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Abstract

This study examined corporate borrowing and organizational growth in Nigeria. The ex-post facto research design was adopted in the methodology. The population consists of all quoted companies in the Nigerian Stock Exchange. A sample of 40 companies was examined for 2012-2013 financial year. Panel Estimated Generalized Least Squares (EGLS) regression with cross-section random effect. The study showed that long term borrowings enhanced firms' growth and it is statistically significant. Similarly, firm age positively enhanced growth though it is found to be statistically insignificant. Also interest charges determined organizational growth but were not statistically significant. Premised on this, firms are strongly advised to always compare the marginal benefits of using debt financing to the marginal costs of debt financing before concluding on using it in financing their operation.

Key words: Corporate borrowing, Firm age, Firm size, Organizational Growth.

Introduction

Naturally, human species perform less as they aged. In the same vein, firms as artificial beings literary are expected to underperform as they grow older. The reverse has appears to be the case when a critical evaluation is made as regard how age could possibly influence the performance and by extension the growth of quoted firms. There are two types of ages in firms. These are the incorporation age and management age. Either of these ages intuitively has a tie with regard to how the firm performed. Similarly, observations have shown that most managers hardly take time enough to evaluate the growth rate of the corporate organizations they serve irrespective of the borrowing sources. The relationship between corporate borrowing and organizational growth is of utmost concern to researchers in finance, accounting and other related fields of study. Corporate borrowing

can otherwise be referred to as debt financing and is an aspect of capital structure. Corporate borrowing as the term implies is concerned with external financing which in this case basically consists of long term and short term loans, lease as well as issuance of corporate bonds. Long term corporate borrowing includes obligations that are not due to be repaid within the next twelve months; such debt consists mostly of bonds or similar obligations including "great variety of notes, capital lease obligation and mortgage issues (Ogbulu & Emeni, 2012). Short term corporate borrowing includes obligations that are due to be repaid within twelve months.

One of those aspects users of accounting information are interested in when evaluating the annual accounts and financial statements of firms is the business performance specifically in terms of financial performance and secondly financial position. Some other potential and existing investors, creditors and financial analysts go beyond examination of the financial performance and position to ascertaining the growth of the firm. In this regard, Mustafa and Osama (2009) note that high growth firms take more loans compared to low growth firms. Thus, financial managers need to carefully do a monitoring of borrowings to avoid adverse effect of increase in borrowing. If a decline in performance and by extension growth rate or level is noticed assuming all other variables are held constant. Intuitively, high cost of corporate borrowing and improper judicious management could have adverse effects on performance and growth of corporate organizations. It is of essence to state here that corporate organizations that hope to be frontiers in the industry/sector have to design a meteoric, meticulous and methodical approach, policy, framework to embarking on corporate borrowings, monitoring corporate borrowings, examining performance and growth from time to time. If corporate borrowing does not influence performance, dividend payment, market value of shares, shareholders wealth maximization and growth, then it would be a 'curse' rather than a blessing to the company. Using corporate borrowing by firms has its own two sides of the coin in terms of the positive and adverse effects. The adverse effects are easily noticed when the cost of the corporate borrowing exceeds the return obtainable from it by the corporate organizations. Corporate financial managers do not just thoughtlessly engage in borrowing to meet up certain financial needs without critically considering the adverse effect in terms of increase in bankruptcy risks. When corporate managers allow borrowing to reach certain stage, further borrowing may lead to the company's inability to meet its financial obligations thus retards performance and growth of the company.

Firms' total borrowings and costs encompass financing means which have implications on the firms' performance and growth. The varying components of corporate borrowing can be used to finance seasonal increases in working capital; permanent increases in working capital, the acquisition of plant, property or equipment; or for merger or acquisition (Ogbulu & Emeni, 2012). It may also carry restrictive covenants that the borrower must satisfy to prevent default (Jane, Mallonis & Cengabe, 2000). One of the peculiarities of corporate borrowing is that it does confer ownership on the firm or borrower. Creditors more often do not possess a voting power in the company they extended loans to. The borrower largely benefits from the corporate borrowing by way of interest payment which is a fully tax-deductible cost of operating the business. The tax- shield reduces tax- payable and

enhances the profit, given that all other expenses are held constant. While on the negative, the firm suffers from equity liquidation or reorganization in the event of default in interest and repayment of the borrowed funds to the creditors.

