td>
<td>0.564</td>
<td>0.107</td>
<td>5.364</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>FID3</td>
<td>0.856</td>
<td>0.852</td>
<td>0.041</td>
<td>21.030</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>FID4</td>
<td>0.815</td>
<td>0.820</td>
<td>0.024</td>
<td>34.364</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>AEG</td>
<td>0.806</td>
<td>0.805</td>
<td>0.055</td>
<td>14.545</td>
<td>0.001</td>
<td>0.756</td>
</tr>
<tr>
<td>AEG2</td>
<td>0.842</td>
<td>0.846</td>
<td>0.031</td>
<td>27.245</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>AEG3</td>
<td>0.953</td>
<td>0.955</td>
<td>0.009</td>
<td>105.822</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>AEG4</td>
<td>0.806</td>
<td>0.805</td>
<td>0.055</td>
<td>14.545</td>
<td>0.001</td>
<td>0.756</td>
</tr>
</tbody>
</table>
Discriminant validity

A number of measures were used to assess the discriminant validity of the outer model. These were coefficient of determination ($R^2$) for the endogenous variable, the FornellLacker Measure and the Stone-Geisser Test ($Q^2$). The $R^2$ value of Audit Expectation Gap (AEG) was: 0.785. The Fornell Larker measure compares the AVE to the highest squared correlation of each construct (Fornell&Bookstein, 1982). As indicated in Table 4.4, all the constructs in the model met this criteria indicating that discriminant validity is supported. The Stone-Geisser Test is the Indicators Cross Validated Redundancy measure for each construct. This measure was produced through a blindfolding procedure in SmartPLS and is required to be equal to or greater than 0. A $Q^2$ of 1 is considered to mean a perfect prediction of model scores while a 0 is considered to a weak measure. All the measures were above 0 and indicated a fair to strong prediction of the model. The discriminant measures are presented in Table 4.3 below. Discriminant validity was confirmed for the measurement model. As indicated in Table 4.3, the square root of the average variance extracted is higher than all its correlation with other constructs within the model.

Table 4.3: Measures of Discriminant Validity

<table>
<thead>
<tr>
<th>Construct</th>
<th>$R^2$</th>
<th>Fornell Larker Measure (AVE &gt; highest correlation$^2$)</th>
<th>Stone-Geisser Test ($Q^2$ ≥ 0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Information Rea</td>
<td>0.830</td>
<td>0.830&gt;0.679</td>
<td>0.740</td>
</tr>
<tr>
<td>liability [AIR]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fraud Investigation &amp; Detection [FID]</td>
<td>0.764&gt;0.679</td>
<td>0.291</td>
<td></td>
</tr>
<tr>
<td>Financial Performance [AEG]</td>
<td>0.785</td>
<td>0.756&gt;0.650</td>
<td>0.506</td>
</tr>
</tbody>
</table>

Table 4.4: Fornell-Lacker’s Correlation matrix of constructs for Discriminant Validity

<table>
<thead>
<tr>
<th></th>
<th>AEG</th>
<th>AIR</th>
<th>FID</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEG</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIR</td>
<td>-0.868</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>FID</td>
<td>-0.806</td>
<td>0.834</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Unidimensionality of Construct

Construct unidimensionality verifies that that items used to measure a particular construct only measure that single construct. Exploratory factor analysis and/or confirmatory factor analysis can be used to measure this criterion (Hair et al., 2014; Hensler et al., 2012). Construct unidimensionality was initially assessed by verifying that the measurement items measured the specific construct. Following the purification and reliability analysis of the measurement scales, PLS analysis was conducted so as to ensure the suitability of every construct adopted for the study. Table 4.4 displays the mean and standard deviation with corresponding normality data statistics for all constructs in the outer model. The table 4.4 below shows the Descriptive Statistics for Measurement Scales and Test of Univariate Normality. The normality of data is confirmed through the excess of Kurtosis over Skewness for each item of the construct which must be less or equal to +2 and greater or equal to -2. All the items used in this study met this criteria to depict the normality of the data used.
### Table 4.4  Descriptive Statistics for Measurement Scales and Test of Univariate Normality

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable</th>
<th>Missing</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
<th>Standard deviation</th>
<th>Excess Kurtosis</th>
<th>Skewness</th>
<th>Diff btw Kurt &amp;Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>FID1</td>
<td>6.000</td>
<td>0.000</td>
<td>2.275</td>
<td>2.000</td>
<td>1.000</td>
<td>4.000</td>
<td>0.758</td>
<td>-0.226</td>
<td>0.188</td>
<td>-0.414</td>
</tr>
<tr>
<td>FID3</td>
<td>8.000</td>
<td>0.000</td>
<td>2.162</td>
<td>2.000</td>
<td>1.000</td>
<td>4.000</td>
<td>0.858</td>
<td>-0.796</td>
<td>0.160</td>
<td>-0.956</td>
</tr>
<tr>
<td>FID4</td>
<td>9.000</td>
<td>0.000</td>
<td>2.412</td>
<td>2.000</td>
<td>2.000</td>
<td>4.000</td>
<td>0.585</td>
<td>0.276</td>
<td>1.113</td>
<td>-0.837</td>
</tr>
<tr>
<td>FID5</td>
<td>10.000</td>
<td>0.000</td>
<td>2.662</td>
<td>3.000</td>
<td>2.000</td>
<td>4.000</td>
<td>0.569</td>
<td>-0.656</td>
<td>0.158</td>
<td>-0.814</td>
</tr>
<tr>
<td>AIR1</td>
<td>11.000</td>
<td>0.000</td>
<td>3.362</td>
<td>3.000</td>
<td>2.000</td>
<td>4.000</td>
<td>0.675</td>
<td>-0.693</td>
<td>-0.599</td>
<td>-0.094</td>
</tr>
<tr>
<td>AIR2</td>
<td>12.000</td>
<td>0.000</td>
<td>3.475</td>
<td>3.000</td>
<td>3.000</td>
<td>4.000</td>
<td>0.499</td>
<td>-1.041</td>
<td>0.102</td>
<td>-1.143</td>
</tr>
<tr>
<td>AIR3</td>
<td>13.000</td>
<td>0.000</td>
<td>3.638</td>
<td>4.000</td>
<td>3.000</td>
<td>4.000</td>
<td>0.481</td>
<td>-1.703</td>
<td>-0.583</td>
<td>-1.120</td>
</tr>
<tr>
<td>AIR4</td>
<td>14.000</td>
<td>0.000</td>
<td>3.612</td>
<td>4.000</td>
<td>3.000</td>
<td>4.000</td>
<td>0.487</td>
<td>-1.825</td>
<td>-0.471</td>
<td>-1.354</td>
</tr>
<tr>
<td>AIR5</td>
<td>15.000</td>
<td>0.000</td>
<td>2.662</td>
<td>2.000</td>
<td>2.000</td>
<td>4.000</td>
<td>0.774</td>
<td>-1.021</td>
<td>0.676</td>
<td>-1.697</td>
</tr>
<tr>
<td>AEG2</td>
<td>17.000</td>
<td>0.000</td>
<td>3.339</td>
<td>3.000</td>
<td>1.000</td>
<td>5.000</td>
<td>0.833</td>
<td>-1.287</td>
<td>0.388</td>
<td>-1.675</td>
</tr>
<tr>
<td>AEG3</td>
<td>18.000</td>
<td>0.000</td>
<td>3.435</td>
<td>4.000</td>
<td>1.000</td>
<td>5.000</td>
<td>0.940</td>
<td>-0.108</td>
<td>0.991</td>
<td>-1.099</td>
</tr>
<tr>
<td>AEG4</td>
<td>19.000</td>
<td>0.000</td>
<td>2.801</td>
<td>2.000</td>
<td>1.000</td>
<td>5.000</td>
<td>1.734</td>
<td>-1.873</td>
<td>0.092</td>
<td>-1.965</td>
</tr>
</tbody>
</table>
Analysis of Structural Model for Hypothesis Testing

The structural or inner model was evaluated using the path weighting or p coefficients and corresponding p values generated from the SmartPLS analysis. According to Chin (1998), bootstrapping (500 resamples) was applied to produce standard errors and t statistics. This enabled the measurement of the statistical significance of the path coefficients. The degrees of freedom for all measures in the bootstrap analysis are equal to the number of resamples minus one, which is 499. In the light of this, to evaluate the interaction of individual construct with the dependent variable thus the following function:

\[ \text{AEG} = f(\text{AIR, and FID}) \]

Where:

AEG = Audit Expectation Gap (Dependent Variable)
AIRR = Accounting Information Reliability Responsibility
FIDR = Fraud Investigation and Detection Responsibility

![Figure 4.1 Measurement Model of the study](image)

**Figure 4.1**: Measurement Model of the study

The statistical objective of PLS is to show high \( R^2 \) and significant t-values, thus rejecting the null hypothesis of no effect. Parameters with an absolute t-value greater than 1.65 indicate a significance level of 0.1 (i.e. \( p<0.1 \)), 1.96 indicate a significance level of 0.05 (i.e. \( p<0.05 \)), those with an absolute t-value over 2.58 present a significance level of 0.01 (i.e. \( p <0.01 \)), and those with an absolute t-value over 3.26 present a significance level of 0.001 (i.e. \( p<0.001 \)). The relevant \( \beta \) value (that is path coefficient value) and p coefficients (significant) are presented in Tables 4.5.
Table 4.5: β, t-Statistics and Significance of Variables for General model of the study

<table>
<thead>
<tr>
<th>Sample Mean</th>
<th>Se</th>
<th>t</th>
<th>p-value</th>
<th>R</th>
<th>R-Square</th>
<th>Adj R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>β</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIRR -&gt;AEG</td>
<td>-0.629</td>
<td>0.636</td>
<td>0.096</td>
<td>6.547</td>
<td>0.000</td>
<td>0.883</td>
</tr>
<tr>
<td>FIDR -&gt;AEG</td>
<td>-0.290</td>
<td>0.287</td>
<td>0.091</td>
<td>3.171</td>
<td>0.000</td>
<td>0.780</td>
</tr>
</tbody>
</table>

From the above figures and table for structural model, the path coefficient (β) for: AIRR->AEG and FIDR->AEG are -0.629 and -0.290 respectively. This explain the rate at which each construct contribute to the change in dependent variable. It implies that for any percentage change in dependent variable (AEG), AIRR and FIDR contribute 62.9% and 29% negatively respectively. Correlation coefficient of the entire relationship between the Independent and dependent variable which shows the strength and the direction of such relationship was represented by R. Here with the R = 0.883 meaning that there is strong correlation between accounting information reliability responsibility (AIRR), Fraud investigation and detection responsibility (FIDR) and audit expectation gap among Nigeria Money Deposit Bank. Therefore, the R-square was used to shows the predictive power of the overall Model: AEG = f (AIR, and FID) recorded a figure of 0.780, showing that 78% of variation in dependent variable can be explained by the independent variables (AIRR and FIDR), while other unidentified variables are responsible for the remaining 22.0%. With this general outlook of our predictive model, we used the t-statistics obtained vide bootstrapping (re-sampled using 499 number of iterations) feature of SmartPls that provided the t-value and p-value for each construct. This enabled the researchers to ascertain the significance of each construct to the objective of the study and the testing of the hypotheses formulated earlier on. Hence for:

a) **Hypothesis 1**: The result presented in table 4.5 above indicated that the level of accounting information reliability responsibility to detect frauds had high influence in narrowing audit expectation gap as shown in beta value (β). The beta value - 0.629 implies a strong negative relationship between accounting information reliability responsibility and audit expectation and significant with p value 0.000 < 0.05. The null hypothesis (H₀) was rejected and alternative hypothesis (H₁) was accepted. The researcher, therefore concluded that there is significant relationship between accounting information reliability responsibility and audit expectation gap.

b) **Hypothesis 2**: The result presented in table 4.5 above indicated that the level of fraud investigation and detection responsibility to detect frauds had high influence in narrowing audit expectation gap as shown in beta value (β). The beta value -0.290 implies a weak negative relationship between fraud investigation and detection responsibility and audit expectation and significant with p value 0.000 < 0.05. The null hypothesis (H₀) was rejected and alternative hypothesis (H₁) was accepted. The researcher, therefore, concluded that fraud investigation and detection responsibility has significant relationship with the audit expectation gap.

**CONCLUSION AND RECOMMENDATION**

From the discussions and findings of the study, it can be concluded that the core responsibility in prevention and detection of frauds and other unethical attitude that cause audit expectation gap can be found in forensic Accountant’s responsibility. Also, the primary
responsibly of conventional Auditor has default in meeting the expectation of public. Therefore, it is recommended that there is the need for continued sensitization of the public, by both the auditing profession and other stake holders on the role and duties of the auditor in the area of prevention and detection of fraud to avoid unreasonable expectation by the public.

The judiciary also should be sensitized as to the role of the audit and the responsibility of the auditor in terms of the coverage of his audit report and his liability to third party, this will go a long way in reducing the gap created by the outcome of court cases on the issue of the expectation gap between the public and the auditor. And there should be amendment on traditional Auditor's scope of responsibility in other to accommodate forensic accounting services.

REFERENCES


their ability to assess risks associated with enterprise resource planning Information Systems, Vol. 18, pp.7-28.
THE EFFECT OF IDENTIFICATION OF ENVIRONMENTAL COST ON QUALITY OF DISCLOSURE: A CRITICAL ANALYSIS OF SHIPPING LINES IN NIGERIA

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ABSTRACT

This paper establishes the effect of identification of environmental cost on quality of disclosure on shipping lines. This study adopts both descriptive design and correlation analysis and the population of the study is the registered shipping lines in Nigeria. The target population of this study was restricted to the legal department, finance and account department, and technical and marine department of the shipping companies. This study makes use of primary data. Primary data was collected through administering of questionnaires to the staff of the shipping lines in Nigeria. Simple regression model was used to establish the relationship between the dependent variable and the independent variable. Data analysis was done using Statistical Package for Social Sciences (SPSS) generating both descriptive and inferential statistics like Pearson’s correlation. Descriptive statistics include; frequencies, mean and standard deviation. The findings show that identification of environmental cost influences quality of disclosure on shipping lines in Nigeria. Based on the findings of this study, it is highly recommended that companies are to decide in their discretion which expenditure or cost should be included under the environmental expenses or cost. Operating expenses have defined expenses associated with environmental measures to primarily include production related costs and product research and development expenses that are solely incurred for environmental protection as distinct from product improvement. This process will create or enhance quality of disclosure on shipping lines in Nigeria.

Keywords: Quality of disclosure, environmental cost, environmental expense, operating expenses, and shipping lines.

INTRODUCTION

In relation to environmental costs, there is no standard definition and this is left to the discretion of the companies to decide which expenditures or cost should be included under the environmental expenses or costs. Measuring environmental performance and setting targets is a critical component for organizations to become more productive, more profitable, and more sustainable (Freedman, et al., 2006). Monitoring key metrics such as energy, waste, and water usage leads to reductions in greenhouse gas emissions as well as operational efficiency improvements and cost savings. Environmental accounting is an inclusive field of accounting. Environmental accounting includes identification of environmental cost, capitalization of environmental cost, identification of environmental liability and measurement of environmental liability. It provides reports for both internal use, generating environmental information to help make management decisions on pricing, controlling overhead and capital budgeting, and external use, disclosing environmental information of interest to the public and to the financial community. Internal use is better termed
environmental management accounting (Bartolomeo, Bennett, Bouma, Heydkamp, James & Wolters, 2000). Neungruthai and Mula (2012) carried a study towards a conceptual design for environmental and social cost identification and measurement system. Suggestions from literature showed that there was a need for a conceptual framework for environmental management accounting (EMA) and social management accounting (SMA) practices to be developed. The study indicate that companies are intending to change to new management accounting practices while looking for ways to improve cost identification and measurement of environment and social impacts.

When environmental costs are not adequately allocated, cross-subsidization occurs between products. In most cases, different products are made by different processes, and each process tends to have a different environmental cost (Christ & Burritt, 2013). Accountants, as the basic custodian and light bearer of economic development can no longer shut their eyes to the effect of environmental issues on business management, accounting, audit and disclosure system. Protection of environment and the potential involvement of accountant is becoming a common subject of discussion among the accountant all over the world (Pramanik, Shil & Das, 2007). Accountants are expected to take a proactive role in the environmental protection process with the advent of liberalization, remove of trade barriers makes it logical that the costs of environmental degradation due to industrial activities should be internalized in corporate account to the extent possible, that is why environmental accounting and reporting therefore is of paramount importance today (Pellegrino & Lodhia, 2012). According to Clarkson, Richardson and Vasvari (2008), disclosure and transparency are critical elements of a robust corporate governance framework as they provide the basis for informed decision-making by shareholders, stakeholders and potential investors with respect to capital allocation, corporate transactions and financial performance monitoring. High quality disclosure, through its influence on investors and lenders who must assess risks and returns and decide where best to place their money, strengthen the efficiency of capital allocation as well as offer the benefit of reducing the costs of capital. Furthermore high quality corporate disclosure provides clarity on the extent to which companies meet legal and ethical requirements.

