

## DETERMINANTS OF EQUITY SHARE PRICES OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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### ABSTRACT

*The study investigated the fundamental determinants of equity share prices of listed deposit money banks in Nigeria. The study specifically examined the nature and direction of causality among macroeconomic factors, industry-specific factors, firm-specific factors and share prices. This is with the view to providing empirical evidence on the nature and relationship among macroeconomic factors, industry-specific factors, firm-specific factors and equity share price of listed deposit money banks in Nigeria. The data on macroeconomic variables were sourced from Central Bank Nigeria statistical bulletin, while data on industry-specific factors and firm-specific factors were obtained from the bank's annual reports and accounts for the period 2011 to 2015. Panel data regression analysis was used to determine the nature of relationship among the four classes of variables, while the pair wise granger causality test was used to ascertain the direction of causality among the variables. Result showed that the macroeconomic factors (GDP and INTR), industry-specific factor (SBC) and firm-specific factor (DPS) are significant determinants of market price of shares. This result was also confirmed by the causality result which showed that macroeconomic factors, industry-specific factors and firm specific factors granger cause market price of shares. It is therefore recommended that private investors, institutional investors and financial analyst consider all these factors when making investment decision.*

**KEYWORDS:** Determinant, equity prices, banks, panel data, granger causality, Nigeria

### 1.1 INTRODUCTION

The fundamental determinant of market price of banks shares is still being debated among the academia and financial analyst. This has been attributed to significant role stock markets and banks all over world play in the economic growth and development of any nation by serving as an intermediary between lenders and borrowers. The stock market is the market where both private and public securities are traded and therefore should serve as a catalyst for economic performance. As a vital economic institution, stock market is expected to play a vital role in efficient capital formation and optimal allocation of scarce financial resources among competing needs.

Equity investors and financial analyst all over the world have been trying to identify underpriced shares in order to earn returns adequate enough to compensate for risk inherent in such investment decision. It is however doubtful whether or not equity investors and financial analysts have devise any ingenious way to track underpriced shares and earn "abnormal returns". This scenario has been attributed to seeming inability by financial analysts to identify actual factors affecting share prices. Meanwhile, Rousseau and Wachtel (2000); Beck and Levine (2003) had earlier showed that equity market prices are strongly correlated with macroeconomic variables such as lending interest rate and economic performance. However, it has been argued recently that both industry factors and firm specific factors interact to influence market price of shares Shiro (2016). Although several empirical studies have shown that firm specific factor such as earnings, liquidity and dividend payout could affect stock prices, empirical evidence on firm-specific determinants of share prices are mixed, conflicting and inconclusive. There seems to be consensus among

researchers that share prices are determined by both internal and external factors but the magnitude and direction is still being debated among scholars. Unfortunately, empirical studies on this all important topic in emerging economies like Nigeria are lacking in dept. Aside from the above, few studies conducted in developing countries produced mixed results with conflicting magnitude and direction, thereby leaving the academia and policy makers in a quandary. The macroeconomic determinants of share prices are theoretically ambiguous. On the other hand, share prices could influence the macroeconomic and firm-specific variables as postulated by Smith (1990), or vice versa (Amadi & Odubo). Fundamentalist school believes that share prices are greatly influenced by changes in the macro economic variables, industry factors and firm specific factors. Since macroeconomic variables are subject to volatility, it is likely to also transmit to industry and firm-specific factors and if this is the case, empirical studies on actual determinants of equity share prices should therefore adopt an integrated approach rather than disaggregated form adopted by earlier researchers.

In view of the above phenomenon, this study is motivated by three main factors; First, is the seemingly lack of consensus among scholars on the actual determinants of stock prices. The second is an attempt to validate the conclusions reached by previous empirical studies on this topic in both developing and developed countries, and finally to determine the causal relationship amongst macro economic variables and stock returns in Nigeria.

*The rest of the study is structured as follows:*

Section 2 presents previous studies that have examined macroeconomic determinants of stock returns. Section 3 discusses the data, model, hypothesis and methodology that were adopted for this study. Section 4 presents the results of the analysis application and thereafter discusses the findings. Section 5 concludes the study.