Due to constraints which are often replete with initial public offer (IPO), corporate borrowing as a financing option has become more preferable by managers in corporate organizations in an emerging economy such as Nigeria. Corporate borrowing can be beneficial to firms if judiciously managed and sourced for at a low cost of capital which maximizes the shareholders wealth. Against this view, Mustafa and Osama (2008), advance two main reasons why corporate managers may choose corporate borrowing for operations. First, they point out that the cost of corporate borrowing is less than equity cost and secondly employing corporate borrowing has tax advantages. The obvious benefit of employing corporate borrowing is that it brings about thin capitalization in taxation which again has become an evolving subject of empirical research especially in accounting as a discipline. It therefore follows that if corporate borrowing improves firms' performance and shareholders wealth maximization if judiciously managed, then the growth of such firms is also inevitable. This study attempts to deviate from the conventional approach of relating debt financing to firms' performance on corporate organizations' growth. The nexus between age and growth of publicly listed firms is yet to gain ascendancy in the empirical fronts in developing countries such as Nigeria. Therefore, the major objective of this paper is towards examining the relationship between corporate borrowing and organizational growth in Nigeria quoted companies.

Review of Related Literature

Conceptual Review

Growth is a gradual process and in the context of firms it can be defined as an increase in the sales of company, expansion of business through acquisition or merger, growth of the profits, product development, diversification, research and development and also an increase in the number of employees of the firm (Rehana, Tahira, Muhammad, & Masood-ul, 2012). Growth as a concept is inevitable in the real world and by extension in the business world. Growth in the corporate business world is a gradual process which is usually occasioned by certain variables. Thus, firm growth is an increase in certain attributes such as sales, employment, and/or profit of a firm between two points in time (Hakkert & Kemp, 2006). Firm growth can also be measured by way of assets, market shares, employees' size, number of branches, sales/ gross revenue, profit, amongst others. Firms' growth in sales and employment reflect both short-term and long-term changes and they are easy to obtain (Zhou, 2009). Furthermore, compared to other indicators such as market shares, sales and employment are more objective measures of growth (Delmar, 1997).

A study by Vijayakumar and Deric (2011), chose sales growth as measurement of growth because sales figure is easy to calculate. In other words, they opine further

that change in demand of product or service of the company also changes the sales of that company, and demand is the predictor of growth. There are other measures of growth, these include increase in assets, increase in the number of employees and increase in the branches of the organization. Irrespective of the measurement of growth rate, growth can be categorized into sustainable growth rate and non-sustainable growth rate. Rehana et al (2012), note that current year sales minus prior year sales and divided by prior year sales is used by many studies to measure growth rate. They posit that growth achieved through internal sources of company financing is called sustainable growth rate while the growth rate obtained through external sources of financing is otherwise known as non-sustainable growth rate. Firms' growth may be absolute or relative. Relative growth is commonly measured by the growth rate in percentage while absolute growth is concerned with a critical examination of the variable. For the purpose of emphasis, the relative growth is used in our model. Similarly, absolute growth and relative growth is the manipulation of first year – year (to) and last-year or earlier year (tf) size to measure growth as reported by Laurence, Paul and Sarah (2009).

Theoretical Review

There are numerous theories underpinning firms' growth rate. They range from neo-classical theory, agency theory, Kaldor-random law to Penrose effects theory. The neo-classical theory states that most advantageous growth options are availed first by a firm's and after that less advantageous options are exploited. The agency theory states that when the managers have internal finance, they can invest it in less profitable projects or even in the project of negative net present value due to their personal interest such that the profitability and growth of the firm by extension is declined (Sorninen, Mart Ikarnen, Puumalainen & Kylahe, 2011). The hypothesis of growth maximization theory states that the managers choose the growth maximization as an objective of the firm and not the profit such that the competitive relationship exist between firm profit and growth (Maris, 1964; Mueller, 1972). The Kaldor-Verdoorn theory states that the productivity of a firm can be increased by enhancing the firm growth and when productivity is increased, the sale also increases thus maximizing the profit of the organization (Kaldor, 2006). The penrose theory notes that firms that have to determine long-run or optimum size but only constraint on current period growth rates. One of the major conclusions of the penrose effect theory of growth is that small firms grow faster than larger ones until they reach what can best be described as minimum efficient scale of production. The beauty of all these theories is that they meander towards the Gibrat's (1931) law of proportionate effect which clearly holds that current firm growth is largely dependent on its previous factors.