Problem Statement

Accounting reports in shipping lines have been found to be deficient over time in the sense that they lack vital information that will enable stakeholders make informed decisions (Nzekwe, 2009). The financial information in corporate annual reports includes both mandatory and their determinants have attracted considerable research attention in developed countries rather than developing ones (Akhtaruddin, 2005:40; Barako, 2007:114). Discoveries in the developed countries most especially in the European Union (EU) have aided the government to revamp the compliance mechanisms. They have also assisted the government in issuing out directives that facilitate the harmonization process and invariably bring all community companies up to a reasonable level of disclosure. According to Bassey, Effiok, and Okon, (2013), environmental accounting helps the form to record all environmental costs incurred by the business thereby finding a way of reducing the cost (environmental expenses) so that the business can increase profit. Also, it helps to disclose to the outside world their ability to be environmental friendly. The deficient adoption is expected to influence the quality of disclosure. Ali et al. (2004:183) opined that the government regulatory bodies and the accountancy profession of emerging nations suffer from structural weaknesses and often take a lenient attitude towards default of accounting regulations. Consequently, private and institutional investors (local and foreign) are hesitant
in investing in such emerging economies due to lack of transparency. It is widely believed that the lack of proper use of International Accounting Standards in affected countries (of which Nigeria is a part) hinders “transparency” in the financial statements of corporations. Hence, this study is set to examine the effect of identification of environmental cost on quality of disclosure on shipping lines in Nigeria.

Objectives of the Study

The objective of this study is to establish the effect of identification of environmental cost on quality of disclosure on shipping lines in Nigeria.

Research Hypothesis

The research hypothesis of this study was based on:

H<sub>0</sub>: There is no significant relationship between identification of environmental cost and quality of disclosure on shipping lines in Nigeria.

LITERATURE REVIEW

Theoretical Framework

Voluntary Disclosure Theory

The notion of voluntary disclosure supports the idea, even in the absence of regulation; managers still wish to disclose additional information. This idea is based on the considerations found in agency theory, which assert that agency costs are borne mainly by agents (Jensen & Meckling, 1976). Therefore, agents try to reduce their agency costs to maximize their wealth. As described in agency theory, agency costs are a product of information asymmetry, whereby the agent has more private information about the firm’s performance than the principal. Theoretical and empirical studies in accounting focus on the informational role of voluntary disclosures for the capital markets (Healy & Palepu, 2001; Verrecchia, 2001). The Securities and Exchange Commission and the FASB provide guidelines for mandatory disclosures; the disclosure literature in accounting refers to voluntary and discretionary disclosures, interchangeably, as information management releases itself. Healy & Palepu (2001) opined that the underlying assumption in the disclosure literature is that managers possess superior information to all outsiders. The result is managers’ trade-off between making accounting choices and providing disclosures to “communicate their superior knowledge of a firm’s performance to investors, and to manage reported performance for contracting, political, or corporate governance reasons”.

Legitimacy Theory

The legitimacy theory is probably the most widely used to explain environmental disclosure. According to Cho and Patten (2007), the legitimacy theory implies that environmental disclosure is a function of the intensity of societal and political pressure faced by a company regarding the environmental performance. As a reaction on this pressure, firms try to provide more environmental information. Campbell, Craven, and Shrives (2003) examined perceived legitimacy gap alongside of Voluntary Disclosure requirement for social and environmental issues and costs. Legitimacy theory posits that organizations are continually seeking to ensure that they operate with the bounds and norms of their respective societies (Deegan, 2000). Legitimacy can be considered as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of
norms, values, beliefs and definitions” (Suchman, 1995). To this end, organizations attempt to establish congruence between “the social values associated with or implied by their activities and the norms of acceptable behaviour in the larger social system of which they are part” (Dowling & Pfeffer, 1975). Consistent with this view, Richardson (1987) asserts that accounting is a legitimating institution and provides a “means by which social values are linked to economic actions”.

Empirical Literature

Identification of Environmental Cost

In relation to environmental costs, there is no standard definition and this is left to the discretion of the companies to decide which expenditures or cost should be included under the environmental expenses or costs. Besides, there is no specific or concrete guideline from the accounting regulators in this regard. There are some industry guidelines which are available as regards environmental cost, they are: The Chemical Manufacturer’s Association’s Responsible CARE Program, The Japanese Industry Association, and the International Chamber of Commerce’s (ICC’s) Business Charter for Sustainable Development. According to these guidelines, operating expenses have defined expenses associated with environmental measures to basically include production related costs and product research and development expenses that are solely incurred for environmental protection as distinct from product improvement. Lack of government or industry guidelines may encourage companies to design their own mechanism for the same purpose. The Survey of the International Standards of Accounting and Reporting (ISAR) showed that there was no formal instruction from regulatory authorities though companies had divided the total environmental expenditures into six categories which are:

- Capital investments
- Operating costs
- Research and Development costs
- Environment Administration and Planning
- Expenses for remediation measures, and
- Recovery Expenses

Neungruthai and Mula (2012) carried a study towards a conceptual design for environmental and social cost identification and measurement system. The purpose of this paper was to identify an effective management accounting system using sustainability accounting concepts for environmental and social cost measurement to add shareholder value. Suggestions from literature showed that there was a need for a conceptual framework for environmental management accounting (EMA) and social management accounting (SMA) practices to be developed. The authors therefore designed a conceptual model for a sustainability management accounting system (SMAS) combining EMA and SMA practices to create more accurate cost information of environment and social impacts. A SMAS also expands on activity based costing (ABC) application to help in the cost analysis and allocation of environment and social impacts. By applying a SMAS, companies generate more accurate cost information thus fully costing products for internal management decision and reporting purposes. The results of the study indicate that companies are intending to change to new management accounting practices while looking for ways to improve cost identification and measurement of environment and social impacts.

Bailey, Dickins and Reisch (2010) carried a study on discussion of public identification of US audit engagement partners on who benefits and who pays. The Public Company
Accounting Oversight Board had issued a Concept Release, which would require audit engagement partners of US publicly traded companies to be identified by signing their firm's audit reports. In this article, the authors attempted to identify who would benefit from – and who would pay for – identification of audit engagement partners. The authors summarized the commentary of responders on the Concept Release, comparing the Concept Release to provisions contained in the Sarbanes–Oxley Act of 2002, examining arguments for and against identifying the audit engagement partner, and summarizing the likely impact of adopting the Concept Release. They concluded that, if adopted, it is unlikely that audit partner identification would enhance audit quality. Further, the cost of additional audit and/or quality control procedures associated with implementation will likely be borne by companies and their shareholders.

Cohen (2008) conducted a study on Quality of Financial Reporting Choice: Determinants and Economic Consequences. The author investigates the determinants and economic consequences associated with firms’ financial reporting choices. Recognizing the endogeneity associated with these choices, he finds evidence of a positive association between investors’ demands for firm-specific information and financial reporting quality. The author also finds that higher proprietary costs are associated with a lower quality of financial information. As for the economic consequences, the evidence suggests that firms with high quality financial reporting policies have reduced information asymmetries. However, after accounting for the endogeneity associated with the reporting quality choice, the author finds no significant evidence that firms choosing to provide financial information of higher quality enjoy a lower cost of equity capital.

Dunk (2002) conducted a study on Product Quality, Environmental Accounting and Quality Performance. The author noted that quality has typically been regarded as a key strategic component of competitive advantage and, therefore, the enhancement of product quality has been a matter of prime interest to firms. Quality provides a basis for strategic advantage, and thus improvement in product quality may lead to enhanced performance. However, a frequent concern is that product quality no longer provides enduring competitive advantage; instead, it has become essentially a competitive prerequisite. Hence, an assessment of whether improvements in product quality are reflected in greater quality performance is likely to be of considerable interest to organizations. Suggestions have been made that the implementation of environmental accounting also contributes to the enhancement of quality performance. The author argued that the greater the integration of environmental issues into financial decision processes, the better the performance of the firm.

Fransesco, Paul, Dionysia and Ioannis (2014) carried out a study on Goodwill Related Mandatory Disclosure and the Cost of Equity Capital. The authors examine whether goodwill related disclosure, as mandated by IFRS 3 and IAS 36, reduces implied cost of equity capital (ICC) for a sample of European firms for the period 2008 to 2011. They focus on goodwill since it is a significant amount on a company’s balance sheet and it conveys current and forward looking information relevant to a firm. Additionally, the goodwill impairment tests give rise to concerns about their implementation quality. The results of the study indicate a mean (median) compliance level of about 82% (83%) and a high variation among firms’ disclosure levels. In depth analysis reveals that non-compliance relates mostly to proprietary information and information that reveals managers’ judgment and expectations.

limits the sample to the 1990 annual reports of companies in the machinery industry, develops a disclosure index based on disclosures in each firm’s annual report, estimates cost of equity capital using an accounting-based valuation formula rooted in early work by Preinreich (1938) and Edwards and Bell (1961), and documents a negative association between disclosure level and cost of equity capital for those firms with a low analyst following.

Quality of Disclosure

Corporate disclosure is critical for well-functioning capital markets (Healy & Palepu 2001). Published annual reports are required to provide various users such as shareholders, employees, suppliers, creditors, financial analysts, stockbrokers, management, and government agencies with timely and reliable information useful for making prudent, effective and efficient decisions. The extent and quality of disclosure within these published reports vary from company to company and also from country to country. Literature reveals that the level of reliable and adequate information by listed companies in developing countries lags behind than in developed ones and government regulatory forces are less effective in driving the enforcement of existing accounting standards (Ali, Ahmed & Henry, 2004). Non-disclosure results from immature development of accounting practice in developing nations (Osisioma, 2001). The government regulatory bodies and the accountancy profession in these nations suffer from structural weaknesses which could encourage corporate fraud at the expense of those that have economic and proprietary interest in the business environment.

Dunk (2002) investigated the extent to which product quality and the implementation of environmental accounting positively influence quality performance. He suggested that the integration of environmental issues into financial decision processes by using environmental accounting would contribute to the enhancement of quality performance and firm performance as a whole. Gamble et al. (1995) (US) investigated the quality of environmental disclosures in the 10K and annual reports of 234 companies in twelve industries, between 1986 and 1991. An instrument was designed to measure the content of environmental disclosures, and descriptive reporting codes were used, based on the manner in which the sample firms disclosed environmental information. Companies in the sample were from industries thought to have the greatest potential for environmental impact: oil and gas; chemicals and related; plastics, resins and elastomers; soap, detergent and toilet preparations; perfume, cosmetics and toilet preparations; paints varnishes and lacquers; petroleum refining; steel works and blast furnaces; motor vehicles and car bodies; and hazardous waste management.

Deegan and Gordon (1996) (Australia) analyzed the environmental disclosure practices of Australian corporate entities in three ways. Firstly, by reviewing the annual reports of a sample of companies for the 1991 financial year, secondly, by determining the change in corporate disclosure practices for the period 1980-1991 and thirdly, by investigating the role of environmental lobby groups. Overall, they found an increase in environmental disclosures over the period 1980-1991, but the standard of the 1991 disclosures was not necessarily very impressive, with an average of 186 words of self-laudatory material per annual report. Environmental lobby groups appeared to have an effect because there was a positive correlation between environmental sensitivity and the level of disclosure, and in some sensitive industries between environmental disclosure levels and firm size. Burritt and Welch (1997) (Australia) reported on an exploratory analysis of the environmental disclosures of a
sample of Australian Federal public-sector entities. The annual reports of sixty entities were examined for the ten-year period 1984-1993. The results showed an increase in total environmental disclosures over the period with budget entities reporting a greater volume of environmental disclosures than non-budget entities. The predominant form of environmental disclosure was qualitative not physical or financial. Seven themes were found with community education and training, and energy related disclosures the most prominent. Future directions for research in this area identified by the authors included; possible new accountability structures based on ecological considerations, and measurable environmental outcomes.

Macve and Carey, (1992) argued that to effect changes in the adoption of environmental reporting, several steps may be taken by management. They should establish clear lines of responsibility on environmental matters and give a board member overall responsibility for such issues. The company should also set out its environmental policy, prioritize objectives and develop information systems for monitoring its performance. Stakeholders, acting either formally or informally, individually or collectively, are a key element in the firm’s external environment that can positively or negatively affect the organization (Murray & Vogel 1997:142). Their diverse nature and range of actors intrinsically present a problem for individual managers who are searching for a clear working definition for stakeholder dialogue. The challenge for business involves identifying to whom and for whom they are responsible, and how far that responsibility extends. Underpinning the difficulties of managing the relationship between a business and its stakeholders are the issues of divergent (and often conflicting) expectations between stakeholders (Greenfield 2004; Deresky 2000; Bowmann-Larsen & Wiggen 2004).

Today's challenges to business to raise the level of its environmental performance come from many quarters. They arise from new legislation and government regulations, market pressures from the 'green consumer', the interests of stakeholders such as investors and employees, and general public awareness, focused by the activities of environmental groups and reporting in the media. It has become essential for companies to increase their responsibility regarding all aspects of the environment and to adopt existing practices so as to cause less environmental damage. Harnessing this awakening responsibility within the corporate sector is therefore a key element in any strategy for achieving the goal of 'sustainable development' (Deloitte Touche Tohmatsu International, et al., 1993).

Research Methodology

The research design for this study was based on descriptive survey and correlation analysis where the relationship of the independent variable and dependent variable was identified. The population of this study was the 101 shipping lines in Nigeria. The target population was restricted to three departments. However, the respondents of the target population comprise of the legal department, finance and account department and technical and marine department of each company selected. The sampling frame is the list of 101 registered shipping companies in Nigeria. Sample of the respondents was grouped into strata of the legal department, finance department and the technical and marine department staff of the shipping lines in Nigeria. Within each of the strata, simple random sampling was used to identify individual respondents who will be issued with a questionnaire to respond to research statements. The following formula developed by Cochran (1963) was used to guide the selection of the respondents as suggested by Mugenda (2008).

\[ n = \frac{Z^2 \times p \times (1-p)}{e^2} \]
Where: 
\[ n = \text{Sample size for large population} \]
\[ Z = \text{Normal distribution Z value score, (1.96)} \]
\[ p = \text{Proportion of units in the sample size possessing the variables under study, where for this study it is set at 50\% (0.5)} \]
\[ e = \text{Precision level desired or the significance level for the study which is expressed as decimal (e.g., .05 = +/- 0.05 percentage points).} \]

The substituted values in determining the sample size for a large population are as follows.
\[ n = (1.96)^2 \times (0.5)(0.5) = 384 \]

Therefore, the sample size was 384 i.e. the sample should not be less than 384 respondents.

For the purpose of this study, primary data was collected through use of questionnaires. A total of 505 questionnaires were distributed to the respondents while 410 questionnaires were returned. A pilot study was carried out to test the reliability and validity of the instrument. In this study, the pilot test was conducted using 10\% of the sample size. Reliability was used to test the consistency of a set of measurement items. Validity was used to test the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. For this study, questionnaires were pre-tested to ensure they are not faulty and that the participants understood them. Descriptive and inferential statistics was used to analyze and interpret the data used in this study which include means and frequencies. Inferential statistics included regression and correlation analysis. To test and analyze the quantitative data, a simple regression model was used as laid below where the independent variable was regressed against the dependent variable to obtain inferential results. Furthermore, simple regression was useful in showing whether the identified linear relationship was significant or not. A regression coefficient with a p value of less than 0.05 indicated that the variables (identification of environmental cost) significantly influence the quality of disclosure. Therefore, the study used the following model to test whether quality of disclosure is a function of the independent variables.

\[ Y = \beta_0 + \beta_1 X_1 + \epsilon \]

Where \( Y \) – dependent variable – odds of Quality of disclosure
\( X_1 \) – identification of environmental cost (IEC)
\( \epsilon \) – is the error term which is assumed to be normally distributed with mean zero and constant variance
\( \beta \) – Parameters to be estimated, while \( \beta_1 \), is the coefficient of the independent variable.
\( \beta_0 \) is a constant (intercept)

**Data Presentation, Interpretation and Analysis**

**Introduction**

This chapter contains the presentation and discussion of the findings of this study. The main objective of the study was to establish the effect of identification of environmental cost on quality of disclosure on shipping lines in Nigeria. The study was guided by one independent variable and one dependent variable. The independent variable was identification of environmental cost and the dependent variable was quality of disclosure.

**Identification of Environmental Cost and Quality of Disclosure**

Correlation

According to Kothari (2004), Karl Pearson Correlation Coefficient is the most widely used method of measuring the degree of relationship between two variables. It ranges from -1 to
+1. A correlation coefficient of -1 indicates a perfect negative correlation, 0 indicates no correlation while +1 indicates a perfect positive correlation. It tells a researcher the magnitude and direction of the relationship between two variables.

The Pearson Correlation of identification of environmental cost versus quality of disclosure was computed and established as 0.527 (p-value=0.000) which is a strong significant and positive relationship between the two variables. A relationship therefore exists since it is above the recommended 30% (Mugenda & Mugenda, 2003). Neungruthai and Mula (2012) in their study on conceptual design for environmental and social cost identification and measurement system found a significant positive relationship between identification of environmental cost and quality of disclosure. From table 4.1, it could then be concluded that there is a positive linear relationship between identification of environmental cost and quality of disclosure.