## 2.1 LITERATURE REVIEW

### 2.1.1 THEORIES OF SHARE PRICE BEHAVIOUR

Several theories relating to share price behavior have been postulated, each in direct conflict with one another. The earliest of these theories is the technicalist view, propounded by Roberts (1959) and later popularized by Reilly and Norton (1999) which posited that equity prices follow a definite pattern of past trends and waves. This implies that share prices move in trends or waves, which could be upward or downward swing (Kelvin, 2006). The technicalist school believed that the present pattern of share price movement are influenced by the past pattern and that forecasting of future trends can be achieved by charting past price movements.

However, Fama (1965) in his random walk theory disagreed with the technicalist view, Fama (1965) in his famous study, argued that in an efficient capital market; security prices fully reflect all available information. The implication of this hypothesis is that, in an efficient market new information is processed as soon as it is released and that share prices quickly adjust to new and appropriate levels. He therefore concluded that investors cannot reap “bumper” return by undertaking technical analysis. Random walk Theory, otherwise known as Efficient Market Hypothesis (EMH) is premised on some fundamental assumptions which are unrealistic. This prompted to the emergence of some other theories. One of such is the fundamentalist view which postulates that security prices are influenced by several factors, ranging from economy factors, industry factors and company specific factors. The fundamentalist school opined that share prices can be analyzed by the present and future earning capacity of a security based on economy, industry and company fundamentals. Fundamentalist school believes investors make investment decisions based on

comparative analysis of intrinsic worth of a share and the prevailing market price. The fundamentalist school disagreed with efficient market hypothesis school on the premise that security prices cannot adjust to tips and rumors pertaining to the operation of the firm.

This study adopts the fundamentalist approach based on data inclusiveness, analytical simplicity and theoretical adoptability.

### ***2.1.2 EMPIRICAL REVIEW***

Empirical studies on the determinants of equity share prices are quite numerous and the debate is inconclusive as it continues to dominate corporate finance literatures. However, most of these studies are empirical evidences from developed and developing countries while studies in emerging markets like Nigeria is lacking. Tsoukalas and Sil(1999) for United Kingdom; Al-Shubiri (2010) for Jordian; Nisa and Nishat (2011) for Pakistian; Arif, Chung and Shausher (2012) for Malaysia; Khan and Amanullah (2012) for Pakistan; Almunani (2014) for Jordan; Menike, Dunusinghe and Ranasinghe (2015) for Sri Lanka and United Kingdom; Ahmed (2015) for Kuwait, Arshad; Arshaad, Yousaf and Jamil (2015) for Pakistian. As noted by Ahmad (2015), the existing literatures and available empirical evidence are lacking in conceptual clarification of the movement in equity prices.

The debate on the determinants of equity prices in Nigeria began in early 2000s amongst some group of researchers such as Udegbunam and Eriki (2001), Somoye, Akintoye and Oseni (2009), Uwuigbe, Olusegun and Agu (2012) and recently Fadiran and Olowokere (2016). Other earlier writers on this topic include Ayadi (1984), Iyiegbuniwe (1984). As germane as the issue was then, the debate still remained unresolved and researchers remained resolute in their effort to put the issue to rest.

There are three conflicting views about the determinants of equity prices. The first school of thought believes that firm-specific factors determine equity prices. Empirical studies in support of this viewpoint include Uddin(2009), Tweneboah and Adau(2008). Mohammed (2014), Uwuigbe, Olusegun and Agu(2012), Srinivasan(2012). From this view, it is hypothesized that dividend per share and earnings per share would have a positive relationship with equity prices. Leverage and liquidity would have a negative relationship with market price of shares.

There are divergent opinion about the relationship between liquidity and market price of shares. While some scholars are of the opinion that excess liquidity would constrain ability of banks to create loan and make profit, others are of the view that liquidity engenders confidence on the banking public which is the platform on which banking business thrives in the case of dividend and share prices, efficient market theory, believes that dividend have positive relationship with share prices. Empirical evidences in support of this view are Muhammed, Aref and Nejat (2012), Ajayi and Seyingbo (2015) and Ullah, Saqib and Usman (2015) amongst others. Dividend per share (DPS) is measured as the ratio of earnings distributed to ordinary shareholders to the number of shares outstanding. Equally important is the firm-specific characteristic found in the literature to influence share price is earnings per share. Firms with high earning opportunities are expected to attract investors because a profitable company is an indication of management efficiency Inyiama and Ozouli, (2014). This implies positive relationship between earning per share and market price of share. This view is supported by Sare, Akukoko and Eusmanba (2013).