Another theory that could underpin this study is the trade-off theory. The postulate that companies seek debt levels that balance that tax advantages of additional debt against the costs of possible financial distress; and the theory predicts moderate borrowing by tax-paying firms (Myers, 2001). The free cash flow theory also connects the corporate borrowing to growth. The free cash flow theory say that dangerously high debt

levels will increase value, despite the threat of financial distress, when a firm's operating cash flow significantly exceeds its profitable investment opportunities. Thus, our point of focus is to test these theories with data extracted from the Nigerian Stock Exchange for empirical validation.

Empirical Review

Relationship between Corporate Borrowing and Organizational Growth

Wipperfurth (1966) ascertain the relationship between debt and firm value on some industries marked by high degree characteristics ranging from growth, cost and demand. The result indicates that corporate borrowing influences firms' growth. Holz (2002) ascribe the empirical result to the willingness of firms' managers to finance their projects by borrowing and then use the money optimally to maximize performance and leads to the firm's growth. Dessi and Robertson (2003) find that corporate borrowing positively affects expected performance. They explained that low growth firms attempt to depend on borrowing to meet expected growth opportunities. Similarly, Margraves and Psillaki (2010) prove that corporate borrowing positively correlates significantly with firm financial growth. In this case, the performance manifests in growth by way of added value, labour and capital. However, Abor (2005) posits that short term debt, long term debt and total debt associate negatively and statistically with firm performance. In finance and other finance related field of study, there is no doubt growth is a function of firms' performance. The conclusion drawn by Abor (2005) was that firms relying on extreme borrowing will not achieve tax shields and it leads to increase borrowing cost of which the firm's exposed to the bankruptcy risks and reduction of returns.

Agarwal and Zhao (2007) present additional evidence on how the growth of the firm may be influenced by the relationship between corporate borrowing and performance. They note that high growth firms are influenced negatively between financial leverage and firm value, while low growth firms are influenced positively. On the contrary, Mustafa and Osama (2009) report that there is no large difference between average of corporate borrowing for each high and low growth firms in a sample of 76 firms from the period 2001-2006 of public Jordanian firms listed in the Amman stock markets. Consistent with agency costs theory, prior literatures indicate that corporate borrowing is value reducing for high growth firms and it is value enhancing for low-growth firms (Ogbulu and Emeni, 2012). Mcconnell and Servas (1995) in a study of U.S. firms, discover that for firms with high P/E ratios or for high-growth firms, value is negatively related to corporate borrowing and that in firms with low P/E ratio or low-growth firms, value is positively related to corporate borrowing. Their empirical evidence does support the contention that for low-growth firms, corporate borrowing serves as a monitoring mechanism to improve the firm value, whereas, for high-growth firms, corporate borrowing causes under investment and destroys the value of a firm. The crux of this study lies on the fact that in an emerging economy such as Nigeria; equity capital, a component of capital structure in financing firms operations should be de-emphasized and the preference for corporate borrowing emphasized because of the tendency of the latter to

enhance firms' value, and for the purpose of tax shields given that there is no huge increase in borrowing that could result to bankruptcy risk and other costs. This was the submission of the pecking order theory. Moreover, equity financing has its own effects which are sometimes more devastating than corporate borrowing in quoted firms. According to Laurence et al (2009), of the 35 studies of organizational growth identified in a literature review, only 22 reported an identifiable formula for their measure of growth. Three of the 35 studies did not report formulas because they used subjective self-reported measures of growth obtained from organization members, an approach subject to both systematic bias and random differences in interpretation. Nineteen of the 22 studies reported identifiable formulas used in manipulations of first year (t_0) and last-year (t_1) size to measure growth. Specifically, six studies measured growth as a ratio of last year to first year organization size (t_1/t_0); another five studies measured growth as the difference of first year size and last-year size divided by first-year ($(t_1-t_0)/t_0$); another five studies measured growth as the difference between first-year size and last-year size divided by length of the study ($(t_1-t_0)/n$); and three studies measured growth by subtracting first-year size from last-year size (t_1-t_0). Thus, of the 22 studies reporting mathematical relationships to measure growth, 19 (86%) analyzed growth as some difference between first-year and last-year sizes (Laurence, et al, 2009). Thus, this study adopts similar approach in measuring growth in the methodology section.