Table 4.1 Pearson Correlation of Identification of Environmental Cost and Quality of Disclosure

<table>
<thead>
<tr>
<th></th>
<th>Quality Disclosure</th>
<th>Identification of Environmental Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Disclosure</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>410</td>
<td>410</td>
</tr>
<tr>
<td>Identification</td>
<td>Pearson Correlation</td>
<td>.527**</td>
</tr>
<tr>
<td>Environmental Cost</td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>410</td>
<td>410</td>
</tr>
</tbody>
</table>

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

Regression Analysis

The regression analysis shows a relationship R=0.527 and R²=0.277. This meant that 27.7% of variation in the quality of disclosure be explained by a unit change in identification of environmental cost. The remaining percentage of 72.3% is explained by other variables. This is shown in table 4.2.

Table 4.2 Model Summary for Identification of Environmental Cost and Quality of Disclosure

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.527**</td>
<td>.277</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Identification of Environmental Cost

F-test was carried out to test the null hypothesis that there is no relationship between identification of environmental cost and quality of disclosure. The ANOVA test in Table 4.3 shows that the significance of the F-statistic 0.000 is less than 0.05 meaning that null hypothesis is rejected and conclude that there is a relationship between identification of environmental cost and quality of disclosure.
Table 4.3 ANOVA Results for Identification of Environmental Cost and Quality of Disclosure

<table>
<thead>
<tr>
<th></th>
<th>Sum</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2097.759</td>
<td>1</td>
<td>2097.759</td>
<td>156.522</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>5468.143</td>
<td>408</td>
<td>13.402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7565.902</td>
<td>409</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Quality Disclosure
b. Predictors: (Constant), Identification of Environmental Cost

To test the significance of regression relationship between identification of environmental cost and quality of disclosure, the regression coefficients ($\beta$), the intercept ($\alpha$), and the significance of all coefficients in the model were subjected to the t-test to test the null hypothesis that the coefficient is zero. The null hypothesis state that, $\beta$ (beta) = 0, meaning there is no significant relationship between identification of environmental cost and quality of disclosure as the slope $\beta$ (beta) = 0 (no relationship between the two variables). The results on the beta coefficient of the resulting model in table 4.4 shows that the constant $\alpha = 12.065$ is significantly different from 0, since the p-value = 0.000 is less than 0.05. The coefficient $\beta = 0.605$ is also significantly different from 0 with a p-value=0.000 which is less than 0.05. This implies that the null hypothesis $\beta_1=0$ is rejected and the alternative hypothesis $\beta_1\neq0$ is taken to hold implying that the model $Y=12.065+0.605$ (Identification of Environmental Cost) is significantly fit. The model Quality of Disclosure = $\alpha + \beta$ (Identification of Environmental Cost) holds as suggested by the test above. This confirms that there is a positive linear relationship between identification of environmental cost and quality of disclosure.

Table 4.4 Coefficient for Relationship between Identification of Environmental Cost and Quality of Disclosure

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>12.065</td>
<td>.605</td>
<td>10.506</td>
<td>.000</td>
</tr>
<tr>
<td>Identification</td>
<td>St. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>.148</td>
<td>.048</td>
<td>12.511</td>
<td>.000</td>
</tr>
<tr>
<td>Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Quality Disclosure

CONCLUSION AND RECOMMENDATION

CONCLUSION

Based on the findings it was concluded that identification of environmental cost is a critical determinant to quality of disclosure. This study determined that identification of environmental cost enhance quality of disclosure of shipping lines in Nigeria. The regression analysis showed that there is a positive joint relationship $R=0.527$ between the independent variable identification of environmental cost and quality of disclosure. $R$-Square = 0.277 meaning that identification of environmental cost explains 27.7% of quality of disclosure. Further analysis indicated that coefficient of identification of environmental cost and quality of disclosure is significant. It can be concluded from this study that there exists a positive significant relationship between identification of environmental cost and quality of disclosure of on shipping lines in Nigeria.
RECOMMENDATIONS

Companies are to decide in their discretion which expenditures or costs should be included under the environmental expenses or costs. Operating expenses have defined expenses associated with environmental measures to primarily include production related costs and product research and development expenses that are solely incurred for environmental protection as distinct from product improvement.

REFERENCES

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Union, Bangladesh Country Office, and Association for Green Accounting, Bangladesh): 5-24.
RELATIONSHIP BETWEEN OUTSOURCING ACCOUNTING TASKS AND FINANCIAL PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN NIGERIA - STRATEGIC RELATEDNESS FACTOR USING THE PARTIAL LEAST SQUARE APPROACH

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ABSTRACT

The overall objective of the study was to investigate the relationship between outsourcing accounting tasks and the financial performance of small and medium enterprises in Nigeria with emphasize on strategic relatedness factor. Several hypotheses were formulated based on the constructs of the Independent Variable. The study specifically seeks to explore the role of outsourcing of accounting functions based on some drivers, as given by the Transaction Cost Economies theory (TCE). The target population of the study are the SMEs in three Geo-political zones of Southern part of Nigeria consisting of 5,796 SMEs. The sampling technique adopted was a two-stage sampling technique applied chronologically as follows: stratified and simple random sampling techniques which eventually produced a sample size of 411 used for the study. Both primary and secondary data options were explored with the main aim of making sufficient data available for the study. Structured Questionnaires were used to collect primary data from the respondent organisations and the secondary data involved the collection of the Annual Financial Reports of the respondent organisations for the 5-year period covering 2008 to 2012 for the extraction of the financial performance indices. The data were subjected to various statistical screening for reliability of the instrument and validity of the variables (in terms of Construct and Convergent validity). Structural Equation Model (SEM) was employed to analyse the data vide SPSS 23 and SmartPLS packages in order to obtain the statistical significance and the direction of the relationships between Inner and Outer models of the study. The study revealed that there was significant relationship between outsourcing of accounting tasks and the financial performance of SMEs in Nigeria when strategic relatedness factor is put into consideration. The study finally recommended that SMEs should take their external accountants as mentors and advisors on how to further devise their firm strategies. This is easily achieved when the outsourcing relationship established is for long term as against the usual short term practices. Here the parties involved would align their goals (goals congruency) and put an arrangement in place for easy knowledge sharing among all the parties involved in the relationship.

Keywords: Capability, Exchange Partners, Financial Performance, Knowledge Sharing, Relationship.
INTRODUCTION

Levina and Ross (2003) predicted that the global economy would accelerate to the point at which only the most flexible organizational structures would be able to survive in the increased competition. In fact according to Longenecker et al (2003), in a turbulent environment the very goal of the strategy should be strategic flexibility. As a result, firms that increasingly pursue this flexibility seek value in the non-core areas across company borders through outsourcing. What has caused the skyrocketing popularity of outsourcing of business functions is the increased competition arising mainly as a result of globalization which coerces companies into rethinking their position in the marketplace. They are being forced to find ways of making their economic activities better, faster and cheaper while still remaining flexible enough to meet the ever-changing demands of customers and competitors (Heide & John 1992). Global access to unlimited number of vendors and falling interaction costs caused mainly by improved information technologies and communication links are diminishing this transaction cost of outsourcing and are thus providing companies with unprecedented restructuring opportunities (Dwyer et al. 1987). Consequently, companies of all sizes and in all industries are capitalizing on the possibilities a well-executed outsourcing strategy can provide Fei (2005).

Statement of Problem
The decision regarding which business operations should be carried out internally and which should be outsourced is crucial to the competitiveness of firms (Coase, 1937). Organizations with the best prospects are those that clearly appreciate the inherent power of strategic relatedness of the focal firm with the external service provider who are experts and operating with lesser costs because of economies large scale production enjoyed due to large number of their clients being offered similar services. In modern organization dynamism firms should be cost efficient and at the same time being strategic when outsourcing for their long time survivor. Achieving this balance is a challenge that has seen finance literature offering conflicting solutions as to what and when to outsource a business process.

Accounting services and functions play a very important role in the lives of SMEs, because they provide better management control, assist in decision-making, help to access new market and maximise profits in the corporate world (Dorasamy et.al, 2010). Outsourcing of the critical activities may be dysfunctional as the firm may lose its innovation potentials, unwarranted confidential leaks, loss of intellectual property right and increase the potential competitors which eventually offset the benefits being from such outsourcing (Arnold, 2000). Despite this rationality, the power of strategic relatedness created between the parties involved has continue to be a serious determinant of outsourcing this critical business process, the accounting functions (Watjastrakul, 2005). There thrust of this study is to reveal how the creation of strategic alliance among the parties in an outsourcing process of accounting tasks can minimize if not totally eradicate the potential dysfunctionality of outsourcing this critical task.

Objective of the Study
The aim of this study is to investigate the influence of strategic relatedness of the exchange partners on the relationship between outsourcing of accounting tasks and the financial performance of small and medium enterprises in Nigeria. Other specific objectives included:
1) To establish relationship between outsourcing of accounting tasks based on Goal Congruence among the exchange partners and the financial performance of SMEs in Nigeria.

2) To examine if outsourcing accounting functions based on Knowledge Sharing Routine among the exchange partners affects the financial performance of SMEs in Nigeria.

3) To evaluate whether outsourcing of accounting tasks based on Capability Complementarity among the exchange partners affects the financial performance of SMEs in Nigeria.

For the purpose of this study, accounting tasks were defined to include both basic processing tasks and value-adding tasks such as: General Ledger processing, Accounts Payable / Receivable functions, Payroll processing, Fixed Asset accounting, Inventory accounting, Budgeting, Costing, Management accounting and Taxation.

Research Hypothesis
In satisfying the above-mentioned objectives, the following set of hypotheses were pertinent:

1. **H₀**: There is no significant relationship between outsourcing of accounting tasks based on goal congruence among the exchange partners and the financial performance of SMEs in Nigeria.

2. **H₀**: There is no significant relationship between outsourcing of accounting tasks based on knowledge sharing routine among the exchange partners and the financial performance of SMEs in Nigeria.

3. **H₀**: There is no significant relationship between outsourcing based on the capability complementarity among the exchange partners and the financial performance of SMEs in Nigeria.

Theoretical and Conceptual Framework

The question of which activities can be outsourced, based on strategic view has been systematized by Quinn and Hilmer (1994). For these authors, firms must focus their resources on a set of core competencies in which they have definite advantages over their competitors and offer unique value to their customers thus, activities for which the firm has no critical strategic need can be outsourced to experts outside the organization. The concept of core competences has been developed on the basis of the resource-based theory. Prahalad and Hamel (1990) defined the core competencies as the collective learning in the organisation, especially how to coordinate diverse production skills and integrate multiple streams technologies. The concept has been predominantly use to develop and test various outsourcing decision frameworks arguing that the core activities shall remain in-house. Every SME is, as a matter of fact, an administrative structure that connects and coordinates the activities of many individuals and groups. Hence the strategic moves of every SME therefore should be how to re-position its available resources among her core-competencies in order to record a sounding competitive edge over her rivals. Consequently, this theory sheds light on the reasons behind retaining core-activities within the organization while the less critical activities are outsourced to the experts externally.

In System Theory of Organizations and Environments, the primary focus of research and theory building shifted from the internal characteristics of organizations to the external dynamics of organizational competition, interaction, and interdependency. The organization as open systems...
perspective views organizations as systems of interdependent activities embedded in and
dependent on wider environments (Hoetker, 2005). A system is an organized collection of parts
united by prescribed interactions and designed for the accomplishment of specific goals or
general purposes. System theory views and organization as a complex set of dynamically
intertwined and interconnected elements, including its inputs, processes, outputs, and feedback
loops, and the environment in which it operates and with which it continually interacts (Cohen &
Levinthal, 1990). Therefore a change in any element of the system causes changes in other
elements. Cohen & Levinthal (1990) explain that one cannot understand the structure and
behavior of an organization without understanding the context within which it operates. They
explain further that no organization is self-sufficient, and thus organisations must engage in
exchanges with their environment in order to survive.

Another relevant theory for this study is Agency Theory. This theory tries to resolve the problem
that arises when the desires and goals of the principal and agent are in conflict, and when it is
difficult or expensive for the principal to verify the agent’s performance. Such difficulties arise
due to incomplete information, incompleteness of the contracts, and the problem of monitoring
behavior (Jensen & Meckling, 1976). The theory assumes that the principal and agent are
engaged in cooperative behavior, but have differing attitudes toward risk (Eisenhardt, 1989) and
provides a guide on how both parties can best structure a relationship to maximize the chances
that the goals of the principal are achieved. Central to this assumption is a belief that the agent
does not share the principal’s goals and thus will not accomplish them adequately if left to its
own devices, a behavior referred to as “shirking”. This theory will assist to explaining the
information asymmetry that exists between the owners of SMEs and their managers which
usually result to moral hazard and adverse selection on the part of the business managers
(agents). Outsourcing operation is one of the areas where the moral hazard and adverse selection
of the vendor could be perpetrated.

**Conceptual Framework**

![Conceptual Framework](image)

Return on Equity

**Figure 1 Conceptual Framework**
Goal congruence is the degree to which firms’ operational, strategic, and performance objectives overlap and/or reinforce one another. When firms’ goals are not congruent, performance considered satisfactory to a firm may not be satisfactory to exchange partners and vice versa. As profit-maximizing goals are aligned, strategic outsourcing not only reduces monitoring and enforcement costs associated with the arrangement but also increases synergies as well (Luo, 2002). When goals are aligned, specialized firms are more likely to share common interests with a clients and thus be more supportive of exploiting new opportunities, even if such opportunities require these firms make additional investments. These synergies enable firms with ‘common goals’ to more quickly exploit competitive imperfections observed in the market (Mahoney and Pandian, 1992), and thus hold the potential to create value beyond cost savings alone. Goal congruency also reduces conflict and encourages cooperative behavior (Parkhe, 1993). Thus, firms with exchange partners that share congruent goals find it easier to collaborate thereby enhancing the value of these relationships.

A high degree of strategic relatedness also results when a firm and specialized exchange partners share common or similar knowledge-sharing routines (Dyer and Singh, 1998). We define knowledge-sharing routines as regular patterns of interactions that permit the transfer, assimilation, and integration of new knowledge (Grant, 1996). The advantage of such routines lies in the ability to economize effort, which reduces coordination costs and affords greater capacity for knowledge-sharing between firms. So, is there any knowledge-sharing routine between the organization and the outside accounting specialists to whom the accounting functions are outsourced? This is very crucial in order to intimate the client of the development in the accounting profession and the introduction of the latest data processing equipment to facilitate mutual understanding. Various scholars have argued that inter-organizational learning is also critical to competitive success, noting that firms’ partners are, in many cases, the most important sources of new knowledge (Powell et al., 1996; Von Hippel, 1988). Common knowledge-sharing routines between a firm and its exchange partners enable more efficient absorption and use of acquired knowledge (Cohen and Levinthal, 1990).

Capability Complementarity reflects a situation in which specialized capabilities sourced from outside enhance the value creation potential of a firm’s own capability endowments. Complementary capabilities are different, yet mutually supportive (Hitt et al., 2007). Richard et al. (2004) suggests that capabilities are complementary when they “represent different phases of production and require in some way or another to be coordinated” in order to create maximum value (Richard et al, 2004). Therefore, the output from the accounting tasks outsourced must be able to support the internal decision making process of the business managers. Barney (1991) suggested that acquiring firms gain above normal returns from acquisitions only when private or uniquely valuable synergies can be realized. Private and uniquely valuable synergy is created when information about the combination is obscured from rivals and when no other combination of firms could produce the same value. Research suggests that firms participating in exchange relationships that involve complementary capabilities perform better than firms with relationships that are formed to achieve cost economies (Holcomb et al., 2007).

Some notable empirical studies include: Lamminmaki, (2008), who investigates the determinants of Degree of accounting department involvement in outsourcing and Degree of accounting system sophistication in outsourcing among 356 Australian hotels. The explanatory variables
used are: Competition, firm size, hotel quality, professional qualification and owner/operation structure. Data collected through phone interviews and surveys of the Hotel Financial Controllers are analysed using Regression analysis and descriptive statistics. His findings are: Hotel size, hotel quality and professional qualification are significantly and positively correlated with outsourcing intensity. However, competition has no significant correlation with degree of outsourcing. Gooderham et al., (2004), study the degree to which small firm uses its authorized accountant as a business advisor in Norway. The independent variable considered are: Long term relationship with accountant, perceived competence in statutory accountancy services, perceived competence in business advisory services and the firm size. Structured telephone interview of 320 SMEs were conducted by the researchers and the data collected were analyzed using Linear regression, Ordered logit, and Binary logit. Their findings support perceived competence in statutory accountancy services and perceived competence in business advisory services.

Carey et al., (2006) study the degree of outsourcing Internal Audit function among the listed companies on Australian Stock Exchange. The independent variables used are: Cost saving, Firm size, Technical competence and corporate strategy. Data collected from a sample size of 99 companies drawn from the exchange are analysed using Logistic Regression. They find that: there is an association between internal audit outsourcing and cost saving in the short run but there is no association between internal audit outsourcing and firm size. Also, there is a positive association between technical competence of external service provider and outsourcing of internal audit. Finally, corporate strategy is not significantly associated with internal audit outsourcing. Kotabe & Mol, (2009), conduct a study on the effect of strategic outsourcing of business process on the firm’s performance. Explanatory variables are: Peripheral outsourcing, Core outsourcing, Generic firm strategy and Environment dynamism. 558 manufacturing company top executives were contacted out of which 94 responded and the data collected were analyzed using descriptive statistics, linear regression and correlation. The result reveals that: peripheral outsourcing and core outsourcing do not support the firm performance. The firm’s strategy and environmental dynamism were proposed to be moderators in the scheme of the outsourcing intensity and firm performance relationship.