Several other studies combined macroeconomic factors with firm-specific factors in analyzing the fundamental determinants of share prices. Al-Shubiri (2010) examined the determinants of equity stock price movements in Jordanian commercial banks. Using a multiple regression analysis for 14 commercial banks annual reports for the period 2005-2008, result from the study indicate that net asset value per share,

has positive significant relationship with market price of shares, positive significant relationship with gross domestic product, negative significant relationship between inflation, lending interest rates with market price of shares in Amman stock exchange.

In a related study by Alumani (2014) to identify the quantitative factors that influence share prices for the listed banks in Amman Stock Exchange over the period 2005-2011 using ratio analysis, correlation and regression analyses empirical evidence from the study show positive correlation between dividend per share, earning per share, book value, price earnings ratio, size and market price of listed banks in Jordan. Result also revealed a significant relationship between banks book value, price earnings ratio, size and market price while dividend per share and dividend payout have insignificant relationship with market price.

Menike, Dunusinghe and Renasinghe (2015) did a comparative analysis on the relationship between macroeconomic and firm specific determinants of stock returns of Sri Lanka and United Kingdom (UK). Empirical results from Fixed Effect regression model indicate that Return on Asset (ROA) and Sales Growth (SG) are significant in explaining changes in Stock returns in Sri Lankan Companies. Meanwhile, the explanatory power of the independent variables becomes more significant with the incorporation of macroeconomic variables in both Sri Lanka and London Stock Exchanges.

Ahmad (2015) investigated the determinants of equity share prices of companies listed in the Kuwait Stock Exchange (KSE) for the period 2008 to 2013. The results of the ordinary Least Square (OLS) regression show that one year lagged price of the stock, inflation rate, tangibility of assets, economic progress peroxide by per capita GDP, money supply changes in growth opportunities, profitability and liquidity of the firm have statistically significant relationship with equity shares prices of listed companies in Kuwait stock exchange.

In a recent study by Fadiran and Olowookere (2016) to examined the factors that influence demand and supply to share price on the Nigerian stock exchange. The authors noted that in a competitive stock market both macroeconomic and firm-specific factors jointly influence share prices. The factors identified are level of economic performance, interest rate, inflation rate, exchange rates, as well as firm-specific performance such as earnings, dividend, net assets per share, return on equity, return on assets and leverage. Utilizing generalized least squares and step wise regression estimation to analyze time series and cross sectional data obtained from seventy two dividend paying firms listed on the Nigerian Stock Exchange. The results of both techniques of analysis revealed that firm specific factors and macroeconomic factors jointly influence the price of equity shares on the Nigerian Stock Exchange (NSE).

Nisa and Nishat (2011) examined the empirical relationship between the equity market prices, firm's financial fundamentals and macro economic factors in Karachi Stock Exchange (KSE). Applying the dynamic panel generalized method of moments (GMM) technique on the data of 221 firms listed on KSE for the period 1995 to 2006. Result from their analysis show that equity share price behavior are influenced by previous behavior of stock prices, company size, previous year earnings per share and macroeconomic indicators such as GDP growth, interest rate and financial department.

Khan and Amanullah (2012) in their study investigated the actual determinants of market price of shares in Karachi Stock Exchange (KSE). The authors employed both correlation analysis and regression analysis to evaluate time series and cross sectional data obtained from 34 companies for ten years period covering 2000 to 2009. Empirical evidence show that Book to Market (B/M) ratio, Price Earning (P/E) ratio, Dividend, Gross Domestic Product (GDP) and interest rate have positive and significant relationship with market price of shares in Karachi Stock Exchange (KSE).

Uwuigbe, Olusegun and Agu (2012) examined the firm specific determinants of share prices in the Nigerian Stock Exchange. These authors adopted the so called regression analysis to estimate whether or not financial performance, dividend payout and financial leverage influence market price of shares in the Nigerian stock exchange. Evidence from the analysis revealed that there a significant positive relationship between firms' financial performance and market value of share prices listed in the Nigerian stock Exchange.