Relationship between Firms' Age and Growth

In biology ageing is a process associated with a general decline in the physical functioning of the human body such as the ability to remember, react, move and to add wrinkle of the skin (Lodevar & Waekhli, 2010). In real life, indications are there that these abilities in human beings get worse at older age and most often they lack the strength to optimally perform in certain activities. They tend to renew these abilities through mental development exercises through reading and lots more. Firms are artificial beings, they are birthed and can also die as humans. They have a life cycle spanning from germination to maturity and growth stage until there is a gradual decline of its value in the markets place. Just as efforts are made by human species to have a constant renewal, so firms engage in renewal in order to continue to exist. They may engage in renewal through innovation, product development, diversification, research and development amongst others. It suffice to state that young firms grow as they age, but do the older firms grow? If they grow, at what rate and how is their ageing correlated with their growth and by extension performance. This has indeed made the quest for organizational immortality very attractive in literatures (Barron, West & Hanuan, 1994, Hannan, 1998; Hannan, Polos & Carroll, 2003a). It was Hopenhayn (1992) who established plausible assumptions that older firms enjoy higher profits, value and by extension growth rate. literally, it is expected that ageing firms should have a common relationship with their profitability and growth. It is worthy to state that age at incorporation is not the same as management age which has to do with the age or tenure of the management in a firm. Incorporation age of the firms is mainly concerned with the very period they were established or incorporated. That is the number of years since listing on a recognized Stock Market. Loderer and Waekhli (2010) examine the effect of age on

growth on inter-temporal basis and conclude that age does not significantly influence growth. Earlier, Villalonga and Amit (2006) find no relation between firm age, profitability and growth. One major point in most researches is that firms perform better and experience growth rate at the incorporation stage down to maturity in their life cycle and get worse when they age further. Barron et al (1994) suggest that age can have adverse effects on performance and growth because of the organizational rigidities that it brings about. Loderer and Waekhli (2010) study indicates that sales grow as firms grow older. A firm that grows older and intends to experience growth may achieve that through restructuring and re-engineering coupled with diversification with a view to maximizing the shareholders wealth and avoid going into extinction. The view is that internal sources of financing may not really be enough if there are still managerial, technical and human challenges. This study hypothesized that age does not significantly influence firms' growth.

Relationship between Firm Size and Growth

Early empirical study on firm growth took current size as the only explanatory variable (Yose & Lourdes, 2000). Most of the studies so far have displayed disagreement as regard the actual way firm size can be succinctly measured. Firm size can be measured through total assets, total sales and employment or through total profits (Rehana et al, 2012). Gibrat (1931) was the first to examine the relationship existing between firm size and growth. He postulates that when the size and growth are independent and unrelated, then firm growth increases or decreases arbitrarily and there is unlimited variance of firm size. He stresses that past growth does not depict future growth of the firm Hart and Paris (1956) study indicates that small size firms grew faster than old firms. Bonini, (1958) early study points out that firm size and growth have an inverse relationship. Hymer and Pashigian, (2011), established no significant relationship between firm size and growth of 1000 U.S firms. Mans-field (1962); Das (1995) and Hall (1987) ascertain no significant relationship between firms size and growth. Glancey (1998), reports that the relationship between size and growth depends on Managerial ability as well as objectives of the firm. He clearly states that if the entrepreneur has ability and set objective to measure the size of the organization, then there can be a positive relationship between size and growth. Audertch, Klomp, Santarelli and Thurik, (2004) in their views argue that size and growth relationship depends on the nature of industry. It indicates that some companies in certain industries have the propensity to increase in size and consequently their growth of course, this could be the reverse on other certain industries and perhaps from country to country.