Materials and Research Methodology

The overall objective of the study was to investigate the influence of strategic relatedness of the exchange partners on the relationship between outsourcing accounting tasks and the financial performance of Small and Medium Enterprises (SMEs) in Nigeria. The target population of the study are the SMEs in three Geo-political zones of Southern part of Nigeria consisting of 22,000 SMEs as contained in the report of collaborative study of National Bureau of Statistics and SMEDAN in the year 2010. The sampling technique adopted was a two-stage sampling technique applied chronologically as follows: stratified and simple random sampling techniques. The SMEs were first stratified into industry using official industries as recognized by the NBS-SMEDAN study. Thereafter a simple random approach was employed in selecting respondent SME organizations from the first three states that recorded the highest number of SMEs for each industries so identified (See Appendix 1). This exercise produced a sample size of 411 used for the study. Both primary and secondary data options were explored with the main aim of making sufficient data available for the study. Structured Questionnaires were used to collect primary data from the respondent organisations and the secondary data involved the collection of the Annual Financial Reports of the respondent organisations for the 5-year period covering 2008 to
2012 for the extraction of the financial performance indices. The data were subjected to various statistical screening for reliability of the instrument and validity of the variables (in terms of Construct and Convergent validity). Structural Equation Model (SEM) was employed to analyse the data vide SPSS 23 and SmartPLS packages to discover the statistical significance and the direction of the relationships between Inner and Outer models of the study.

**Data Analysis, Results and Discussions**

This study used Structural Equation Modeling (SEM) partial least squares (PLS) approach. SEM-PLS is an approach for testing multivariate models with empirical data. SEM–PLS regression uses a two stage procedure to test predictive models. The initial step is the evaluation of the outer or measurement model to determine the validity and reliability of the construct used to measure the variables in the study. The next step is the assessment of the inner or structural model. The measurement models address the reliability and validity of the indicators in measuring latent variables or hypothetical constructs, while the inner or structural model specifies the direct and indirect relations among the latent variables (LV) and describes the extent of explained and unexplained variances in the model.

Component based SEM technique was utilized in the research because PLS has a number of functionalities which were deemed appropriate in this research. PLS can analyze complex models with large sets of relationships among constructs and sub-constructs. It provides more flexibility in modeling second order constructs and formative constructs (Chin, 1998) and supports hierarchical component approach in second order construct modeling by assigning all indicators of first order factors (Wold, 1982). Additionally, PLS can account for measurement errors of latent constructs and assess significance of structural models simultaneously (Sambamurthy & Chin, 1994). SEM analysis was relevant for this research as it can handle multiple independent and dependent variable simultaneously (Bryne, 2001). SEM also allows relationships among constructs to be automatically corrected by measurement errors as the estimation of measurement and structural models are being performed simultaneously (Bryne, 2001).

The SEM was developed and analyzed in two stages. Initially the measurement model was developed and measurement properties of multi-item constructs were analyzed for Construct Reliability, Convergent Validity, Discriminant validity and Unidimensionality of Construct by conducting confirmatory factor analysis (CFA). The second stage involved analysis of the proposed structural model for hypotheses testing.

**Development of Measurement Model**

**Construct Reliability**

Construct reliability was assessed by computing the composite reliability and the Cronbach Alpha of the constructs using SmartPLS. The Cronbach Alphas were all above the 0.6 threshold as specified for PLS analysis (Hair et al., 2014) and ranged from 0.618 and 0.947 which indicates good to excellent reliability and composite reliability of reflective items were all above the acceptable 0.7 threshold which means all the variables in the study exhibited construct reliability. All constructs were viewed to have acceptable reliability levels because the composite reliability
scores for all constructs were above the 0.7 threshold. Details of construct reliability are presented in Table 4.1.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Composite Reliability</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Congruence [GC]</td>
<td>0.802</td>
<td>0.618</td>
</tr>
<tr>
<td>Knowledge Sharing Routine [KSR]</td>
<td>0.957</td>
<td>0.947</td>
</tr>
<tr>
<td>Capability Complementarity [CC]</td>
<td>0.882</td>
<td>0.802</td>
</tr>
<tr>
<td>Financial Performance [FP]</td>
<td>0.995</td>
<td>0.994</td>
</tr>
</tbody>
</table>

**Table 4.1 Reliability of Constructs**

**Convergent Validity**

Confirmatory Factor Analysis (CFA) was conducted to assess the convergent validity of the constructs. Convergent validity was assessed using the value of standard loadings of the indicators for the underlying construct. The scores are to be statistically significant and above 0.5 (Nunnally, 1978). The CFA results of item loadings and their respective t-values are reported in Table 4.20. The items were significantly loaded on the proposed factors with loading higher than 0.5.

Convergent validity was also assessed using average variance extracted (AVE). The AVE of all constructs were above the 0.5 threshold indicating that the latent constructs account for at least fifty percent of the variance in the items. This indicates that the measurement scales exhibited adequate measurement validity (Hair et al., 2014).

**Table 4.1: Convergent Validity of outer model**

<table>
<thead>
<tr>
<th>Outer Model</th>
<th>Sample Estimate</th>
<th>Sample Mean (M)</th>
<th>Std Error (Se)</th>
<th>t-Statistics</th>
<th>p-values</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Congruence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.714</td>
</tr>
<tr>
<td>GC2</td>
<td>0.973</td>
<td>0.971</td>
<td>0.023</td>
<td>42.509</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>GC5</td>
<td>0.640</td>
<td>0.617</td>
<td>0.138</td>
<td>4.621</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Knowledge Sharing Routine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.763</td>
</tr>
<tr>
<td>KSR1</td>
<td>0.679</td>
<td>0.675</td>
<td>0.074</td>
<td>9.124</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>KSR2</td>
<td>0.953</td>
<td>0.952</td>
<td>0.009</td>
<td>101.207</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>KSR3</td>
<td>0.948</td>
<td>0.948</td>
<td>0.012</td>
<td>78.612</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>KSR4</td>
<td>0.932</td>
<td>0.932</td>
<td>0.011</td>
<td>84.421</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>KSR5</td>
<td>0.958</td>
<td>0.959</td>
<td>0.008</td>
<td>114.208</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>KSR6</td>
<td>0.710</td>
<td>0.704</td>
<td>0.064</td>
<td>11.086</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>KSR7</td>
<td>0.887</td>
<td>0.888</td>
<td>0.030</td>
<td>29.954</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Capability Complementarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.537</td>
</tr>
<tr>
<td>CC1</td>
<td>0.775</td>
<td>0.760</td>
<td>0.096</td>
<td>8.044</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>
Discriminant validity

A number of measures were used to assess the discriminant validity of the outer model. These were coefficient of determination ($R^2$) for the endogenous variable, the Fornell Lacker Measure and the Stone-Geisser Test ($Q^2$). The $R^2$ value Financial performance (FP) was: 0.563. The Fornell Larker measure compares the AVE to the highest squared correlation of each construct (Fornell & Bookstein, 1982). As indicated in Table 4.4, all the constructs in the model met this criteria indicating that discriminant validity is supported. The Stone-Geisser Test is the Indicators Cross Validated Redundancy measure for each construct. This measure was produced through a blindfolding procedure in SmartPLS and is required to be equal to or greater than 0. A $Q^2$ of 1 is considered to mean a perfect prediction of model scores while a 0 is considered a weak measure. All the measures were above 0 and indicated a fair to strong prediction of the model. The discriminant measures are presented in Table 4.3 below. Discriminant validity was confirmed for the measurement model. As indicated in Table 4.3, the square root of the average variance extracted is higher than all its correlation with other constructs within the model.

Table 4.2: Measures of Discriminant Validity

<table>
<thead>
<tr>
<th>Construct</th>
<th>$R^2 &gt; 0.17$</th>
<th>Fornell Larker Measure (AVE $&gt; \text{highest correlation}^2$)</th>
<th>Stone-Geisser Test ($Q^2 \geq 0$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Congruence [GC]</td>
<td>-</td>
<td>0.714$&gt;$0.254</td>
<td>0.173</td>
</tr>
<tr>
<td>Knowledge Sharing Routine [KSR]</td>
<td>-</td>
<td>0.763$&gt;$0.376</td>
<td>0.696</td>
</tr>
<tr>
<td>Capability Complementarity [CC]</td>
<td>-</td>
<td>0.537$&gt;$0.131</td>
<td>0.417</td>
</tr>
<tr>
<td>Financial Performance [FP]</td>
<td>0.563</td>
<td>0.975$&gt;$0.376</td>
<td>0.958</td>
</tr>
</tbody>
</table>

Table 4.3: Fornell-Lacker’s Correlation matrix of constructs for Discriminant Validity

<table>
<thead>
<tr>
<th></th>
<th>CC</th>
<th>FP</th>
<th>GC</th>
<th>KSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FP</td>
<td>0.362</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GC</td>
<td>0.069</td>
<td>0.504</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>KSR</td>
<td>0.292</td>
<td>0.613</td>
<td>0.200</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Unidimensionality of Construct

Construct unidimensionality verifies that that items used to measure a particular construct only measure that single construct. Exploratory factor analysis and/or confirmatory factor analysis can be used to measure this criterion (Hair et al., 2014; Hensler et al., 2012). Construct unidimensionality was initially assessed by verifying that the measurement items measured the specific construct. Following the purification and reliability analysis of the measurement scales, PLS analysis was conducted so as to ensure the suitability of every construct adopted for the study. Table 4.4 displays the mean and standard deviation with corresponding normality data statistics for all constructs in the outer model. The table 4.4 below shows the Descriptive Statistics for Measurement Scales and Test of Univariate Normality. The normality of data is confirmed through the excess of Kurtosis over Skewness for each item of the construct which must be less or equal to +2 and greater or equal to -2. All the items used in this study met this criteria to depict the normality of the data used.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>Missing</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
<th>Standard deviation</th>
<th>Excess Kurtosis</th>
<th>Skewness</th>
<th>Diff btw Kurt &amp; Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSR1</td>
<td>13</td>
<td>0</td>
<td>3.266</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>1.309</td>
<td>-0.982</td>
<td>-0.509</td>
<td>-0.473</td>
</tr>
<tr>
<td>KSR2</td>
<td>14</td>
<td>0</td>
<td>2.899</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1.249</td>
<td>-1.235</td>
<td>-0.083</td>
<td>-1.152</td>
</tr>
<tr>
<td>KSR3</td>
<td>15</td>
<td>0</td>
<td>2.886</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1.609</td>
<td>-1.625</td>
<td>0.059</td>
<td>-1.684</td>
</tr>
<tr>
<td>KSR4</td>
<td>16</td>
<td>0</td>
<td>3.101</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1.498</td>
<td>-1.488</td>
<td>-0.084</td>
<td>-1.404</td>
</tr>
<tr>
<td>KSR5</td>
<td>17</td>
<td>0</td>
<td>3.025</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>1.835</td>
<td>-1.904</td>
<td>0.025</td>
<td>-1.929</td>
</tr>
<tr>
<td>KSR6</td>
<td>18</td>
<td>0</td>
<td>3.177</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>1.412</td>
<td>-1.202</td>
<td>-0.404</td>
<td>-0.798</td>
</tr>
<tr>
<td>KSR7</td>
<td>19</td>
<td>0</td>
<td>2.405</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>1.53</td>
<td>-1.596</td>
<td>0.388</td>
<td>-1.984</td>
</tr>
<tr>
<td>CC1</td>
<td>20</td>
<td>0</td>
<td>2.949</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>0.673</td>
<td>1.357</td>
<td>0.711</td>
<td>0.646</td>
</tr>
<tr>
<td>CC3</td>
<td>22</td>
<td>0</td>
<td>3.114</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1.043</td>
<td>-0.039</td>
<td>-0.847</td>
<td>0.808</td>
</tr>
<tr>
<td>CC5</td>
<td>24</td>
<td>0</td>
<td>3.076</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>0.965</td>
<td>-0.188</td>
<td>-0.414</td>
<td>0.226</td>
</tr>
<tr>
<td>GC 2</td>
<td>27</td>
<td>0</td>
<td>2.076</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>0.978</td>
<td>-0.333</td>
<td>0.756</td>
<td>-1.089</td>
</tr>
<tr>
<td>GC5</td>
<td>30</td>
<td>0</td>
<td>2.43</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>0.852</td>
<td>-0.106</td>
<td>-0.341</td>
<td>0.235</td>
</tr>
<tr>
<td>ROCE_2008</td>
<td>34</td>
<td>0</td>
<td>1.764</td>
<td>1.12</td>
<td>0.52</td>
<td>2.67</td>
<td>0.774</td>
<td>-1.897</td>
<td>0.059</td>
<td>-1.956</td>
</tr>
<tr>
<td>ROCE_2009</td>
<td>35</td>
<td>0</td>
<td>2.199</td>
<td>1.85</td>
<td>0.73</td>
<td>3.15</td>
<td>0.886</td>
<td>-1.63</td>
<td>-0.176</td>
<td>-1.454</td>
</tr>
<tr>
<td>ROCE_2010</td>
<td>36</td>
<td>0</td>
<td>2.56</td>
<td>1.92</td>
<td>0.88</td>
<td>3.78</td>
<td>1.012</td>
<td>-1.624</td>
<td>0.105</td>
<td>-1.729</td>
</tr>
<tr>
<td>ROCE_2011</td>
<td>37</td>
<td>0</td>
<td>2.843</td>
<td>2.11</td>
<td>0.93</td>
<td>4.23</td>
<td>1.156</td>
<td>-1.649</td>
<td>0.101</td>
<td>-1.75</td>
</tr>
<tr>
<td>ROCE_2012</td>
<td>38</td>
<td>0</td>
<td>3.043</td>
<td>2.16</td>
<td>1.22</td>
<td>4.78</td>
<td>1.395</td>
<td>-1.695</td>
<td>0.235</td>
<td>-1.93</td>
</tr>
</tbody>
</table>
Analysis of Structural Model for Hypothesis Testing

The structural or inner model was evaluated using the path weighting or p coefficients and corresponding p values generated from the SmartPLS analysis. Consistent with Chin (1998), bootstrapping (500 resamples) was applied to produce standard errors and t statistics. This enabled the measurement of the statistical significance of the path coefficients. The degrees of freedom for all measures in the bootstrap analysis are equal to the number of resamples minus one, which is 499. In the light of this, to evaluation the interaction of individual construct with the dependent variable thus the following function:

\[ \text{FP} = f(\text{GC}, \text{KSR} \text{ and } \text{CC}) \]

Where:
FP = Financial Performance (Dependent Variable)
GC = Goal Congruence among exchange partners
KSR = Knowledge Sharing Routines
CC = Capability Complimentarity

**Figure 4.1:** Measurement Model of the study

**Figure 4.2:** Structural Model T-Statistics using Bootstrapping of SmartPLS
The statistical objective of PLS is to show high $R^2$ and significant t-values, thus rejecting the null hypothesis of no effect. Parameters with an absolute t-value greater than 1.65 indicate a significance level of 0.1 (i.e. $p<0.1$), 1.96 indicate a significance level of 0.05 (i.e. $p<0.05$), those with an absolute t-value over 2.58 present a significance level of 0.01 (i.e. $p <0.01$), and those with an absolute t-value over 3.26 present a significance level of 0.001 (i.e. $p<0.001$). The relevant β value (that is path coefficient value) and p coefficients (significant) are presented in Tables 4.5.

### Table 4.5: β, t-Statistics and Significance of Variables for General model of the study.

<table>
<thead>
<tr>
<th></th>
<th>Sample Mean (M)</th>
<th>Se</th>
<th>t</th>
<th>p-value</th>
<th>R</th>
<th>r-Square</th>
<th>Adj r-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>GC -&gt; FP</td>
<td>0.395</td>
<td>0.395</td>
<td>0.071</td>
<td>5.567</td>
<td>0.000</td>
<td>0.75</td>
<td>0.563</td>
</tr>
<tr>
<td>KSR -&gt; FP</td>
<td>0.477</td>
<td>0.482</td>
<td>0.074</td>
<td>6.429</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC -&gt; FP</td>
<td>0.196</td>
<td>0.203</td>
<td>0.063</td>
<td>3.090</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the above figures and table for structural model, the path coefficient (β) for: GC -> FP, KSR -> FP and CC -> FP are 0.395, 0.477 and 0.196 respectively. This shows each construct’s positive contribution to every unit change in the value of dependent variable. For instance, an increase in the financial performance, by say N200, the Goal Congruence accounts for 39.5% of it and same interpretation for other constructs of the independent variable. Also, the letter ‘r’ connotes the correlation coefficient of the entire relationship between the Independent and dependent variable which shows the strength and the direction of such relationship. Here with the $r = +0.75$ meaning that there is positive and strong correlation between outsourcing of accounting tasks based on strategic relatedness among the exchange partners and the financial performance of the SMEs in Nigeria. Furtherance to this is the r-square which shows the predictive power of the overall Model: $FP=f\{GC,KSR$ and CC$\}$ recorded a figure of 56.3% showing the overall effect of Independent variable on the variability of the dependent variable. Hence, for every change in the financial performance, outsourcing of accounting tasks is responsible for it to the tune of 56.3% while other unidentified variables are responsible for the remaining 43.7%.

