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Inflationary Trend and its Impact on Nigeria Stock Exchange Market

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Abstract

In this study, Inflationary trend was explored to determine its impact on Nigeria Stock Exchange Market. Only secondary source of data was used for this research work. Four (4) variables were used to validate the reliability of this research work namely: inflationary rate, total value of Nigerian stock exchange market, government expenditure and currency exchange rate ranging from 1980 – 2014 i.e. thirty five (35) years of economic activities. The descriptive method was used to analyze the data generated for the research. General regression statistical tool was used to determine the relationship between the dependent and independent variables. The hypotheses were tested using probability plot and graphical summary statistics. From the findings, the researcher observed that Inflation, Government Expenditures and Exchange Rate are significant to Total Value of Nigeria Stock Exchange Transactions. By this we say, inflationary trend to a large extent has a tremendous effect on Nigeria stock exchange market

Keyword: Inflation, Expenditure, Stock Exchange, Transactions, Trend etc.

1.0 Introduction

The stock market is a common feature of a modern economy and it has substantial reputation of performing various functions that promote the growth and development of the economy. The market is an economic institution; which promotes efficiency in capital formation and allocation. It enables governments and industry to raise long-term capital for financing new projects, and expanding and modernizing industrial and commercial concerns (Kimani and Mutuku, 2013). Investment in the stock market is long term in nature; hence any development that could affect the stability of the polity or economy usually has serious impact on the

performance of the stock market. Corrado and Jordan (2002) identify inflationary rate amongst others as a factor that could influence the market performance.

According to Alile (1997), the central objective of the stock exchange worldwide remains the maintenance of the efficient market with attendant benefit of economic growth. The stock market is of interest to economists and policy makers because of the perceived benefits to the economy. The stock market serves as a veritable tool in the mobilization and allocation of savings among competing uses which are critical to the growth and efficiency of the economy.

The performance of the stock market is of utmost importance to investors, policy makers and the likes. The measures of stock market performance include market capitalization; which measures stock market size, stock market liquidity which refers to the ability of investors to buy and sell securities easily. Others, according to Daferighe & Sunday (2012) are All Share Index; which reflects the performance and condition of the stock market, and the turnover ratio; which is an index of comparison for market liquidity rating and level of transaction costs.

1.1 Aim of the Study

The main aim of this research work is to investigate the impact of inflation on the stock exchange market transactions.

Hypothesis

Ho- Inflation does not have any significant effect on the stock exchange market transactions in Nigeria.

Ho- Government expenditures do not have any significant effect on the stock exchange market transactions in Nigeria.

2. Concept of the stock Exchange Market

Omotor (2010) defined the stock exchange market as an economic institution; which promotes efficiency in capital formation and allocation. Stock exchange market enables governments and industry to raise long-term capital for financing new projects, and expanding and modernizing industrial and commercial concerns.

Orubu (2009) posits that the stock market can be defined as the market where medium to long term finance can be raised. The market is the market for dealing (that is the lending and borrowing) in long term loan able funds. He described it as a forum through which long term funds are made available by the surplus to deficit economic units. It must be however be noted that though all surplus economic units have access to the stock market not all the deficit economic units have the same easy access to it.

According to Al-Faki, (2006), the stock market is a network of specialized financial institutions, series of mechanism, which to facilitate the bringing together of suppliers and users of medium to long term capital for investment in economic development projects.

Concept of inflation

According to Ojo (2000), inflation is described as a general and persistent increase in the prices of goods and services in an economy. Inflation rate is measured as the percentage change in the price index (consumer price index, wholesale price index, producer price index etc).

Keynes (1930) regarded inflation as a phenomenon of full employment. According to them, a rise in prices in all situations cannot be termed inflation. When there are unemployed resources in the economy, increase in the money supply will result not only in increasing

prices but also in increasing output and employment. According to them, the rise under such conditions should not be called inflation. It is semi-inflation. But once the stage of full employment is reached in an economy, any increase in the quantity of money or rise in aggregate demand will lead to rise in prices without any increase in output and employment. This should be called pure or true inflation.