Giardano, (2013) note a negative relationship decreases as the firm size increases and vice versa. Singh and Whittington (1975) study using UK data lucidly depicts a positive relationship between firm size and growth. Mata (1994) using the number of employees as a growth measure for a sample of 5% Portuguese firms size and growth. Additionally Kumar (1985); Evans (1987); Dunne and Hughes (1994); Mata and Portugal (1994) Wagner (1994) and Baldwin (1995) show that small firms rapidly growth than large firms. The

reason they adduced was that small firms of scale achieve economies of scale. Small firms grow rapidly than the large firms while the firms that have gained economies of scale cannot grow further due to reduction of cost up to a minimum level (Park & Jang, 2011). If they further move towards scale economies, their fixed cost increases so growth is reduced (Rehana et al, 2012). They also state, based on the empirical finding made that the size and the growth of firms have negative relationship and when the size of the firms is small, it grows faster vice versa.

Methodology

The population of study consisted of all companies quoted on the Nigerian Stock Exchange as at 31st December, 2013. The ex-post facto research designs was used in this study. A sample of 40 quoted manufacturing companies on the Nigeria Stock Exchange was selected using the convenience random sampling technique. Panel estimated generalized least squares technique was employed to undertake the econometric analysis after the summary statistical tests. However, the model specification employed to capture the linear relationship between the dependent and independent variables is stated in its deterministic form as:

Fgrowth = f (Short Term Debt, Long Term Debt, interest charge, Firm age, Firm size). It is stated in a linear model as:
$$\text{Financial growth}_{it} = \beta_{0it} + \beta_1^{STD}_{it} + \beta_2^{LTD}_{it} + \beta_3^{INT}_{it} + \beta_4^{FA}_{it} + \beta_5^{FS}_{it} + Ut_{it}$$

Where Fgrowth which represents financial growth and is the dependent variable. The coefficients of $\beta_1 - \beta_2, \beta_3, \beta_4$ and β_5 are the coefficient of the explanatory variables. Where

STD = Short term debt;

LTD=Long term debt;

INT=Interest charges

FA =Firm age; and

FS=Firm size and Ut_{it} is the error term, also known as the stochastic variable.

The above model specification is underpinned to the models of Zhou (2009), Laurence et al (2009) and Ogbulu and Emeni (2012).

Operational Definition of Variables

1. Short term Debt: This is operationalized using debt falling due under one year as disclosed in the annual reports of the firms
2. Long term Debt: This is operationalized using debt falling under after more than one year as disclosed in the annual reports of the firms
3. Firm size: This is operationalized using total assets of the firms
4. Firm Age: This is operationalized using the incorporation age of the firms
5. Growth: This is operationalized using the previous year gross revenue (sales or turnover) minus current year gross revenue (sales or turnover).

Analysis and Discussion of Findings

Under this section, we present the econometric analysis and result of the model specified above. It begins with diagnostic tests, followed by statistical analysis, panel estimation techniques and the discussion of findings arising there from. Tables 1, 2 and 3 below show the summary of the relevant diagnostic and misspecification tests as well as the statistical analyses.

Table 1: Diagnostic tests

Breusch-Godfrey Serial Correlation LM Test:

| | | | |
|---------------|----------|---------------------|---------|
| F-statistic | 0.705720 | Prob. F(2,70) | 0.04972 |
| Obs*R-squared | 1.541663 | Prob. Chi-Square(2) | 0.04626 |

Heteroskedasticity Test: White

| | | | |
|---------------------|----------|----------------------|--------|
| F-statistic | 1585.284 | Prob. F(20,57) | 0.0000 |
| Obs*R-squared | 77.86002 | Prob. Chi-Square(20) | 0.0000 |
| Scaled explained SS | 1115.139 | Prob. Chi-Square(20) | 0.0000 |

Ramsey RESET Test

| | Value | df | Probability |
|------------------|----------|---------|-------------|
| t-statistic | 1.803079 | 71 | 0.01756 |
| F-statistic | 3.251092 | (1, 71) | 0.01756 |
| Likelihood ratio | 3.492264 | 1 | 0.0217 |

Source: E-VIEW 7.0: OUTPUT

The table above shows the Breusch- Godfrey serial correlation LM test of the residuals. The F- statistic obtained was 0.705720 which is less than the 5% critical value. Thus, we accept the null hypothesis that no evidence of serial correlation exist also given the observed R- squared value as 1. 541663 and the probability value as 0.04626. The white heteroskedasticity test shows an F- statistic value of 1585.284 with probability values of 0.0000 and 0.0000 respectively, providing evidence of no heteroskedasticity. This is because the F- statistics is less than 1% and is statistically significant at 1% level. The Ramsey RESET test which indicates whether the model specification was appropriately made or not is observed to show F- statistic value of 3.25 with probability value of 0.00175 and is statistically significant at 5% level which suggests that evidence of misspecification of the regression model is unlikely. It implies therefore that the model is appropriately stated in a correct deterministic and stochastic form.