With this general outlook of our predictive model, we used the t-statistics obtained vide bootstrapping (re-sampled using 499 number of iterations) feature of SmartPls that provided the t-value and p-value for each construct. This enabled the researchers to ascertain the significance of each construct to the objective of the study and the testing of the hypotheses formulated earlier on. Hence for:

**Hypothesis 1:** Goal Congruence among the exchange partners has indicator that was statistically significant and positive with the following t-statistics $t(499)=5.567$, $p<0.000$; consequently we failed to reject Alternative hypothesis but we rejected Null hypothesis that there is no significant relationship between outsourcing of accounting tasks based on goal congruence among the exchange partners and the financial performance of SMEs in Nigeria.

**Hypothesis 2:** Knowledge Sharing Routines among the exchange partners has indicator that was statistically significant and positive with the following t-statistics $t(499)=6.429$, $p<0.000$; consequently we failed to reject Alternative hypothesis but we rejected Null hypothesis that there is no significant relationship between outsourcing of accounting tasks based on knowledge sharing routine among the exchange partners and the financial performance of SMEs in Nigeria.
Hypothesis 3: Capability Complementarity among the exchange partners has indicator that was statistically significant and positive with the following t-statistics t(499)=3.090, p≤0.000; consequently we failed to reject Alternative hypothesis but we rejected Null hypothesis that there is no significant relationship between outsourcing of accounting tasks based on capability complementarity among the exchange partners and the financial performance of SMEs in Nigeria.

CONCLUSION AND RECOMMENDATIONS

We conclude that outsourcing of accounting tasks is an option for SMEs in order to maintain a competitive advantage in the business world environment as outsourcing could lessen the unwarranted burden of mastery of quality accounting practice by the operators of SMEs. Establishing strategic relatedness with the external experts will not only assist the organization in building relevant internal capacity but will open door for free and unhindered flows of relevant information from the market into the organization. Consequently we recommend that SMEs should take their external accountants as mentors and advisors on how to further devise the firm’s strategies. This is easily achieved when the outsourcing relationship established is for long term as against the usual short term practices. Here the parties involved would align their goals (goals congruency) and put an arrangement in place for easy knowledge sharing among all the parties involved in the relationship.

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Service Outsourcing: A demonstration of America’s Service Outsourcing”.

ANALYZING THE DETERMINANTS OF PRIVATE SAVINGS IN KENYA OVER THE PERIOD 1993-2013

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&

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ABSTRACT

The main aim of this study was to investigate the determinants of private savings in Kenya over a period of 21 years from 1993 to 2013. Private saving is the amount of disposable income remaining after households meet their consumption demand. The determinants of private saving considered in the study include dependency ratio, per capita income, financial deepening, inflation rate, and real interest rate. The research methodology employed in the study is desk research using time series data bank of the World Bank. The data are subjected to time series data examination including the Augmented Dickey Fuller test for unit root which establish that the non-stationary variables become stationary after differencing once. The cointegration test shows that the OLS residuals are not stationary implying absence of cointegration suggesting nonexistence of long run relationship among the variables. The analytical method employed in the study is the OLS regression technique which is appropriate for short run relationships. The model was subjected to diagnostic tests for OLS estimation. One of the key findings of the study is that increase in inflation will decrease private savings contrary to the theory of precautionary motives for saving. This finding suggests that lower inflation in Kenya raises growth which in turn increases savings in the country. All the other determinants of the private saving considered in the study were statistically significant according to theoretical expectations except for the real interest rate which was statistically insignificant. These findings can be important in formulating policies and strategies for refocusing attention to the growth of private savings in the country.

Keywords: Determinants of private saving, life-cycle hypothesis, permanent income hypothesis, unit root test, cointegration, regression analysis model.

INTRODUCTION

Saving represents a decision not to consume income. Three key motives leading to such a decision include retirement, precautionary, and bequest. There is also target saving for the acquisition of tangible assets. The saving motives are not mutually exclusive. In both developed and developing countries, private saving is critical as it allows households to smooth consumption in the face of volatile incomes besides supporting investments in human and physical capital.

Since 1990s, private saving rates have been stable in some countries but vary widely around the world (Loayza, Schmidt-Hebbel, and Serven, 2000). According to the world Bank (2013), the standing of private saving rates for some selected countries as a percentage of gross domestic product is as follows: China 50.4 %, United Kingdom 15.1 %, United States of America 16.3 %, India 18.4 %, Kenya 11 %, Nigeria 19.8 %, Ghana 10.8 %, Uganda 19.6 %, Tanzania (%) and so on. On average, East Asia saves more than 30 % of gross national
disposable income (GNDI) while Sub-Saharan Africa (SSA) saves less than 15% due to inadequate financial services (World Bank, 2013). In the last one and half decades, private savings in Kenya have depicted erratic trend and have remained low compared to the savings of the neighbouring countries, Tanzania and Uganda, as Figure 1.1 illustrates.

![Figure 1.1: Private Saving Rates in East Africa](image)

Source: World Development Indicators, World Bank

**LITERATURE REVIEW**

**Neoclassical Economic Theories of Saving**

The two most recognized neoclassical theories of saving are the life cycle hypothesis (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954), and the permanent income hypothesis (Friedman, 1957). These theories treat individuals and households as being concerned with long-term consumption opportunities and explain saving and consumption in terms of expected future income. These models view saving as an important way for smoothing out consumption in the face of income fluctuations. Consumption is shaped by expected lifetime resources instead of current resources, such that over short durations (e.g., a year), saving is expected to reflect departures of current income from average life resources. When current income drops below anticipated average lifetime income, saving decreases, and individuals and households may even borrow to finance consumption. When current income exceeds expected average life resources, individuals and households save.

The ‘life-cycle’ hypothesis (LCH) suggests that consumption and saving will mirror an individual’s age or stage in the life cycle. This model underlines saving for retirement as a primary incentive for postponed consumption. A more complicated LCH model views the desire to leave a bequest and the need to prepare for difficult times as potential saving motives. Young households are likely to have negative saving typically because they have relatively low earnings and incur debt for education, the purchase of homes, and other expenses. In the mid period of the life cycle, saving is expected to be positive since individuals settle their debts and begin to save for retirement. Upon retirement, dissaving is likely to occur again. Therefore, variations in consumption and saving among households are supposed to be somewhat the outcome of age differences and the pattern of saving and dissaving gives rise to an inverted U-shaped pattern across age categories and/or over time (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954).

The permanent income hypothesis (PIH) was put forward by Friedman (1957) and is linked to the Relative Income Hypothesis through the previous highest levels of income. Like the life cycle hypothesis, the permanent income hypothesis (PIH) is built on the assumption that
long-term income is the main determinant of consumption. Thus, the PIH focuses on permanent and transitory income rather than life resources and current income. The hypothesis stipulates that consumption, understood as including consumer durables, is a function of a non-observed variable called permanent income. The permanent income is understood as being the present value of lifetime income, whereas transitory income is the gap between measured income and permanent income. Friedman (1957) asserted that household consumption will react to changes in permanent but not transitory income. Observed variations in household saving and consumption are thought to reflect, in part, variances in the relative portions of transitory and permanent income.

**Per Capital Income Growth**

Using a sample of ten developing countries, Giancarlo et al. (1992) estimated individual household saving functions by combining time-series and cross-country observations. The study tested households’ responses to income and growth, rates of return, monetary wealth, foreign saving, inflation, interest rate and demographic variables. The results show that income and wealth variables affect saving positively, foreign saving and monetary assets have the contrary effects on saving, while inflation and the interest rate variables did not show clear effects on saving. Loayza, et al. (2000) studied the determinants of saving rates in developing countries by paying special attention to the connection between growth and saving as well as the impact of specific policies on saving rates using both qualitative and quantitative approaches. The results indicate that while the economies of China, India, and East Asia have generally experienced an increase in their saving rates, countries such as South Africa, the former Soviet Union as well as the Baltic States had experienced the reverse.

Agrawal et al. (2010) explored the determinants of savings behaviour in India for the period 1962 to 2004 by use of co-integration procedures and found that greater access to banking facilities and higher income per capita, significantly improved savings in India during the period under consideration. The study also established that foreign savings and public savings have negative effects on private savings while the income per capita causes the opposite effect. The authors concluded that there is need for higher rates of growth in order to boost and generate greater domestic savings in the economy. Sandri et al. (2012) used panel data of advanced economies to study precautionary saving motive during Great Recession and found that greater labour income uncertainty was significantly associated with higher household savings. The authors explain that the sharp increase in household saving rates can be attributed to the precautionary savings motive. Their findings support the theory of “forced saving” in the literature.

Özcan et al. (2003) investigate the determinants of private savings for Turkey during the 1968-1994 period and found that the income level positively affect private savings but the growth rate of income is not statistically significant and that life expectancy negatively affect savings. Doshi (1994) studied the role of life expectancy saving performance and found that life expectancy was statistically significant and important factor affecting savings levels in Least Developed Countries.

**Inflation**

Lipumba et al. (1999) examined the developments in saving and investment in Namibia over a period of seventeen years using co-integration and error correction approaches and found
that private saving in Namibia was significantly influenced by real income and that real lending rates, inflation, real income and government investments were significant in determining investments in Namibia. Using data set for Ghana over the period 1960-1992, Aryeetey (1995) studied the determinants of savings in Ghana and found that real deposit rates had no significant influence on rural household saving in Ghana. The author concluded that depression and uncertainty of the investment climate, together with high rates of inflation had a weighty effect in determining savings in the country.

Olusoji (2003) found that savings in Nigeria was being affected by income, growth rate, government deficit and inflation rate and that exchange rate seemed to be the most significant determinant while interest rate had no effect. Özcan et al. (2003) studied the determinants of financial saving in Nigeria with special emphasis on inflation and found that inflation had a positive effect on private savings. Kudaisi (2013) studied the determinants of domestic savings in West Africa during 1980-2006 anchored on Hall hypothesis of consumption and found that the dependency ratio and interest rate had negative and insignificant effects on domestic savings, the GDP growth rate had positive and statistically insignificant effect, while the government budget surplus and inflation rate were statistically significant determinants of savings.

Epaphra (2014) examined the factors affecting savings in Tanzania over the 1970-2010 period using time series data and Granger Causality test and found that real GDP growth rate, as well as the disposable income, life expectancy and population growth had positive impact on savings in Tanzania while inflation had a negative impact.

Financial Deepening

Financial deepening relates to the overall increase in the ratio of money supply to GDP or some price index and is a measure of how much opportunities for continued growth exists in an economy (Wikipedia, the free encyclopedia). Husain (1996) studied the long-run behaviour of saving in Pakistan and found that financial deepening contributed significantly to the rise in private saving. Chete (1999) studied the macroeconomic variables affecting private savings in Nigeria and established that private saving was affected by the ratio of broad money (M2) to GDP. Studies on interest rate reforms, financial deepening and savings in Tanzania concluded that there was no strong proof that real interest rate had effect on national savings but that reforms in interest rate had positive effect on financial deepening which eventually affected the saving rate (Odhiambo, 2008; Ndanshau, 2012; and Lipumba et al., 1990).

Nwachukwu and Odigie (2009) studied the determinants of private saving in Nigeria between 1970 and 2007 using Error-correlation technique and found that the saving rate rose together with both the growth rate of disposable income and the real interest rate on bank deposits. The study also found that public saving tends not to overcrowd private saving suggesting that government policies directed at increasing fiscal balance had the capacity to bring about a considerable increase in the national saving rate; while the degree of financial depth had a negative but insignificant impact on saving behavior in Nigeria.

Essien and Onwioduokit (1998) employed the Error-Correction Methodology to study the impact of financial development on savings mobilization in Nigeria and found that there was no long-run relationship between financial depth and domestic resource mobilization. Mwea (1997) did a comparative analysis of average private saving rates in 15 African countries over
the period 1970-1993 and found that there was a negative and highly statistically significant
coefficient on fiscal balance implying that fiscal balance and private saving were exact match
for each other.

Tiriongo (2005) studied the determinants of aggregate domestic private savings in Kenya
over the reform period 1980 to 2003 using Ordinary Least Square procedure. The study was
motivated by the existence of substantial fluctuations in the ratio of aggregate domestic
private savings to GDP. The study found that aggregate private savings in Kenya were
significantly determined by the current account deficit, the ratio of M2 money to GDP, real
gross per capita income growth, deposit rate and the old age dependency ratio.

Real Interest Rate

Horioka et al. (2007) used panel data for China over the period between 1995 and 2004 to
analyze the determinants of the household saving rate. Income growth rate, inflation rate, and
real interest rate were found to be important determinants of saving rates in China over the
period under consideration. These findings provide support for the life cycle hypothesis as
well as the permanent income hypothesis. Using time series data for Nigeria over the period
1970 to 2010, Nwachukwu (2012) studied private saving based on co-integration procedures
within the framework of the Life Cycle Hypothesis. The author found that the saving rate
increased with both the real interest rate on bank deposits and the growth rate of disposable
income whereas financial debt had an adverse effect on saving behaviour in Nigeria.

Ogaki, Ostry and Reinhart (1996) studied the determinants of household saving behaviour for
Low and Middle-income developing countries in Africa and found that saving was affected
by the real interest rate. Uremadu (2007) used ordinary least square (OLS) regression
technique to study the determinants of financial saving in Nigeria and found that per capita
income, broad money supply, debt service ratio, GDP, and interest rate spread, were the
major factors that affected financial saving in Nigeria.

Dependency Ratio

Kibet et al. (2009) used entrepreneurs, teachers, and smallholder farmers, in rural areas of
Kenya to investigate the determinants of household saving using the OLS regression method
and found that household saving was influenced by the dependency ratio, level of education,
transport costs, service charge, credit access, and type of occupation, household income,
gender and age of household head.

Gedela (2012) investigated the factors affecting saving behaviour in rural and tribal
households in India using regression analysis models and found that saving was influenced
by sex, age of the head of the household, dependency ratio, income and medical expenditure
supporting the findings by (Kibet et. al. 2009). Elbadawi and Mwega (2000) studied private
domestic savings in Sub-Saharan Africa and other regions including East Asia, Caribbean,
and Latin America, and found that the growth of gross private domestic income per capital,
the growth in the term of trade, and gross private domestic income had positive effects on the
rate of saving in the countries studied whereas public savings negatively affected the private
savings. The authors found also that government consumption had a positive and significant
coefficient suggesting that private sector relied to a large extent on government consumption.
The authors concluded that the key element influencing savings in Asian economies were
increase in public saving, young dependency ratio and income per capital.
METHODOLOGY

Conceptual Framework

The conceptual framework of the study is a modification of the private saving framework of Nwachukwu (2012) and Loayza et al. (2000). Private saving as a dependent variable is influenced by the independent variables including per capita income growth, dependency ratio, inflation rate, financial deepening as measured by broad money (M2) as a proportion of GDP, and real interest rate as illustrated in Figure 2.

Figure 2: A Framework of Private Saving

Source: Own Formulation Based on Nwachukwu (2012) and Loayza et al. (2000)

The analytical procedure employed in the study is the regression analysis model using the OLS technique. The model specification is given as follows:

\[ PSR = \beta_0 + \beta_1 RIR + \beta_2 M2 + \beta_3 DR + \beta_4 PCI + \beta_5 IFR + \varepsilon \]

Where
- \( PSR \rightarrow \) Private saving rate
- \( RIR \rightarrow \) Real interest rate
- \( M2 \rightarrow \) Broad money as a proxy for financial deepening
- \( DR \rightarrow \) Dependency ratio
- \( PCI \rightarrow \) Per capita income
- \( IFR \rightarrow \) Inflation rate
- \( \beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5 \rightarrow \) are the regression coefficients to be estimated.
- \( \varepsilon \rightarrow \) Random error term

The hypothesis tested in the study is the null hypothesis that none of the explanatory variables is important in explaining private savings in Kenya. Thus,

\[ H_0: \text{Real interest rate, financial deepening, dependency ratio, per capita income and inflation rate are not statistically significant in determining domestic private savings in Kenya} \]

The private savings variable is the domestic private saving as a percentage of GDP. The inflation rate is computed as a percentage change in the Kenyan GDP deflator. Per capita income growth is calculated as percentage change in the ratio of gross domestic income to the total population, while broad money supply (M2) is measured as a percentage of GDP. The real interest rate refers to an interest rate that has been adjusted to remove the effects of inflation to reflect the real cost of funds to the borrower, and the real yield to the lender. Dependency ratio is a measure of dependents, people less than 18 or more than 64 years to
the working-age population computed as the proportion of dependents per 100 working-age population.

**Data sources and treatment**

The study employed annual macroeconomic time series data for Kenya over the period 1993-2013 obtained from the World Bank World Wide Web. Regression involving non-stationarity data often leads to spurious results which, appearing to be statistically significant under standard hypothesis testing procedures such as the t tests and F tests, are evidence of accidental correlations rather than meaningful causal relationships (Harries and Sollies, 2003). To address the problem of spurious regression, the data must be tested for stationarity. The study employed the Johansen-Juselius cointegration approach to model stationarity properties of the data. The approach involves two fundamental tests: the unit root test to establish the order of integration for each variable and the cointegration test to establish existence of long-run equilibrium among variables.