Functions of the Stock Exchange

According to Donwa and Odia (2011), the functions of the stock exchange market are:
1. To enhance the mobilization of private and public investments through trading in shares and stocks.
2. To serve as a broad communication arena for its constituencies and the dual role of overseeing the markets and their member firm participants on one hand and self-regulating itself on the other hand.
3. To ensure fair dealing in securities through its rules, regulations and operational codes which help us protect the public from shady deals.
4. To maintain broad liquid secondary markets for corporate securities thereby helping to build public confidence and participation in the market.
5. To enhance issuers ability to raise capital in the primary market and understanding the importance of efficient capital management.

3. Determinants and Causes of Inflation

Exchange rate is a major determinant of inflationary rate in Nigeria. It is the value of the domestic currency in terms of foreign currency. On the other hand, foreign exchange is the actual foreign currency or various claims (bank deposits or promises to pay) on it that are traded for each other (Christal and Lipsey, 1999). Exchange rate changes can affect the relative prices, thereby the competitiveness of domestic and foreign producers. A significant appreciation of the domestic currency makes domestic goods expensive relative to foreign goods resulting in a shift of demand away from domestic to foreign goods. The effect of such a shift on the economy is reduction of demand pull inflation.

Another measure of inflation or price movements is the GDP Deflator. This is available on an annual basis. However, it is rarely used as a measure of inflation. This is because the CPI represents the cost of living and is, therefore, more appropriate for measuring the welfare of the people. Furthermore, because CPI is available on a more frequent basis, it is useful for monetary policy purposes (Aminu and Anono, 2012). The structuralists attribute the cause of inflation to structural factors underlying characteristics of an economy (Adams, 2000). According to Adams 2000, in the developing countries, particularly those with a strong underground economy, prevalent hoarding or hedging, individuals expect future prices to increase above current prices and, hence, demand for goods and services are not only transactionary, but also precautionary. This creates artificial shortages of goods and reinforces inflationary pressures.

There is a view that the primary cause of inflation in developing countries is the recourse to money creation in the face of limited borrowing to finance large fiscal deficits – the “public finance view” of inflation (Agenor and Montiel, 1996). Changes in money supply, credit to government by banking system, government deficit expenditure, industrial production and food price indices are underlined factors that contribute to inflationary tendencies in Nigeria (Awogbemi and Taiwo, 2012).

Increase in government expenditure financed by monetization of oil revenue and credit from banking system could also be responsible for the expansion of money supply which in turn (with lagged effect) contributes to inflationary tendencies. Growth in the money supply is another determinant of inflation. When money supply growth increases substantially, inflation also increases and when there is a decline in monetary growth rate, there is a strong relationship between increase in money supply and inflation. Rising cost of goods are often taken to be counter-productive and negative to an economy. The most significant effect of inflation is its impact on the revenues of the government. When it is higher than previously planned and thought, the revenues of the government will increase. Inflation is also responsible for inefficiencies and non-performance of an economy. It makes budgeting and future planning difficult for economic agents and imposes a drag on productivity, particularly when firms are forced to shift resources away from products and services thereby discouraging investment and retarding growth (Orubu, 2009).

4. Research Design

This research was conducted by using descriptive analysis; general regression analysis, graphical summary and normality test were all used in the analysis.

5. Method of Data Collection

Secondary source of data collection was adopted in the study. These secondary data were analyzed using descriptive analysis; general regression analysis, graphical summary and normality test to test the validity and reliability of the data/variables.

Variables Used

In carrying out this research work, one (1) dependent variable and three (3) independent variables were used making a total of four (4) variables to be used. They are:
VSE = Total Value of Nigeria Stock Exchange Transactions (Dependent Variable)
INF = Inflation Rates (Independent variable)
GEXP = Government Expenditure (Independent variable)
EXR = Exchange Rates (Independent variable).
The above variables are represented in functional form as shown below.
VSE = F(INF, GEXP, EXR)

6. Method of Data Analysis

The descriptive method of data analysis will be used to analyze data to determine their mean, range, sum, etc.