Table 2: Descriptive Analysis

| | FGROWTH | STD | LTD | INT | AGE | FSIZE |
|--------------|----------|----------|----------|----------|----------|----------|
| Mean | 13790882 | 67605118 | 32158683 | 3885412. | 24.96154 | 1.90E+08 |
| Median | 367964.5 | 268591.5 | 2729.000 | 110016.5 | 22.50000 | 8363697. |
| Maximum | 7.18E+08 | 4.20E+09 | 1.12E+09 | 2.06E+08 | 82.00000 | 6.03E+09 |
| Minimum | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 2.000000 | 5454.000 |
| Std. Dev. | 82045433 | 4.80E+08 | 1.78E+08 | 23619780 | 16.42807 | 9.37E+08 |
| Skewness | 8.281947 | 8.366032 | 5.941620 | 8.235280 | 0.883177 | 5.865834 |
| Kurtosis | 71.48586 | 72.34137 | 36.53277 | 70.76226 | 4.633262 | 35.93936 |
| | | | | | | |
| Jarque-Bera | 16135.20 | 16536.61 | 4113.389 | 15804.76 | 18.80954 | 3973.559 |
| Probability | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000082 | 0.000000 |
| | | | | | | |
| Sum | 1.08E+09 | 5.27E+09 | 2.51E+09 | 3.03E+08 | 1947.000 | 1.48E+10 |
| Sum Sq. Dev. | 5.18E+17 | 1.77E+19 | 2.44E+18 | 4.30E+16 | 20780.88 | 6.76E+19 |
| | | | | | | |
| Observations | 78 | 78 | 78 | 78 | 78 | 78 |

SOURCE: E-VIEWS 7.0 OUTPUT

The mean growth of the firm in terms of sales/revenue in the two periods observed is #13790882 units, it is higher than the median value of #3679645. The maximum sales /revenue growth of the quoted firms in the period was #71,800,000 units, while the minimum value is 0.000untis (Zero unit). The standard derivation, being the spread of the distribution stood at 82045433. It suggests excessive variability from the mean in the period. The J-B value of 16135. 20 with a probability of 0.000000 indicates that firms' growth rate is statistically significant at 1% level and it satisfies normality. Short term borrowing has a mean value of #67,605,118 higher than the median value of #268591.5. The maximum amount of short- term borrowing was #4200,0000. The spread of the distribution was 4.80. The J.B value is statistically significant at 1% and indicates short –term borrowing was normal and distributed across the quoted firms sampled in this study.

Long –term borrowing mean value is #32158683 with a median value of #2729.000. The maximum value of long –term borrowing employed by the quoted firms was #11200000. The standard derivation is 1.78. The Jargue- Bera value of 4113.389 indicates the data on long – term borrowing was statistically significant at 1% and satisfies normality. Interest charges on the corporate borrowing on the average was #38854.12 in the period observed. The median value is #110016. 5. The maximum value is #2.06. The spread of the variability was 23619780. It displays the riskiness of the cost of corporate borrowing in the period. The Jargue- Bera value of 15804.76 is statistically significant at 1% level and shows that the data is normally distributed. The mean Age of the sampled quoted firms in the period is 24.9years. The maximum age of the firm is 82years while the minimum age is 2years standard derivation is 16.42. The J-B is statistically significant at 1% and is normally distributed. Firm size on the average is 1.90, the maximum size is 6.03 and the minimum value is 5454.000. The standard derivation is 9.37. The J.B value of 3973 is at 1% significant level is a point that the data is normally distributed. All the variables were positively spread in the period observed