**Unit root test**

The study employed the Augmented Dicky Fuller (ADF) unit root testing procedure. Variables found to be non-stationary are differenced to make them stationary. If a variable must be differenced d times to make it stationary, it is said to have d unit roots, i.e., integrated of order d, denoted I(d). The ADF unit root test uses autogressive equations given as follows.

1. ADF with both trend and intercept

   \[ Y_t = \alpha + \beta T + \gamma Y_{t-1} + \sum \delta_i Y_{t-i} + u_t \]

2. ADF with an intercept but no trend

   \[ Y_t = \alpha + \gamma Y_{t-1} + \sum \delta_i Y_{t-i} + u_t \]

   These equations are used to test the hypotheses:
   - \( H_0: p = 1 \), existence of unit root, i.e., the data series, \( Y_t \), is non-stationary.
   - \( H_1: p < 1 \), the data series, \( Y_t \), is stationary.

**Cointegration test**

The procedure for testing for cointegration is similar to that of testing for the order of integration of variables. If two variables are integrated of order d and b, i.e., I(d, b), the two data series are said to be co-integrated and have a stationary linear combination (Horries and Sollies, 2003). Cointegration implies existence of long-run relationship among variables which may drift apart from each other in the short run but remain converged to each other in the long run. OLS model is not appropriate for cointegrated data but rather the vector error correction model is, whereas the OLS model is appropriate for short-run estimation. The study employed Johansen cointegration test procedure.

**Diagnostic tests**

These are tests designed to measure the suitability of the regression analysis model. The tests are carried out after the regression estimation of the function to ascertain if the data fit the model and include the following:
1. The fitness test where the regression line must be fitted to the data strongly. The test is met when the value of R-squared is more than 60%. The higher the R-squared, the better the data is fitted.

2. The test of significance which requires that most of the independent variables should be significant to explain the dependent variable. The independent variables should also be jointly significant to influence the dependent variable.

3. The test for serial correlation which requires that the residuals are not auto-correlated. The test is carried out using Breusch-Godfrey serial correlation LM test.

4. The heteroskedasticity test which is designed to ensure that the variance of the residuals is homoscedastic using the Breusch-Pegan-Godfrey Test.

5. The normality test designed to ensure that the residuals follow normal distribution. The JarqueBera statistics is used to test for normality of residuals.

RESULTS

Descriptive statistics

In this section, the general descriptions of all the variables used in the study are provided. The statistics on the mean, the maximum and the minimum values for each variable are stated.

Table 4.1: Descriptive statistics

<table>
<thead>
<tr>
<th>Variate</th>
<th>DR</th>
<th>IFR</th>
<th>M2</th>
<th>PCI</th>
<th>PSR</th>
<th>RIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.874286</td>
<td>11.96667</td>
<td>37.89524</td>
<td>0.938095</td>
<td>12.94476</td>
<td>9.233333</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.01</td>
<td>46</td>
<td>42.2</td>
<td>5.5</td>
<td>20.73</td>
<td>21.1</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.81</td>
<td>1.6</td>
<td>34.6</td>
<td>-2.8</td>
<td>7.84</td>
<td>-8.1</td>
</tr>
<tr>
<td>Observations</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: World Bank Data for various issues

Unit root tests

This study employed a widely accepted test for stationarity, the Augmented Dickey-Fuller (ADF) unit root tests to formally test for stationarity of the variables. Table 4.2 presents the results.

Table 4.2: ADF Unit Root Tests

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intercept</th>
<th>Critical value</th>
<th>Trend &amp; Intercept</th>
<th>Critical value</th>
<th>Verdict</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSR</td>
<td>-3.633797</td>
<td>-3.052169</td>
<td>-3.430087</td>
<td>-3.658446</td>
<td>Non-stationary</td>
</tr>
<tr>
<td>1st difference</td>
<td>-5.839710</td>
<td>-3.029970</td>
<td>-5.514066</td>
<td>-3.673616</td>
<td>Stationary</td>
</tr>
<tr>
<td>DR</td>
<td>-6.550690</td>
<td>-3.020686</td>
<td>-2.419064</td>
<td>-3.658446</td>
<td>Non-stationary</td>
</tr>
<tr>
<td>1st difference</td>
<td>-3.075752</td>
<td>-3.029970</td>
<td>-4.066560</td>
<td>-3.673616</td>
<td>Stationary</td>
</tr>
<tr>
<td>1st difference</td>
<td>-6.206032</td>
<td>-3.029970</td>
<td>-6.186162</td>
<td>-3.673616</td>
<td>Stationary</td>
</tr>
<tr>
<td>IFR</td>
<td>-5.219545</td>
<td>-3.020686</td>
<td>-4.812095</td>
<td>-3.658446</td>
<td>Stationary</td>
</tr>
<tr>
<td>PCI</td>
<td>-3.414473</td>
<td>-3.020686</td>
<td>-4.140503</td>
<td>-3.658446</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Source: Own compilation based on the World Bank Data

The results show that Inflation rate, Real Interest Rate, and Per Capital Income Growth are stationary at levels, hence are I(0). However, Private Saving Rate, Dependency Ratio, and Ration of broad Money to GDP are non-stationary at levels.
The tests establish that the non-stationary variables become stationary after differencing once that is are I(1)s. To establish whether the non-stationary variables are cointegrated, the next section outlines the cointegration test results.

Cointegration test

The Johansen cointegration test was used where OLS estimation is performed on the equation given as follows:

$$\text{DPSR} = \beta_0 + \beta_1 \text{DM2} + \beta_2 \text{DDR} + u_t$$

The dependent variable (PSR) was an I(1) so that the cointegration test was performed including only the two variables that were I(1)s, which are dependency ratio (DR) and financial deepening (M2). Table 4.3 presents the results of the cointegration test.

Table 4.3: Johansen Cointegration Test Results
Sample (adjusted): 1995 2013
Included observations: 19 after adjustments
Trend assumption: Linear deterministic trend
Series: DR PSR M2
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Eigenvalue</th>
<th>Trace Statistic</th>
<th>0.05 Critical Value Prob.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0.491392</td>
<td>21.31595</td>
<td>29.79707</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.265715</td>
<td>8.470468</td>
<td>15.49471</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.127991</td>
<td>2.602162</td>
<td>3.841466</td>
</tr>
</tbody>
</table>

Trace test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

The results show that the residuals of the OLS estimation of the I(1) variables are not stationary, implying absence of cointegration suggesting absence of a long run relationship among variables.

OLS estimation results

Table 4.4 presents the results of the OLS estimation of the private savings model of the Kenya economy.
Table 4.4: The OLS estimation results

Dependent Variable: PSR
Method: Ordinary least squares regression
Date: 08/28/15   Time: 22:49
Sample (adjusted): 1994 2013
Included observations: 20 after adjustments

<table>
<thead>
<tr>
<th>Explainable Variables</th>
<th>Coefficient Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>4.169124</td>
<td>1.154005</td>
<td>3.612743</td>
</tr>
<tr>
<td>DR</td>
<td>148.0897</td>
<td>61.95092</td>
<td>2.390436</td>
</tr>
<tr>
<td>M2</td>
<td>-0.631969</td>
<td>0.177405</td>
<td>-3.562304</td>
</tr>
<tr>
<td>IFR</td>
<td>-0.308209</td>
<td>0.062952</td>
<td>-4.895908</td>
</tr>
<tr>
<td>PCI</td>
<td>0.745399</td>
<td>0.270168</td>
<td>2.759019</td>
</tr>
<tr>
<td>RIR</td>
<td>0.037669</td>
<td>0.083019</td>
<td>0.453744</td>
</tr>
</tbody>
</table>

R-squared | 0.803644 | Mean dependent var | -0.486500 |
Adjusted R-squared | 0.733517 | S.D. dependent var | 2.933992 |
S.E. of regression | 1.514586 | Akaike info criterion | 3.911486 |
Sum squared resid | 32.11559 | Schwarz criterion | 4.210206 |
Log likelihood | -33.11486 | Hannan-Quinn criter. | 3.969799 |
F-statistic | 11.45980 | Durbin-Watson stat | 1.761845 |
Prob(F-statistic) | 0.000151 |

To establish whether this model best fits the data; diagnostic tests are performed and the results are presented in Table 4.5.

Diagnostic tests

To check if the model meets the requirement for OLS estimation, six conditions for Ordinary least square (OLS) regression were examined.

The regression line must be fitted to the data strongly. This condition is met when the value of R-square is more than 60%. The higher the R-square, the better the data is fitted. The R-square of this model is 80.3%, meaning that the regression line is fitted to data strongly.

Most of the independent variables should be significant to explain the dependent variable.
In this model, four out of the five independent variables (IFR, DR, PCI and M2) are significant hence an indicators that this data fits OLS model of private saving.

Independent variables should be jointly significant to influence the dependent variable.
This is measured using F-test. The results of the F-test is 0.000151, which is less than 5% we reject the null hypothesis that all the independent variables cannot jointly influence the dependent variable hence asserting that the data is fit for the model.

Residuals are not auto-correlated. Breusch-Godfrey serial correlation LM test is used to test this. A P-value of 32.55% reported in Table 4.5 is above 5% implying that the residual of the values is not serially correlated or auto-correlated and hence fits for regression model.
Variance of the residual is homoscedastic. To check if the residual is homoscedastic, we use the Breusch-Pegan-Godfrey test presented in Table 4.5. The observed R-squared is 1.582599 and the corresponding P-value is 90.3%. So we cannot reject the null hypothesis which says that the variance of the residual is homoscedastic implying that the model fits for regression analysis.

Residuals follow normal distribution. The JarqueBera statistics is used to test for normality of residuals and the result is shown in Table 4.5. The P-value is 55.2% implying that the null hypothesis cannot be rejected suggesting that the residuals are normally distributed.

Table 4.5: Diagnostic Test Results of the OLS Estimation Model

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Obs*R-squared</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heteroskedasticity Test: Breusch-Pagan-Godfrey</td>
<td>1.582599</td>
<td>0.9033</td>
</tr>
<tr>
<td>Ramsey RESET Test</td>
<td>t-statistic</td>
<td>0.503852529</td>
</tr>
<tr>
<td>Breusch-Godfrey Serial Correlation LM Test:</td>
<td>t-statistics</td>
<td>1.063424954</td>
</tr>
<tr>
<td>Jarque-Bera Normality test</td>
<td>t-statistic</td>
<td>1.187129</td>
</tr>
<tr>
<td>Probability</td>
<td>0.622200452</td>
<td>0.373479316</td>
</tr>
</tbody>
</table>

Since our model has satisfied the all the conditions for regression model analysis, we can now use the results of the OLS estimation of private saving model presented in Table 4.3 to analyze the determinants of private savings in Kenya.

DISCUSSION

The results of cointegration tests imply that the variables of the model of private savings in Kenya over the period 1993-2013 are not cointegrated suggesting a short run estimation model rather than estimation of long run relationships among variables. The value of the adjusted R-Squared of 0.7335 implies that the explanatory variables in the model account for about 73.4% of the variations in private savings in Kenya. The F-statistic value of 11.4598 suggest that the model is highly statistically significant as illustrate by the p-value of 0.0002 implying rejection of the null hypothesis in favour of the alternative that a highly statistically significant relationship exists between the private savings in Kenya and the explanatory variables.

The coefficient for the dependency ratio (DR) variable is positive as expected and statistically significant at 3% level of significance. The finding suggests that an increase in the dependency ratio arising, say, from increase in life expectancy, will lead to an increase in private savings by the labour force in order to cater for the increase in the number of dependent population. The coefficient for financial deepening (M2) is negative and highly statistically significant at 0.3%. The result implies that increasing money supply will induce inflation and reduction in interest rates suggesting reduction in private savings in the economy. The finding is partly consistent with results of Mwachukwu and Odigie (2009) and Tiriongo (2005). A reduction in interest rates will act as a disincentive for individual and firms to save.

The coefficient of the inflation rate variable (IFR) is negative against expectation and highly statistically significant. This finding contradicts the precautionary saving theory which states that as inflation rises, consumers will spend less so as to cushion for anticipated difficult
times. The coefficient of the per capita income variable (PCI) is positive and statistically significant at 2.8% level of significance. The result suggests that an increase in per capita income growth will increase private savings in Kenya. The finding is consistent with results of Tiriongo (2005) and Agrawal et al. (2010) as well as the simple Keynesian savings theory. The coefficient of real interest rate variable (RIR) is the only variable in the private saving model that is not statistically significant. The result is consistent with the finding of Ogaki, Ostry and Reinhart (1996) who concluded that real interests do not necessarily improve the level of private savings.

CONCLUSION

The study explored the determinants of private savings in Kenya over a period of 21 years from 1993 to 2013 using OLS estimation. Prior to the model estimation, time series properties of the data were established using Augmented Dickey-Fuller test for unit roots. Three variables including the inflation rate, real interest rate, and per capita income growth are found to be stationary at levels, hence are I(0) while the other three variables including the private saving rate, dependency ratio, and financial deepening are non-stationary at levels but become stationary after differencing once prompting a test for cointegration. There was no evidence of cointegration, thus, a short run private savings model is estimated using the OLS method. The estimated model has a good fit as illustrated by the F-statistic, the adjusted R-Squared, and the diagnostic tests. All the 5 explanatory variables, except the real interest rate, are found statistically significant determinants of the private savings in Kenya.

Policy Implications

Private savings in Kenya have significant negative relationship with inflation. The country should pursue policies geared toward reduction of inflation in order to promote growth in private savings and boost investment levels in the economy. Per capita income and financial deepening are other important factors that influence private savings in Kenya. Policy makers can promote growth of per capita income by improving productivity of workers. Further, a strict monetary policy can be pursued to maintain money supply within manageable levels ensuring stable and low inflation rates as well as improvement in real incomes and private savings in the economy.

Dependency ratio is another important factor influencing private savings in Kenya’s economy. An important policy recommendation would be focusing on improving the life expectancy, which in turn, would improve the dependency ratio. This would entail improvement of health care provision for the entire Kenyan population.

REFERENCES


CASHLESS POLICY AND ITS EFFECTS ON THE NIGERIAN ECONOMY

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ABSTRACT

The paper discussed the effects of cashless policy on the Nigerian economy, how it was kick-started in Lagos, means of payments (both manual and electronic), positive and negative effects of cashless policy, benefits to the economy and stakeholders, suggestions were made to the Nigerian government on how to curb some of the negative effects and to improve on the implementation of the policy.

Keywords: Information Technology, Computer, Automated Teller Machine.

INTRODUCTION

A cashless economy is an environment in which money is spent without being physically carried from one place to another. Electronic devices as means of information that reveal how much a person has deposited and has spent are needed. Information technology plays an important role in bringing about sustainable development in every nation. Without an optimal use of information technology, no country can attain a speedy social-economic growth and development. The future of all business particularly those in the services industry lies in information technology, in fact, information technology has been changing the ways companies and banks compete. Information technology is more than computers, it encompasses the data a business creates and uses as well as a wide spectrum of increasing convergent and linked technologies that process such data. Information technology thus relates to the application of technical processes in the communication of data. It is no doubt that information technology can help to reduce transaction costs for banks, which will translate to lower prices for services to customers. Information technology for banks takes different forms which include: computerization of customers’ accounts and information storage and retrieval, deposit and withdrawal through Automated Teller Machine and networking to facilitate access to accounts from any branch of the bank. Other forms include bio-metrics used in fingerprinting and identification which should dispense the use of passwords or personal identification by customers. The use of internet and websites to bundle a host of services that go beyond transactional financial services which is increasing among banks.

The financial sector has undergone many organizational changes over time in order to facilitate easy production and trade of products and services. However, with accelerating development of the financial systems as a result of deregulation, globalization and new information system, new ways of handling money appeared among banks and their customers. The use of e-card, internet banking facilitates the ease and convenience in handling transactions. E-banking customers have possibility to access online or electronic banking for 24 hours which allows them to view historical banking transactions, transfer money between accounts, make savings, perform other operations at everywhere. Moreover increase in knowledge and ability to manage internet banking, banks and ATMs have resulted in more independent bank customers no longer requiring bank staff. The shift in bank customers’ behavior and attitude towards cash services offered at the banks gave birth to
cashless policy. This means banking is entirely relying on monetary transactions that use electronic means rather than cash. The cashless policy was conceptualized by the apex bank to migrate Nigeria’s economy from cash based economy to a cashless one through electronic payment system, not only to enable Nigeria monetary system be in line with international best practices or discourage movement of cash manually, but at the same time increase the proficiency of Nigeria’s payment system which will in turn improve the quality of service being offered to the banking public. Cashless policy aims to curb some of the negative consequences associated with the high usage of physical cash in the economy, including high cost of cash, high risk of using cash, high subsidy, informal economy, inefficiency and corruption (CBN, 2011). The introduction of the policy in Nigeria therefore brings up issues that touch on security, privacy, crime and computerization. According to David (2012), Nigeria did not embrace electronic banking when compared to developed countries. Nigeria adopted electronic banking system in early 2000s.