Review of extant literature showed that while some scholars such as Zaheer and Kashif (2014); Ozbay (2009); Menike *et al.*, (2015), Ifuero and Esther (2012); Tague (2013) see macroeconomic factors as major determinants of share price movements, other scholars such as Ajayi, Seyingbo (2015), Mohammad, Aref and Nejat (2012), Uddiri, Rahman and Hossain (2013) Allah, Saqib and Usman (2015) see firm specific factors as major determinants of share prices.

Recently, several authors modeled share price movements to be both firm specific and macro economic factors Al-Shubiri (2010), Ahmad (2015), Fadiran and Olowookere (2016); Nisa and Nishat (2011), Khan and Amanullah (2012) amongst others.

In conclusion, none of these previous studies considered industry specific factors in examining the fundamental determinants of share prices. This study fills this gap in literature by incorporating industry specific factors as espoused in the fundamentalist view of share price determinants.

### 3.1 METHODOLOGY

#### 3.1.1 POPULATION AND SELECTION CRITERIA

The population of the study is made up of 25 banks operating in Nigeria during the period 2011 to 2016. Then the following criteria were adopted to select 13 banks that made the inclusion list.

- i. Banks that were operational at the period
- ii. Banks whose annual reports and accounts were up-to-date
- iii. Foreign banks were excluded from the sample
- iv. Banks that paid dividend to shareholders in the period under study

#### 3.1.2 ANALYTICAL FRAMEWORK AND MODEL SPECIFICATION

The analytical framework adopted for this study is the panel data regression analysis. The attractiveness of Panel data regression over other methods such as cross section or time series data is that panel data relates to individual banks over time and there is likely to be heterogeneity problems. Panel data combines time series and cross section observations and this gives it more informative, more variability, robust degree of freedom and more efficient result (Gujarati 2009).

Panel data regression analysis will state the nature of relationship among the variables but does not prove causality or direction of influence. If event A happens before event B, then it is possible that A is causing B, it is not possible that B is causing A. In other words, events in the past can cause events to happen today, in this case, a pair wise Granger causality Test was employed.

### 3.1.3 MODEL SPECIFICATIONS

The general framework for panel data is of the form.

$$Y_{it} = \beta X_{it}^1 + \alpha Z_i^1 + \mu_{it} \dots \dots \dots (1)$$

Where  
 Y is the dependent variable  
 X is the independent variable  
 Z is the vector of control variables  
 i is the individual firm effect  
 t is the time period

Adapting equation (1) into our Fixed Effect Model (FEM), we obtain equation (2) as follows:

$$\text{LOGSP}_{it} = \beta_1 i + \beta_2 \text{LGDP}_{it} + \beta_3 \text{INTR}_{it} + \beta_4 \text{SBC}_{it} + \beta_5 \text{EPS}_{it} + \beta_6 \text{DPS}_{it} + \beta_7 \text{LIQ}_{it} + e_{it} \dots \dots \dots (2)$$

Where

- LOGSP represent natural logarithm of share price
- LGDP represent natural logarithm of gross domestic product\
- INTR represent lending interest rate
- SBC represent sensitivity to the business cycle of an industry
- EPS represents earnings per share
- DPS represent divided per share
- LIQ represent liquidity
- e is the stochastic error term
- $\beta_1$  is the intercept
- i represent individual banks (1-13)
- $\beta_2$  and  $\beta_3$  are the coefficients of macroeconomic factors
- $\beta_4$  is the coefficient of industry factors
- $\beta_5, \beta_6$  &  $\beta_7$  are coefficient of firm specific factors

#### a priori expectation

$$\beta_1 > 0; \beta_2 > 0; \beta_3 > 0; \beta_4 > 0; \beta_5 > 0; \beta_6 > 0;$$

The pair wise Granger causality model is specified as:

$$\text{LOGSP}_t = \sum_{i=1}^n \alpha_i X_{t-1} + \sum_{j=1}^n \beta_j \text{SP}_{t-j} + \mu_{it} \dots \dots \dots (3)$$

$$X_t = \sum_{i=1}^n \lambda_i X_{t-1} + \sum_{i=1}^n \Omega \text{SP}_{t-j} + \mu_{2t} \dots \dots \dots (4)$$

Where it is assumed that the error terms  $\mu_{it}$  and  $\mu_{2t}$  are uncorrelated.