General regression statistical tool will be used to attempt to explain the relationship between the dependent and independent variables.

The data for this study will be analyzed, using normality test and graphical summary statistical tools to determine the significance of all inflationary variables used for this study to the Nigeria Stock Exchange. Other statistical tool may be used when appropriate or required using Statistical Package for Social Science (SPSS) version 21 and Minitab software version 16.1. The hypotheses will be tested as follows.

Hypothesis: Descriptive analysis, general regression analysis, normality test and graphical summary were used to validate the hypothesis.

Decision Rule

The null hypotheses will be accepted if the significant value is greater than 0.05 significant level, otherwise, accept the alternative hypothesis.

7. Presentation and Data Analysis

Here shows how the data collected for the study are presented, analyzed and discussed. The researchers made use of Descriptive Analysis, Multiple Regression Analysis, normality test and graphical summary and other relevant statistical tools to analyze and determine the significance of the variables.

Table 1:
Data Collected from the Exchange Market

year	INF	VSE	GEXP	EXR
1980	20.812	5.369	2.396	0.55
1981	7.697	5.719	2.434	0.636
1982	23.212	5.37	2.478	0.67
1983	17.82	5.986	2.265	0.748
1984	7.435	5.547	2.295	0.808
1985	5.717	5.757	2.568	0.999
1986	11.29	6.21	2.786	3.316
1987	54.511	5.946	3.091	4.191
1988	50.466	6.745	3.323	5.353
1989	7.364	6.413	3.714	7.65
1990	13.006	5.417	4.098	9
1991	34.588	5.489	4.198	9.754
1992	57.165	6.197	4.53	19.66
1993	57.031	6.69	5.253	22.63
1994	72.835	6.893	5.08	21.886
1995	29.268	7.516	5.516	21.886
1996	8.529	8.85	5.82	21.886
1997	9.996	9.242	6.059	21.886
1998	6.619	9.515	6.188	21.886
1999	6.933	9.551	6.854	92.528
2000	18.873	10.245	6.552	109.55
2001	12.876	10.962	6.925	113.45
2002	14.031	10.992	6.925	126.9
2003	14.998	11.698	7.111	137
2004	17.863	12.327	7.262	132.85
2005	8.239	12.479	7.507	129
2006	5.382	13.061	7.569	127
2007	11.577	13.888	7.804	116.8
2008	11.537	14.333	8.083	131.25
2009	13.72	13.438	8.146	148.1
2010	10.84	15.592	8.341	148.812
2011	12.217	13.367	8.457	156.7
2012	8.475	13.603	8.434	155.756
2013	8.057	14.67	8.553	155.7

2014	8.102	14.104	8.429	168

Source: CBN Statistical Bulletin, Vol. 24 2014

Table 2:
Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
INF	35	67.5	5.4	72.8	679.1	19.402	2.9785	17.6211	310.503
VSE	35	10.2	5.4	15.6	329.2	9.405	.5853	3.4628	11.991
GEXP	35	6.3	2.3	8.6	197.0	5.630	.3747	2.2166	4.913
EXCHR	35	167.5	.6	168.0	2344.8	66.994	10.9028	64.5017	4160.467
Valid N (listwise)	35								

Source: The Researcher

The above descriptive analysis revealed that INF has the range of 67.5, minimum of 5.4, maximum of 72.8, the sum of 679.1, mean of 19.40, standard error of 2.97, standard deviation of 17.62 and standard variance of 310.50. It also shows that the VSE has the range of 10.2, minimum of 5.4, maximum of 15.6, the sum of 329.2, mean of 9.40, standard error of 0.58, standard deviation of 3.46 and standard variance of 11.99. GEXP also has the range of 6.3, minimum of 2.3, maximum of 8.6, the sum of 197.0, mean of 5.63, standard error of 0.37, standard deviation of 2.21 and standard variance of 4.91. While EXCHR has the range of 167.5, minimum of 0.6, maximum of 168.0, the sum of 2344.8, mean of 66.99, standard error of 10.90, standard deviation of 64.50 and standard variance of 4160.46.