Electronic banking is defined as the use of computer to carry out banking transactions such as withdrawals through cash dispensers or transfer of funds at point of sale. Cashless policy started in Lagos, pilot state. The apex bank pegged withdrawal by individual and corporate accounts at N500,000 and N3million respectively. Processing (charges) fees for withdrawals above the limits for individual customers is 3% while that of corporate bodies is 5%. Charges for lodgements for individuals and corporate accounts are 2% and 3% respectively. However, ministries, departments, agencies, specialized banks, diplomatic missions, embassies, multilateral and donor agencies have been exempted from charges emanating from this policy.

The cashless policy will potentially result in an extensive application of computer technology in the financial system which places the computer Professional Registration Council at the centre of control and regulation of the emerging in the Nigerian economy. The Central Bank of Nigeria has in recent times engaged in series of reformations aimed at both making the Nigerian financial system formidable and enhancing the overall economic performance of Nigeria so as to place it on the right path in tune with global trends. Recently, the CBN came out with two laudable agenda- the Islamic banking (non-interest banking) and the cashless economy (e-payment system)(Babalola, 2008). Some of these policy measures came with tremendous success despite the initial scepticisms of Nigerians. For instance, when the CBN in July 2004 set December 31st, 2005 deadline for N25billion minimum capitalization, it was agreed with considerable criticism when the programme was completed, the banking landscape was transformed out of a system dominated mainly by “fringe banks to one made up of largely “mega banks” (Adeyemi, 2006). The product of the exercise was to ensure a diversified, strong and reliable banking industry where there is safety of depositors’ fund, and reposition of the banks to play active developmental roles in the Nigerian economy” (Adegbaju and Olokoyo, 2008). This remark sums up the assessment of analysis about the outcome of the reform agenda. In recent years, Nigeria has been experiencing growth and the condition seems right for launching unto a path of sustained and rapid growth, justifying its ranking amongst the 11 countries as identified by Goldman Sachs to have the potential for attaining global competitiveness based on their economic and demographic settings and the foundation for reforms already laid. Constraints to the achievement of Nigeria’s ambition to be among the top 20 economies of the world by year 2020 is the fact that the Nigerian economy is too heavily cash oriented in transaction of goods and services which is not in line with global trends. In its efforts to rescue the Nigerian economy from the brinks of total collapse; the CBN in collaboration with the Bankers’ Committee, the cashless policy was designed to provide mobile payment services, breakdown the traditional barriers hindering
the financial inclusion of millions of Nigerians and bring low-cost, secure and convenient financial services to urban, semi-urban and rural areas across the economy. The cashless policy initiated by the CBN led by its former Governor, Sanusi Lamido was introduced first in Lagos state, with the aim of achieving an environment where a higher and increasing proportion of transactions are carried out through cheque and electronic payments in line with the global trend (Obodo, 2012).

So much have been said about the anticipated gains that had resulted from the adoption of e-payment and cashless economy but in concrete terms, people have been convinced that the agenda is for the good of all but the fear being expressed is the state of Nigerian infrastructural decay, lack of security on financial information, cost of ownership and adoption due to high cost of acquiring and maintaining internet data, computers and so on. The internet is perhaps one of the most useful tools to businesses and individuals in contemporary world economies. Its use has touched virtually every aspect of humanendeavour especially banking. Technological breakthroughs and product designs have led to the emergence of e-banking services which in recent time has become globally popular except in developing countries including Nigeria (James, 2012). The Central Bank of Nigeria in 2011 released a circular on the introduction of “cashless policy” which sets cash deposit and withdrawal limits, that the country would from June 1st 2012 join the committee of nations that embrace the electronic means of payment and limit the use of cash to the very barest. The apex bank has also gone ahead to assert that the commencement of its “cashless policy” for cities such as Lagos, Abuja and Port Harcourt to demonstrate the CBN’s seriousness about the policy which has generated huge debate from Nigerians. While the apex bank is of the view that the cashless policy is the way to go in line with global trends, many Nigerians both informed and uninformed have divergent views about the policy (CBN, 2011). The cashless policy of the CBN is designated to provide mobile payment services, breakdown the traditional barriers hindering financial inclusion of millions of Nigerians and bring low cost, secure convenient financial services to urban, semi-urban and rural areas across the country. The CBN has gone ahead to license six Payments Terminal Service Providers to support and maintain Point of Sale (P.O.S) terminals. This step is a bold demonstration that apex bank is determined to see the policy work which has been kick started in Lagos early 2012 (Olajide, 2012)

LITERATURE REVIEW

One of the prerequisites for the development of national economy according to Ajayi and Ojo (2006) is to encourage a payment system that is secure, convenient and affordable. In this regard, developed countries of the world, to a large extent are moving away from the payment instruments toward electronic ones, especially payment cards (Humphrey, 2004). In recent times, the mobile phones is increasingly used to purchase digital contents (ringtones, music or games, tickets, parking fees and transport fees etc) just by subscription on mobile phones or using Point of Sales. In Nigeria, as it is in many developing countries, cash is the main mode of payment and a large percentage of the population is unbanked (Ajayi and Ojo, 2006) which makes the economy to be heavily cash-based. However, the cost of cash to the Nigerian financial system is high and increasing; the cost was very close to fifty million naira in 2008 (CBN, 2012). Cashless economy does not mean a total elimination of cash as money will continue to be a means of exchange for goods and services in the foreseeable future. It is a financial environment that minimizes the use of physical cash by providing alternative channels for making payments. The cashless policy of the Central Bank of Nigeria is designed to provide mobile payment services, breakdown the traditional barriers
hindering financial inclusion of millions of Nigerians and bring low cost, secure convenient financial services to urban, semi-urban and rural services across the country. There are up to seven different electronic payment channels in Nigeria: Automated Teller Machine (ATM), Point of Sales terminals, mobile voice, web, inter-bank, intra –bank and kiosks. E-payment initiatives in Nigeria have been undertaken by indigenous firms and have been stimulated by improvement in technology and infrastructure (Babalola, 2008). Other alternative means of payments include the following:

1. CHEQUES: there is an expected surge in the use of cheque. However, encashment of third party cheque across the counter is prohibited and all cheque drawn in favour of any beneficiary other than the account owner be presented through CBN clearing house. The value on cheque must not exceed N10million.

2. Bank Drafts and Other Bank Instruments: bank drafts will become the toast of many merchants for big transactions not more than N10million. This is because bank draft unlike personal cheque cannot be paid across the counter and will still be subject to three days clearing rule of CBN for cheque.

3. ATM: Automated Teller Machines will be used much frequently for making variety of online payments such as utility bills, T.V subscriptions, GSM recharges etc. Customers are advised to keep their ATM cards (Debit and Credit) safe and never to divulge their PINs.

4. NIBSS Fund Transfers: The Nigerian Interbank Settlement Scheme is an online platform where banks exchange value thereby enabling the performance of interbank transfer such as NEFT and NIBSS instant transferring funds between banks for single or multiple beneficiaries for individual amounts not exceeding N10million. NEFT transfers (National Electronic Funds Transfer), once affected works with the next available clearing session of CBN and is received in the beneficiary’s account the same day or next working day, but NIBSS instant payments are immediate.

5. RTGS: Real Time Gross Settlements is used to transfer sums above N10million in favour of a single beneficiary. It is used for big ticket transactions which must have been effected before noon for most banks if the funds are to reach the recipient bank the same day.

6. Mobile Money: This is a product that enables users to conduct fund transfer, make payment or receive balance enquiries on their mobile phones.

7. E-transfers: It refers to electronic transfers which can be affected via the internet on (Personal Computers) PCs, laptops and other devices. Bank customers who have subscribed to internet banking can do basic banking transactions via the web.

8. POS Terminal : Point of Sale terminals are deployed to merchant locations where users slot their electronic cards through POS in order to make payments for purchases or services instead of using raw cash. As the POS terminals are online real-time, the customer’s bank account is debited immediately for value of purchases made or services enjoyed. There are indeed alternatives to handling or transacting cash for transfers and for payments of goods and services purchased. These include: ATMs, mobile banking/ payments which can be done through the use of mobile phones for balance enquiry, fund transfer, bills payment, internet banking which can be used for instant balance enquiries, fund transfer, bills payment and other transactions. Most banks require you to have a token device for internet banking services in order to give some security for customers banking application. Yet, other alternative includes Point of Sale(POS) terminals which allow merchants access to card payments for sale of products and services e.g recharge cards, bill payments, lottery tickets etc and finally there is electronic fund transfer through which one can transfer money electronically from his account to other account. Some banks also offer an instant electronic fund transfer service. However, most of these e-payment channels require you to have an ATM/ Debit card (Oyetade and Ofoelue, 2012).
POSITIVE EFFECTS OF CASHLESS POLICY

i. Prompt settlement of transactions: E-banking speeds up settlement of transactions both locally and internationally, where the bank stands as paying bank to the customers for settlement of transaction or as collecting bank for collection of payment on transactions;

ii. Reduction in the frequency of visits to banks: unlike before customers can now transact their banking businesses in branches nearer to them and they can also withdraw money from any ATM including the ones located outside the bank where they have account. They can also transact banking business at home with the aid of telephone.

iii. Stimulation of cashless policy: e-banking paves way for cashless society as the introduction of electronic machine has reduced the use of raw cash thereby transiting the country into a cashless society.

iv. Reduction of theft: since robbers are attracted by volume of cash movement through bullion vans, the use of alternative electronic payment system will no doubt reduce incidence of robbery in the society, this is one of the reasons why CBN continues to emphasize that people should buy into the policy as soon as possible.

v. Clearance of goods: payment system in the custom services help in ensuring easy facilitation of clearance of goods by importer, this is apart from the fact that money due to government would be paid electronically to the right account, thereby reducing the incidence of fraudulent practices of diverting government funds to individual pockets.

vi. With cashless policy, CBN will reduce cash management costs by as much as N192 billion annually. CBN is of the opinion that the cash handling accounts for at least one third of infrastructural and labour costs in the sector, hence cashless policy will impact negatively on employment of those handling cash in the bank. The policy will also reduce cash related vices like robbery, cost of processing cash, revenue leakages from cash handling and inefficient treasury management through cash processing.

NEGATIVE EFFECTS OF CASHLESS POLICY

The following are the constraints that affect effectiveness of e-banking in Nigeria presently:

i. Erratic power supply and communication link: power failure negatively affects e-banking infrastructures like ATM, network failure of communication link due to much congestion, change in weather also affect the policy.

ii. Non-existence of computer back-up: there is bound to be total loss of data on customers’ accounts if there is no back up and the entire file is damaged. This may lead to misappropriation of customers’ account, hence bank should maintain back up of all its information outside the bank’s premises.

iii. Inadequacy of fund to invest in information technology: most banks find it difficult to fund procurement of modern equipments needed for e-banking. Nevertheless, there has been tremendous improvement in automation of bank operation in the country in the last 5years but there are still rooms for further expansion so as to catch up with hi-tech, which is in vogue in developed countries.

iv. Replacement of workforce by machine: electronic banking has now somehow reduced the number of employees needed to handle most transactions in the bank as most work done by workers are now being handled by machines thereby translating to increase in the rate of unemployment in the country.

v. High bank charges for the use of e-banking machines: commission charged by bank on ATM transactions, as an example, is too high, thereby discouraging customer from using it. Central Bank of Nigeria is working out a modality to stop forthwith charges for usage of...
ATM. This will be a sort of relief and stimulates the effectiveness of the policy in Nigeria, if fully implemented.

vi. Low acceptance by the public: many people have burnt their fingers as a result of fraudulent withdrawals from their accounts through the use of ATM by unscrupulous individuals who believe in using master cards to withdraw money from unsuspecting individuals. Not to mention situations whereby customers are debited by the ATM with withdrawals not supported by cash that fail to drop down from the machine as expected. Customers are discouraged to use the machine as it takes longer time before the wrong debit is reversed if it does not end up unsolved.

vii. Inadequate securities around the ATM location: most ATM locations are not secured thereby making it easier for fraudulent persons to carry out their fraudulent activities without any arrest. Computer hackers also use the porous security system to steal data by breaking the codes or passwords.

viii. Encouragement of excessive withdrawals: customers can use their cards to effect withdrawals as many times as possible, even on weekend and during public holidays. They can even make impulse withdrawals while attending a ceremony with the use of their credit cards.

BENEFITS OF CASHLESS POLICY

1. Faster transactions- through reduction in queue at the banking halls. It has been proven from time to time that queue at point of sale terminals has been reduced which leaves much time for employees to enjoy their break, there has been an improvement in the speed of rendering banking services

2. Improving Hygiene: it has eliminated bacterial spread through handling of notes and coins from one individual to another.

3. Increased Sales: it has been demonstrated that with the introduction of a cashless policy, there has been increase in sales by 20%. Vending and catering purchases are often dictated by the amount of loose balance we have in pockets. With the introduction of cashless policy, this is never a problem; the value on the card is available 24hours and 7days a week

4. Cash collection made simple: time spent on collecting, counting and sorting cash is eliminated. The cashless system offers a choice of top-up options including payroll reduction, credit and debit cards. Removing all the cash from your site removes the security issues relating to cash handling significantly and reduces the risk of vandalism and theft from your vending and catering points of sale. A payroll loader, where money is transferred from your salary to your smart card, or a credit card, where money can be loaded from Access, Visa or Master card directly to your smartcard offers you and your customers a truly cashless system.

5. Managing staff entitlements: free vends, corporate cash, royalty and hospitality are all entitlements which can be programmed in to the card, this can be refreshed daily, weekly or monthly while the card can be configured so that any unused allowance is accumulated depending on the client’s request. In some instances, it may be necessary to charge different tariffs for visitors and staff.


Benefits to the Stakeholders

Having considered the benefits of the cashless policy generally, the advantages of the policy to stakeholders cannot be overemphasized. A variety of benefits are expected to be derived by various stakeholders from an increased utilization of e-payment which includes:
i. For consumers; increased convenience, more service options, reduced risk of cash-related crimes, cheaper access to (out of branch) banking services and access to credit

ii. For Corporations; faster access to capital, reduced revenue leakage, and reduced cash handling costs

iii. For Banks; efficiency through electric payment processing, reduced cost of operations and increased banking penetration (Oyetade and Ofoelue, 2012)

iv. Benefits to the economy; through the system, users can also pay utility bills, school fees, hotel booking, house rents, among other transactions, using a mobile phone device

v. For Government; increased tax collection, greater financial inclusion, increased economic development. The government will also benefit from the cashless policy in the area of adequate budgeting and taxation, improved regulatory services, improved administrative processes (automation), and reduced cost of currency administration and management (Ashike, 2011).

The cashless system which is cultured to the use of e-payment increases profitability through the following ways:

i. Convenience - removing administrative resources required by invoices, cheque and cash

ii. Immediacy - credit cards enable instant purchases without delay

iii. Improved cash flow - payment at the time of purchase reduces the pressure caused by 30days invoicing

iv. Growth – opens additional payment channels via the phone, mail order, internet and increases customers’ base. More customers means more revenue

v. Competitive advantages – match and beat the services of competitors and gain the edge

SUMMARY AND CONCLUSION

The introduction of electronic banking in Nigeria has a strong influence on the development of payment system. However, it involves commitment of huge amount of financial resources on computer technology, telecommunication facilities and constant electricity. The ATM has been the best and the most common means of effecting cashless policy in Nigeria by learned and unlearned, poor and rich, so the government should adopt these suggestions in order to achieve desired results like other developed countries.

RECOMMENDATIONS

1. Government should provide uninterrupted power supply and adequate communication link while shortfall should be covered by banks through back-up arrangement to power standby generator in case of power outage;

2. Government should also support banks in the aspect of financing the payment system which requires a lot of capital to maintain;

3. Government and the CBN should create awareness on the benefits derivable from cashless policy for the improvement of businesses and economic development;

4. Skilled manpower and computer experts should be employed by every bank to prevent fraud and hacking of banks’ data to steal customers’ fund;

5. Electronic payment system is capital intensive, therefore banks are encouraged to collaborate to finance some of the infrastructures needed for the smooth implementation of the policy by sharing cost to reduce the initial cost of setting up electronic banking;

6. Government should provide adequate security so as to create safe environment that will make people to imbibe the policy.
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A LITERATURE REVIEW ON ISO 9001 STANDARDS

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ABSTRACT

Quality management systems (QMs) are business practices that may benefit companies. As several empirical studies show, implementing QM effectively influences firm performance positively (Powell, 1995; Samson & Terziovski, 1999; Huarng & Chen, 2002; Kaynak 2003; Parast, Adams & Jones, 2011; Shahin & Dabestani, 2011). Firms that implement QM focus on providing more value for their customers and improving the efficiency of processes. In this context, management system standards (MSSs) have enjoyed enormous success over the last years, in the sphere of QM (ISO 9001). The first MSS appeared within the context of QM, and more specifically, in the sphere of quality assurance, which according to the definition in the ISO 8402 standard, is the set of all those planned and systematic actions applied within the framework of a Quality System, to provide adequate confidence that a product or service will satisfy given requirements for quality (ISO, 1994). By the end of 2010 at least 1.109.905 ISO 9001 certificates had been granted in a total of 178 countries worldwide, which nearly tripled the number of certificates at the end of 2000 (ISO, 2011). The aim of this paper is to put together some opinions and results of different studies and to come with some important reasons for implementation of ISO 9001.