## 4.1 EMPIRICAL ANALYSIS AND DISCUSSION

### 4.1.1 PRELIMINARY TESTS

#### 4.1.2 DESCRIPTIVE STATISTICS

Table 1 below reports the descriptive statistics of the variables used for the study. The data series appears to be consistent as indicated by the low standard deviation. Specifically, LOGSP, LOGGDP, INTR, SBC, EPS, DPS and LIQ exhibit a relative low standard deviation of 1.03390, 0.0418, 2.3029, 1.06679, 2.0777, 0.4640 and 0.2334 respectively

The Skewness which measures the symmetrical nature of the data series shows that almost all the data series are negatively skewed except LOGGDP and DPS that is positively Skewed.

The Kurtosis result show that LOGSP, LOGGDP, INTR, BSC, are platykurtic as indicated by less than 3 value, while EPS, DPS and LIQ are leptokurtic with a value greater than 3. The Skewness and Kurtosis are of great value since they provide useful guide in the computation of J-B statistic, which is normally used in testing for the normality or asymptotic property of data series.

#### 4.1.3 CORRELATION ANALYSIS

Table 2 reports the correlation analysis of the series. Results showed that the independent variables; LOGGDP ( $r = 0.0661$ ), EPS ( $r = 0.2294$ ), DPS ( $r = 0.6546$ ) and LIQ ( $r = 0.2169$ ) are positively associated with the dependent variable LOGSP.

Conversely, INTR ( $-0.0702$ ) and SBC ( $-0.1680$ ) are negatively correlated with LOGSP.

It should be noted that the correlation coefficient ( $r$ ) of the variable are below 0.70, implying that there is no multicollinearity problem among the variables.

#### 4.1.4 REGRESSION ANALYSIS

Table 3 below present the regression analysis result of panel fixed effect model. Result showed that R-squared, popularly known as coefficient of determination is 0.89 and adjusted R-squared of 0.86. This implies that about 89% systematic variations of the regress and (LOGSP) is explained by the repressors (LOGGDP, INTR, SBC, EPS, DPS and LIQ). This implies that the model has a good fit.

The F-statistics (27.32) and probability of F-statistics (0.0000) shows the model is adequately specified. Furthermore, the Durbin Watson statistics value of 1.84 implies the absence of serial auto correlation. The coefficient of natural logarithm of economic growth has negative and statistical significant relationship with share price of Nigerian banks as indicated by the t-statistics of -2.7 and P-value of 0.04. This implies that holding other variables constant, a percentage change in economic growth would culminate to 2.95 percentage decline in market price of Nigerian banks. This result is inconsistent with our a priori expectation and the findings of Al-Shubiri (2010), Ahmed (2015), Fadiran and Olowookere (2016).

However, this result is likely the case of Nigerian banking industry, since it is well documented that Nigerian GDP growth is majority accounted for by crude oil export. It is likely that if our focus is on oil industry, GDP and market prices would have .positive relationship.

The co-efficient of lending interest rate has negative and significant relationship with share price. This result is in consonance with our a priori expectation and findings from earlier writers such as Ahmad (2015), but inconsistent with the findings of Fadiran and Olowookere (2016). In specific terms, a percentage increase in interest rate will result in 0.05 decline in share price and this can be explained within the context that high interest rate constrain investment by making it difficult for entrepreneurs to borrow and fund their businesses.

The industry-specific variable, proxy by the sensitively to business cycle has negative and significant relationship with equity prices of Nigerian banks as indicated by the t-statistics of -0.16 and P-value of 0.0007. Implying that a percentage increase in the operating leverage of Nigeria banks drags share price by 0.16 percent. This result is consistent with the findings of Abas (2016). The result is not surprising considering the high operating leverage associated with banking business. Leverage has a double edged sword, at a certain level of leverage, operating profit rises but a certain level, when it becomes counterproductive and serve as a drag to equity prices.