Table 3: HAUSMAN TEST

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 73.605760 | 5 | 0.0000 |

Cross-section random effects test comparisons:

| Variable | Fixed | Random | Var(Diff.) | Prob. |
|----------|---------------|--------------|--------------------|--------|
| STD | -0.181307 | -0.168521 | 0.005786 | 0.8665 |
| LTD | 1.946851 | 0.311664 | 0.050202 | 0.0000 |
| INT | 0.372187 | 0.595700 | 2.553878 | 0.8888 |
| AGE | 692803.660017 | 54186.897099 | 1071026525296.1181 | 0.4704 |
| FSIZE | 0.040327 | 0.062764 | 0.001195 | 0.5162 |

The table 3 above indicates that the Hausman test Chi-square statistic is 73.605760 (with a probability of 1%) which revealed significant differences. Thus the null hypothesis is rejected and the inference here is the cross sectional random estimation is adopted for analysis and interpretation.

Table 4: Cross Section Random Effect Result

The results are presented below:

Dependent Variable: FGROWTH

Method: Panel EGLS (Cross-section random effects)

Date: 06/26/15 Time: 11:16

Sample: 2012 2013

Periods included: 2

Cross-sections included: 40

Total panel (unbalanced) observations: 78

Swamy and Arora estimator of component variances

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | -442661.6 | 1130809. | -0.391456 | 0.6966 |
| STD | -0.168521 | 0.021559 | -7.816845 | 0.0000 |
| LTD | 0.311664 | 0.119183 | 2.614996 | 0.0109 |
| INT | 0.595700 | 0.446511 | 1.334120 | 0.1864 |
| AGE | 54186.90 | 37088.51 | 1.461016 | 0.1484 |
| FSIZE | 0.062764 | 0.011047 | 5.681783 | 0.0000 |

Effects Specification

| | S.D. | Rho |
|----------------------|----------|--------|
| Cross-section random | 2070670. | 0.1930 |
| Idiosyncratic random | 4234718. | 0.8070 |

Weighted Statistics

| | | | |
|--------------------|----------|--------------------|----------|
| R-squared | 0.994062 | Mean dependent var | 11347572 |
| Adjusted R-squared | 0.993649 | S.D. dependent var | 74329321 |
| S.E. of regression | 5923717. | Sum squared resid | 2.53E+15 |
| F-statistic | 2410.500 | Durbin-Watson stat | 2.550454 |
| Prob(F-statistic) | 0.000000 | | |

Unweighted Statistics

| | | | |
|-------------------|----------|--------------------|----------|
| R-squared | 0.994289 | Mean dependent var | 13790882 |
| Sum squared resid | 2.96E+15 | Durbin-Watson stat | 2.176811 |

The Adjusted R-squared being the coefficient of determination after adjusting for the degree of freedom is 0.99, suggesting that all the explanatory variables account for about 99%, systematic variation on dependent variable (sales/ revenue growth) of the firm, leaving 1% unaccounted for due to stochastic error term. This indicates that corporate borrowing determines Organizational growth in Nigeria given that the cost is low and the environments where the quoted firms operations exist are devoid of political and social-economic instability. The F- statistic indicating the overall goodness of fit of the model shows that all the independent variables were statistically significant at 1% level. The individual coefficient as can be observed reveals that a unit change in STD will result to - 0.16852 unit decrease in firms' growth and is statistically significant at 1% level. A unit change in long - term corporate borrowing will lead to 0.311664 unit increase in the firms' growth and is statistically significant at 5% level. A unit change in interest charges in the sampled quoted firms will lead to 0.5957 unit increase in the firms' growth and is statistically insignificant at 5% level. A unit change in the firms' age is observed to lead to 54186.90 unit change in the growth of the firms though this is not statistically significant at 5% level. Similarly, a unit change in firm size is observed to lead to 0.062764 unit increase in the growth of the firm in the period and is statistically significant at 1% level. The Durbin - Watson statistic under the unweight statistics of the cross- section random effects of 2.17 shows the absence of serial autocorrelation in the regression result, thus making it useful for policy perspective.