Keywords: Quality management, ISO 9001 standards, Quality systems, consumer awareness.

INTRODUCTION

As various authors point out (e.g., Braun, 2005), the ISO 9001 standards do not refer to the compliance with a given goal or result. In other words, they are not performance standards measuring the quality of a firm’s products or services or a firm’s environmental results; rather, they are standards setting out the need to systematize and formalize a large number of corporate processes within a set of procedures, and to document such implementation. It must also be remembered that the implementation of this type of standard is a voluntary one, although in some sectors it has become an obligatory measure, given the coercive influence of customers (Braun, 2005; Mendel, 2006).

LITERATURE

Customer satisfaction, profitability and market leadership are driven in large part by delivering quality products and services to customers. Today, more than ever, there is a worldwide trend towards increasingly stringent customer expectations regarding quality. Accompanying this trend has been a growing realization that continuous quality improvements are often necessary to achieving and sustaining excellent economic performance. One roadblock to providing quality products and services was the definition of what "quality" meant to different customers. Different countries, industries and governments all had varying quality systems that suppliers had to adopt in order to deliver goods around the world. A single worldwide standard was needed to simplify international standards. This gave rise to ISO - the International Organization for Standardization. Located in Switzerland, ISO is the specialized international agency for standardization and the source of ISO 9000.
Established in 1947, it is comprised of the national standards bodies of 140 countries, working together to produce more than 13,000 International Standards for business, government and society. The object of ISO is to promote the development of standardization and related world activities with a view to facilitating international exchange of goods and services and to developing cooperation in the sphere of intellectual, scientific, technological and economic activity. The results of ISO technical work are published as international standards.

There are several ISO standards one of them is ISO 9000, which related to quality management systems and designed to help organizations ensure that they meet the needs of customers and other stakeholders. ISO 9000 deals with the fundamentals of quality management systems including the eight management principles on which the family of standards is based. ISO 9001 is one of the standards in the ISO 9000 family. ISO 9001 deals with the requirements that organizations are wishing to meet the standard have to fulfill. Third party certification bodies provide independent confirmation that organizations meet the requirements of ISO 9001. Over a million organizations worldwide are independently certified, making ISO 9001 one of the most widely used management tools in the world today. ISO 9001, Quality Management Standard, is the internationally recognized standard for the quality management of businesses. It applies to the processes that create and control the products and services an organization supplies, prescribes systematic control of activities to ensure that the needs and expectations of customers are met and is designed and intended to apply to virtually any product or service, made by any process anywhere in the world. Implementing a Quality Management System will motivate staff by defining their key roles and responsibilities. Cost savings can be made through improved efficiency and productivity, as product or service deficiencies will be highlighted. From this, improvements can be developed, resulting in less waste, inappropriate or rejected work and fewer complaints. Customers will notice that orders are met consistently, on time and to the correct specification. This can open up the market place to increased opportunities.

**BENEFITS OF THE ISO 9001 STANDARD**

Many scholars have analyzed the benefits of the ISO 9001 standard in several performance dimensions (e.g. operational benefits, customer results, etc.). In this context, the following 13 benefits are examined and mentioned in the 50 papers that have been consulted for this literature review:

Exports, Efficiency, Improvement in competitive position/competitive advantage, Improvement in systematization, Improved quality in product/service, Improved image, Improvements in employee results, Improved customer satisfaction, Improved relationships with suppliers, Improved relationships with authorities and other stakeholders, Market share, Profitability and Sales and sales growth.

The three benefits most frequently analyzed by researchers are improved efficiency, improved customer satisfaction and improvements in relations with employees. These are followed by profitability and improved systematization. Other benefits attained by many firms, as analyzed by the studies, are an improvement in market share and sales, image, product/service quality and exports. Conversely, the three benefits least studied are an improvement in competitive position, improved relations with suppliers and improved relations with authorities and other stakeholders.
In order to analyze these benefits arising from the ISO 9001 standard, some authors examine its effects through a list of benefits, whereas others base themselves on, or even propose a classification of such benefits. Such is the case of Lee (1998), who classifies benefits gained with respect to internal operations (better team spirit, less staff conflict, reduced wastage, increased efficiency, shorter lead time), benefits gained with respect to customer relations (improved sales through new customers, longer contracts with existing customers, fewer complaints from existing customers), and benefits gained with respect to subcontractor relations (subcontractors to become certified, better relations with subcontractors, more stringent control over subcontractors).

Nield and Kozak (1999) show that the benefits of the standard may be the following: operational benefits (improved operating systems, enhanced operating practices), marketing benefits (improved customer satisfaction, gained competitive edge, nation-wide recognition), and human resources benefits (gained more committed work force, reduction in staff turnover). Casadesús and Giménez (2000) show that these benefits are people results (work satisfaction, suggestions system, health/safety, turnover, absenteeism), operation results (errors and defects; order processing; reliability; costs; on-time delivery; cost savings; lead time; stock rotation), customer results (customer satisfaction; complaints; repeat purchases) and financial results (market share; sales; return on sales; return on assets).

Casadesús, Jiménez and Heras (2001) classified benefits as internal benefits and external benefits. Internal benefits are the following: work satisfaction, safety at work, suggestions system, absence from work, salaries of workers, safety and reliability, on-time delivery, order processing, number of errors, stock rotation, quality costs, cost savings. As external benefits they find the following: customer satisfaction, number of complaints, number of repeat purchases, market share, sales per employee, return on assets, return on sales. Casadesús and Karapetrovic (2005) find that these benefits may be related to financial results (increased sales, returns on investment, market share, and sales per employee), operational results (reduced logistic costs, improved supplier relationship, increased inventory turnover, fewer non-conformities, compliance with delivery dates, and shorter lead time) and customerrelated results (loyalty purchases, customer satisfaction, and fewer complaints). Similarly, other scholars use two general groups of benefits related to operational performance and financial performance (Naveh & Marcus, 2004; Briscoe, Fawcett & Todd, 2005). For example, for operational performance Naveh and Marcus (2004) show defect rate, cost of quality, productivity, on-time delivery and customer satisfaction, while Briscoe et al. (2005) list defect rate as a percent of production, cost of quality, productivity, and on-time delivery. For financial performance both studies show market share, sales, and export growth. Based on this review, in general terms, the ISO 9001 standard creates benefits related to customer satisfaction (for instance, fewer complaints and improved customer satisfaction) (e.g., Casadesús & Karapetrovic, 2005; Singh, 2008), improvement in staff management issues (for instance, more training for employees) (e.g., Gupta, 2000; Renuka & Venkateshwar, 2006) and improved efficiency, documentation and clear knowledge of tasks by employees (e.g., Chow-Chua, Goh & Wan, 2003; Magd, 2008). These results indicate that most firms experience improvement in these issues, due to the fact that the ISO 9001 standard allows them to reduce mistakes and rework, save on costs and improve the management of the firm. Many firms also attain these benefits because ISO 9001 allows for an improvement of the documentation and work procedures, and a greater clarity of work. Other benefits obtained by many firms are an improved image and an improved service or product quality, because the fact that they possess a certificate enhances their image in the eyes of their customers. In turn, the greater control exercised upon their internal processes allows them to improve the quality of the product or service. Similarly, several studies provide evidence of certified firms
outperforming non-certified firms (Heras, Dick & Casadesús, 2002; Corbett, Montes-Sancho & Kirsch, 2005; Sharma, 2005). This improvement is attributed largely to improvement in internal business processes. In this context, other studies also show that ISO 9001 certification is not associated with significant financial performance in the longer term, or that there is no significant difference between the impacts of quality management on financial performance for firms with and without ISO 9001 certification (Häversjö, 2000; Singels, Ruël & van de Water, 2001, Tsekouras, Dimara & Skuras, 2002). These ideas indicate that, although there are firms that do succeed in improving their financial results (for instance, their market share and their sales, because the quality certificate opens the door to certain customers), there are many others that do not manage to attain any improvement. Therefore, as the studies show, there is not such an unquestionable relationship between the standard and the financial results. Consequently, the impact of ISO 9001 on firm performance was more mixed compared with the impact of QM on firm performance, which was much more unanimous (Martínez-Costa Martínez-Lorente & Choi, 2008). Therefore, the clearest benefits are those influencing the internal performance or operational results, customer results and people results, while the effects on financial results are inconclusive.

CONCLUSIONS

This paper carries out a literature review on the ISO 9001 standards and their benefits. On the basis of this analysis the paper suggests several ideas about similarities and differences, classification of benefits, integration, and the selection effect. Consequently, in this context, these standards show clear benefits on certain issues, such as efficiency, employees, systematization, customers and other stakeholders, which indicates that, in general terms, certified firms improve people, operational and stakeholder performance. Nevertheless, only some certified firms do better than non-certified firms regarding financial performance. Therefore, although the standards do create internal and external benefits, and therefore many of them have a positive effect upon people, operational issues and stakeholders, the relationship between these standards and financial performance is not so clear.

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GREEN MARKETING IMPACT ON GHANAIAN CUSTOMER SATISFACTION AND ENVIRONMENTAL SAFETY

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ABSTRACT

Green revolution, going green, environmental protection, sustainable life style, sustainable development, protecting our earth and many more have become a natural phenomenon in our everyday life. Green marketing is a tool used by many companies in various industries to follow this trend. There have been a lot of literature review on green marketing over the years, this paper analyses the impact of green marketing strategies on customer satisfaction and environmental safety using comprehensive literature review. As a result, this paper can be used by researchers who need to find out the impact of green marketing on customer satisfaction and environmental safety.

Keywords: Green Marketing, Consumer Satisfaction, Environmental Safety.

INTRODUCTION

In the last decade, consumers have become more enlightened on environmental issues. Green marketing refers to selling product or rendering services based on environmental benefit. It came into existence in late 1980s and early 1990s. Green marketing is growing rapidly and consumers are willing to pay a lot for green product. There has been little analysis of the impact of this new market on the consumers and the environment so far. Green marketing affects all areas of our economy, it does not just lead to environmental protection but it also creates new market and job opportunities. Companies that are environmental stewards stand a chance of gaining many satisfied and loyal customers.

Green Marketing

The American Marketing Association (AMA) held the first workshop on ecological marketing in 1975. 1980 was the first time green marketing came into existence. AMA defines green marketing as the marketing of products that are presumed to be environmentally safe; it incorporates several activities such as product modification, changes to production processes, and packaging, advertising strategies and also increases awareness on compliance marketing amongst industries. Business Dictionary defines green marketing as promotional activities aimed at taking advantage of changing consumer attitude towards a brand. These changes are increasingly being influenced by a firm’s policies and practices that affect the quality of the environment and reflect the level of its concern for the community. It can also be seen as the promotion of environmentally safe or beneficial products.
Green Marketing and Sustainable Development

According to the World Commission on Environmental Development (1978), Sustainable Development is “meeting the needs of the present without compromising the ability of the future generations to meet their own needs”. The common theme throughout this strategy of sustainable development is the need to integrate economic and ecological considerations in decision making by making policies that conserve the quality of agricultural development and environmental protection. This is what the end product of green marketing is, environmental protection for the present and the future generation. The development of energy-efficient operations, better pollution controls, recyclable and biodegradable packaging, ecologically safe products are all part of green marketing which also leads to sustainable development.

Green Marketing in terms of Price, Product, Place and Promotion

Green Marketing begins with ‘green design’. Product design constitutes an active interface between demand (consumers) and supply (manufactures) [1]. An example by Ottman and Terry [11]; superconcentrated laundry detergents are associated with energy saving, reduced packaging, space and money. The product itself has to be made in such a way that it satisfies consumer and manufacturer’s needs. For ecologically sustainable products to be successful, green branding attributes have to be efficiently communicated [23]. Most buyer decisions are influenced by the labeling, (green labeling) that states all that makes the product green compliant. The price of green product has to be affordable for the customer to encourage purchase. Industrial differentiation works only when products reduce client’s cost.

Most buyers are influenced by advertisement that reflects a company’s commitment to environment [19]. Companies that do green advertisement that tend to portray an image of environmental friendliness, influences their customer purchase decisions. Consumers love to associate themselves with companies that are environmental stewards. When a company communicates this through their advertisements, promotions, publicity and corporate social responsibilities, they are sure to get many loyal customers.

Green distribution is a very delicate operation. Customers must be guaranteed of the ‘Ecological nature’ of the product. The green environment is a constantly regulated environment and as such high level of compliance is necessary when carrying out distribution of green products. This is a common procedure in the united state [11].

Stakeholders in Green Marketing Strategy

Based on marketing literature, stakeholders play one of the most influencing roles in any organization and market [20], [27], [18], [17]. They influence all aspect of green strategy also in areas such as purchase of green product, nature of the product, the packaging, advertisement, promotion and also Green awareness programs. When a particular company wants to ‘go green’, the stakeholders are at the fore front of their green marketing strategy. Jaime Rivera-Camino [12] said that stakeholders in green marketing include the plant, various animals, plant species and the future generations.

Customer Satisfaction and Green Marketing

Customer satisfaction has been defined in two basic ways: as either an outcome or as a process
As an outcome, satisfying the end state resulting from the consumption experience [6]. As a process, it is the perceptual evaluative and psychological process that contributes to satisfaction. The definition is varied with regards to their level of simplicity which includes;

- Product satisfaction
- Satisfaction with the purchase decision experience.
- Satisfaction with the performance attributes
- Satisfaction with the store or institution
- Satisfaction with pre-purchase experience. [29]

Marketing literature suggests that there is a relationship between customer satisfaction and loyalty. Satisfaction leads to attitudinal loyalty. It could be seen as the intension to purchase. [21], [15], [18], and [17]. Satisfaction is an outcome that occurs without comparing expectations [15]. Customer satisfaction could also be defined as an evaluative response to perceived outcome of a particular consumption experience. [3], [2], [9]. It is an overall judgment on satisfaction, based on the assumption that satisfaction is the outcome of service quality [5], [26]. Many Authors believe that customers have a high level of involvement regarding environmental issues as a consequence of growing environmental consciousness. [14], [4], [10], [25]. Studies have shown the significant influence of environmental knowledge and consciousness on consumer environmental attitude [9], [24]. Consequently, companies that communicate their ‘green product’ in their packaging, advertisement or manufacturing process, gain satisfied customers. Because of the green trend, companies that fail to ‘go green’ are not failing to fail in their industry. Customers want to associate themselves with companies and products that are eco-friendly.

**Environmental Safety**

Environment is simply our surrounding. The increased awareness on environmental issues is as a result of increased publicity on the media on issues such as, the warring off of the ozone layer and increased pollution of the environment by industries. Customers have become concern about their everyday habit and the impact it has on their environment.

Managing environmental safety issue is highly challenging, time consuming and expensive. There are many laws on environmental safety that have made companies liable to any wrongdoings. These laws cover areas such as, harmful pollution, managing of hazardous materials and so on. As a result, several hazard control, pollution control and prevention programs are held in different parts of the world on emergency procedures, contingency planning and employee training. Similarly, many regulatory bodies and acts are set to ensure environmental safety and protection, some of which include, OSHA (Occupational Safety and health Act), CERCLA (Comprehensive environmental Respond Compensation liability Act), TSCA (Toxic Substance Control Act), HMTA (the Hazardous Material Transportation Act), FIFRA (Federal Insecticide, Fungicide and Rodenticide Act), FFDCA (Federal food, Drug and Cosmetic Act, Clean Air Act, Clean Water Act, GHS (Globally Harmonized System of Classification and labeling of Chemicals).

Environmental Safety is not an easy task to implement. Implementing the GHS standardization policies of a single frame work of the classification and labeling of chemicals so hazards are consistently defined across different national jurisdiction is beneficial but highly challenging, especially in countries like U.S, Japan and Korea that have multiple regulatory authorities. EH&S (Environmental Health and Safety) regulatory compliance and CSR (Cooperate Social
Responsibility) initiative throughout the supply chain can help promote and sustain ongoing improvement within an organization. These improvements will help the company achieve regulatory compliance and position itself as a socially responsible company.

DISCUSSION

There is now a real sense that environmental protection is highly necessary. Everyone believes a green life is a better and healthier life for present and future generation. Most consumers’ spending pattern shows that they have a desire for brands that ‘go green’. Consumers not only want to buy their products but are willing to pay more for it. Based on research, 70 percent of some 2000 people in US, UK, Germany, the Netherlands, Australia and Japan are willing to pay a premium for energy alternatives such as, wind and solar power. Consumers are motivated to buy from companies that are eco-friendly in the production. When a company display’s the green logo on their product, it shows that their product or services stands out from the crowd and this gives them a competitive edge. Consequently, most customer buying decisions are influenced by green product label like the US energy star logo, Green label in Thailand, Korea Eco label and much more.

CONCLUSION

Green marketing is a tool for protecting the environment for the future generation. It has a positive impact on environmental safety. Because of the growing concern of environmental protection, there is an emergence of a new market which is the green market. For companies to survive in this market, they need to go green in all aspect of their business. Consumers want to identify themselves with companies that are green compliant and are willing to pay a premium for a greener life style. As such, green marketing is not just an environmental protection tool but also, a marketing strategy.

REFERENCES