The three firm-specific variables used in this study are EPS, DPS and LIQ. While DPS and LIQ are positive determinant of share price of Nigerian banks, EPS has negative but insignificant relationship with share prices. A positive and statistical significant relationship was observed between dividend per share and market prices of shares. This result is consistent with our a priori expectation and several other authors such as Al-Shubiri (2010), Fadiran and Olowokese (2016). Theoretical and empirical literatures revealed that dividend announcement attract investors as it signals the profitability and management efficiency of banks. The co-efficient of earning per share show negative but insignificant relationship with share price as indicated by t-statistics of -0.02 and P-value of 0.38. Similarly, the co-efficient of liquidity show positive but insignificant relationship with share prices as indicated by t-statistics of 0.00 and P-value of 0.97. The relationship between liquidity and banks profitability still dominate academic and professional journals because of mixed and conflicting results emerging from most studies.

#### **4.1.5 PAIRWISE GRANGER CAUSALITY TEST**

Table 4 below reports the result of pair wise granger causality test. This test becomes necessary to ascertain whether share price causes economics variables, industry factors and firm specific factors or vice versa. Result showed a bi directional causality between economic growth and share prices of deposit money banks. Similarly, a bidirectional relationship was also observed between banks lending interest rate and share prices. A bidirectional relationship was also observed between sensitivity to business cycle of the industry and market price of equity shares of deposit money banks in Nigeria. Interestingly, a unidirectional causality was found between dividend per share and share prices, running from dividend per share to equity market prices.

These are no causality between earning per share and market price on one hand, and liquidity and equity prices on the other hand.

## **5.1 CONCLUSION AND RECOMMENDATION**

This present study examined the fundamental determinants of market prices of equity shares of listed deposit money banks. In carrying out this study, three analytical approaches were adopted; i. Correlation analysis; ii. Regression analysis; iii. Causality analysis.

Specifically, the study sought to validate the fundamentalist view of share price determinants, that market price of shares are determined by macroeconomic factor, industry-specific factors and firm-specific factors.

The Macro economic factors selected are economic growth (GDP) and interest rate (INTR), sensitivity to the business cycle of banking industry (SBC) was chosen for industry-specific factors. Dividend per share (DPS), earnings per share (EPS) and Liquidity (LIQ) were chosen for firm-specific factors. These variables were chosen after series of analysis to arrive at parsimony and multicollinearity test.

The correlation analysis showed that almost all the independent variables are positivity correlated with share price. The fixed effect regression analysis validated the fundamentalist view, the result showed that the coefficient of economic growth has negative and significant relationship with share price as indicated by t-statistics ( $\beta = -2.95$ ,  $t = -2.07$ ), the coefficient of interest rate has negative and significant relationship with equity prices ( $\beta = -0.05$ ,  $t = -2.21$ ); the co-efficient of sensitivity to business cycle has negative and significant relationship with market price of shares ( $\beta = -0.16$ ,  $t = -3.59$ ). The co-efficient of dividend per share has positive and significant relationship with equity prices ( $\beta = 0.55$ ,  $t = 3.23$ ).

The pair wise granger causality test revealed a bilateral causality between economic growth and share price as indicated in the t-statistics and probability of F-statistics, interest rate and share price, sensitivity to business cycle and equity prices and a unidirectional causality between dividends per share to equity market price of deposit money banks in Nigeria.

It is therefore recommended that financial analyst, investors and corporate managers consider macro-economic factors (GDP and INTR), industry specific factors (SBC) and firm-specific factors (DPS) when making investment decisions in capital market especially on banking stocks.

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Table 1: VARIABLES, TYPES AND MEASUREMENT

Abbreviation	Variable	Type	Measurement
LOGSP	Natural Logarithm of share price	Dependent variable	Market price of selected banks shares on the last trading day of the year
LOGGDP	Natural logarithm of gross domestic product	Independent Variable	Total amount of goods and services produced in a given year by Nationals and foreigners
INTR	Lending interest rate	Independent variable	Banks prime lending rate
SBC	Sensitivity to the business cycle of an industry	Independent variable	Average operating leverage of all firms in the industry
EPS	Earnings per share	Independent variable	Profit after tax as a ratio of outstanding shares
DPS	Dividend per share	Independent variable	Dividend paid as a ratio of outstanding shares