Discussion of Findings

The findings from the estimation techniques above are quite revealing and thought provoking in finance and finance related discipline. Corporate borrowing was observed to determine organizational growth. The finding is a path breaking one given the very scanty or non- existence of empirical validation in this regard to the best of our knowledge in Nigeria. It is expected that borrowing (debt financing) will negatively impact on the performance and growth of firms. The finding corroborates with Wippen (1966); Holz (2002); Robertson (2003). It is contrary to the findings of Abor (2005), and somewhat in tandem with Agarwal and Zhao (2007). Specifically, Abor, (2005) finds that short- term borrowing (debts) negatively influence firms' performance and by extension growth. However, the finding in this study is contrary to Abor (2005) that Long - term and total debt borrowing negatively

impact on firms growth and value. In this study long – term borrowing is ascertained to be statistically significant at enhancing corporate growth. Albeit, a low growth firm should employ corporate borrowing in the right direction and manner so as to achieve the wealth maximization goal. Firms are expected to achieve growth with short- term borrowing as against long – term borrowing. This is because they are able to make repayment as at when due. This in essence assists them to monitor their liquidity position and performance for a short – term period. Since short – term borrowing in this study negatively reduces firm growth though it is statistically significant, intuitively, it could positively enhance growth if examined on a sector specific or on a more longitudinal specific study. Long – term borrowing positively influencing firm growth is not a sufficient condition to absolutely claim by managers to employ it. Firms may suffer the adverse consequences of bankruptcy costs and a decline in tax- shield of using an excessive incremental borrowing to finance activities. Thus, caution has to be exercised by the finance manager. If short – term borrowings do not positively influence firm growth it clearly suggests other hidden "games" are being played or at most there is inefficiency on the part of the managers. It also shows there is liquidity crisis. Firm age especially incorporation age positively determines corporate growth; and is not statistically significant. Intuitively, firms' age should enhance the growth rate of growing (young) firms'. The findings in this study are not consistent with Lodere and Waekhli (2010); Amit (2006), Baron et al (1994). This study takes a position that firms' grow as they age if only they engage in research and development, innovation and diversification. Size was observed to significantly determine firm growth; the finding is not consistent with Pasugian (1962), Mansfield (1962), Das (1995), Hall (1987). However the finding of this study is in line with Glancey (1998), Singh and Whittington (1975). Large firms could grow in profit, number of employees and sales but not so much in total assets. Similarly, small firms as they increase in sizes will then be able to influence growth through managerial efficiency and constant envisioning by the strategic managers.

Conclusion and Recommendations

This paper has empirically examined corporate borrowing and organizational growth. Corporate borrowings which comprise of short term and long term debts have a way of influencing firms growth, specifically low growth firm. Organizational growth can manifest through sales, employment, assets, market shares and/or profits. This study has shown that long term borrowings enhanced firms' growth and it is statistically significant at one percent level. Similarly, firm age positively enhanced firm growth though it is found to be statistically insignificant at one percent. However, short- term borrowings do not improve firm growth though it is statistically significant in the period observed. Also interest charges determine organizational growth but were not statistically significant. Premised on this, it is

recommended that quoted companies should de-emphasize the use of equity financing and emphasize on debt financing since it has positive influence on growth in order to ensure strict adherence to the pecking order theory. Firms are strongly advised to always compare the marginal benefits of using debt financing to the marginal costs of debt financing before concluding on using it in financing their operations.

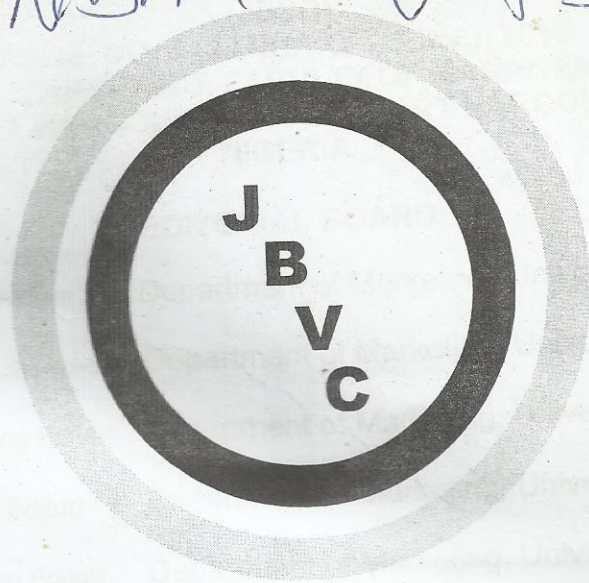
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