Table 2: DESCRIPTIVE STATISTICS

	<i>LOGSP</i>	<i>LOGGDP</i>	<i>INTR</i>	<i>SBC</i>	<i>EPS</i>	<i>DPS</i>	<i>LIQ</i>
<i>Mean</i>	1.6284	13.4161	22.7585	0.5992	0.8377	0.3728	0.9907
<i>Median</i>	1.9621	13.4154	23.4900	0.9900	0.7400	0.1400	1.0200
<i>Maximum</i>	3.2865	13.4850	24.9000	2.1400	8.3000	1.7500	1.5000
<i>Minimum</i>	-0.6931	13.3536	18.2100	-1.2400	-12.6600	0.0000	0.2334
<i>Std. Dev</i>	1.0390	0.0418	2.3029	1.0679	2.0777	0.4640	0.2334
<i>Skewness</i>	-0.6039	0.1226	-1.1081	-0.3272	-2.9735	1.2098	-0.6934
<i>Kurtosis</i>	2.5366	2.1637	2.8879	2.2526	26.5640	3.6312	3.8049
<i>Jarque Bera</i>	5.2993	2.4049	15.5930	3.1250	1870.336	19.8041	3.8049
<i>Probability</i>	0.0706	0.3004	0.4000	0.2096	0.0000	0.0000	0.0170
<i>Observation</i>	76	76	76	76	76	76	76

Source: Authors Computation from E-View 7, 2017.

TABLE 3: CORRELATION MATRIX

	<i>LOGSP</i>	<i>LOGGDP</i>	<i>INTR</i>	<i>SBC</i>	<i>EPS</i>	<i>DPS</i>	<i>LIQ</i>
<i>LOGSP</i>	1.0000						
<i>LOGGDP</i>	0.0661	1.0000					
<i>INTR</i>	-0.7002	-0.4921	1.0000				
<i>SBC</i>	-0.1680	-0.3902	0.1536	1.0000			
<i>EPS</i>	0.2294	-0.0304	-0.0842	-0.0751	1.0000		
<i>DPS</i>	0.6546	0.0997	0.0278	0.0403	0.3805	1.0000	
<i>LIQ</i>	0.2169	0.1566	0.0924	0.0775	-0.0867	0.2482	1.0000

Source: Authors Computation E-View 2017

Table 4: Panel Data Regression Analysis

<i>Explanatory</i>	Dependent variable LOGSP			
<i>Variables</i>	Coefficient	Std. Error	t-statistics	Prob.
<i>C</i>	42.2767**	19.2647	2.1945	0.0323
<i>LOGGDP</i>	-2.9500**	1.4190	-2.0789	0.0421
<i>INTR</i>	-0.0512**	0.02314	-2.2124	0.0310
<i>SBC</i>	-0.1697***	0.0471	-3.5958	0.0007
<i>EPS</i>	-0.0213	0.0245	-0.8669	0.3896
<i>DPS</i>	0.5587***	0.1728	3.2316	0.0020
<i>LIQ</i>	0.0064	0.2400	0.0267	0.9788
<i>DIAGNOSTIC STATISTICS</i>				
<i>R<sup>2</sup></i>	0.89			
<i>Adj. R<sup>2</sup></i>	0.86			
<i>F. stat</i>	27.32			
<i>Prob. (F-stat)</i>	0.0000			
<i>Durbin-Watson</i>	1.84			

Source: Authors Computation from E-view 7, 2017.

Note, \*\*, \*\*\* denotes significance at 5% and 1% respectively.

Table 5: Pair wise Granger Causality Test

Null Hypothesis	Obs.	F-Stat	Prob.	Decision
LOGGDP does not Granger cause LOGSP	52	17.6192	0.0000	Reject
LOGSP does not Granger cause LOGGDP		12.1162	0.0000	Reject
INTR does not Granger cause LOGSP	52	14.9881	0.0000	Reject
LOGSP does not Granger cause INTR		12.7636	0.0000	Reject
SBC does not Granger cause LOGSP	52	14.0149	0.0000	Reject
LOGSP does not Granger cause SBC		14.5728	0.0000	Reject
EPS does not Granger cause LOGSP	52	1.5063	0.2322	Accept
LOGSP does not Granger cause EPS		2.1091	0.1327	Accept
DPS does not Granger cause LOGSP	52	3.2550	0.0478	Reject
LOGSP does not Granger cause DPS		0.9317	0.1327	Accept
LIQ does not Granger cause LOGSP	52	1.1337	0.3307	Accept
LOGSP does not Granger cause LIQ		0.8000	0.4554	Accept

SOURCE: Authors computation from E view 7, 2017.