8. General Regression Analysis: VSE versus INF, GEXP, EXCHR

Regression Equation

LVSE = 3.82707 - 0.0202046 INF + 0.765949 LGEXP + 0.0247478 EXCHR

Coefficients

Term	Coef	SE Coef	T	P
Constant	3.82707	0.641002	5.97045	0.000
INF	-0.02020	0.008928	-2.26298	0.031
LGEXP	0.76595	0.169757	4.51202	0.000
EXCHR	0.02475	0.006021	4.11005	0.000

Summary of Model

S = 0.839071 R-Sq = 94.65% R-Sq(adj) = 94.13%

PRESS = 26.2108 R-Sq(pred) = 93.57%

The regression analysis shows the model used to predict the yield variable. The model summary reveals the rate of coefficients of determination of the variables. The summary shows a relationship of 94.65% to the variables.

9. Test of Hypothesis

Hypothesis one

Ho-- Inflation does not have any significant effect on the stock exchange market transactions in Nigeria.

The above hypothesis was tested using normality test statistical analysis using variables from table --- which has a 94.65% relationship

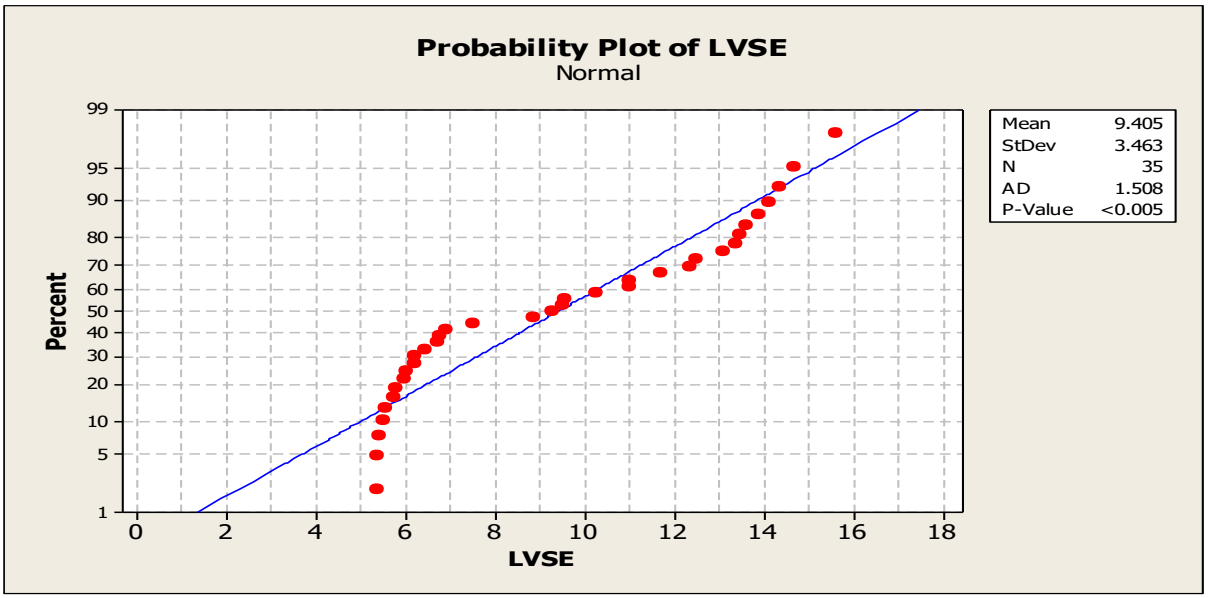

Figure 1: Probability Plot of LVSE

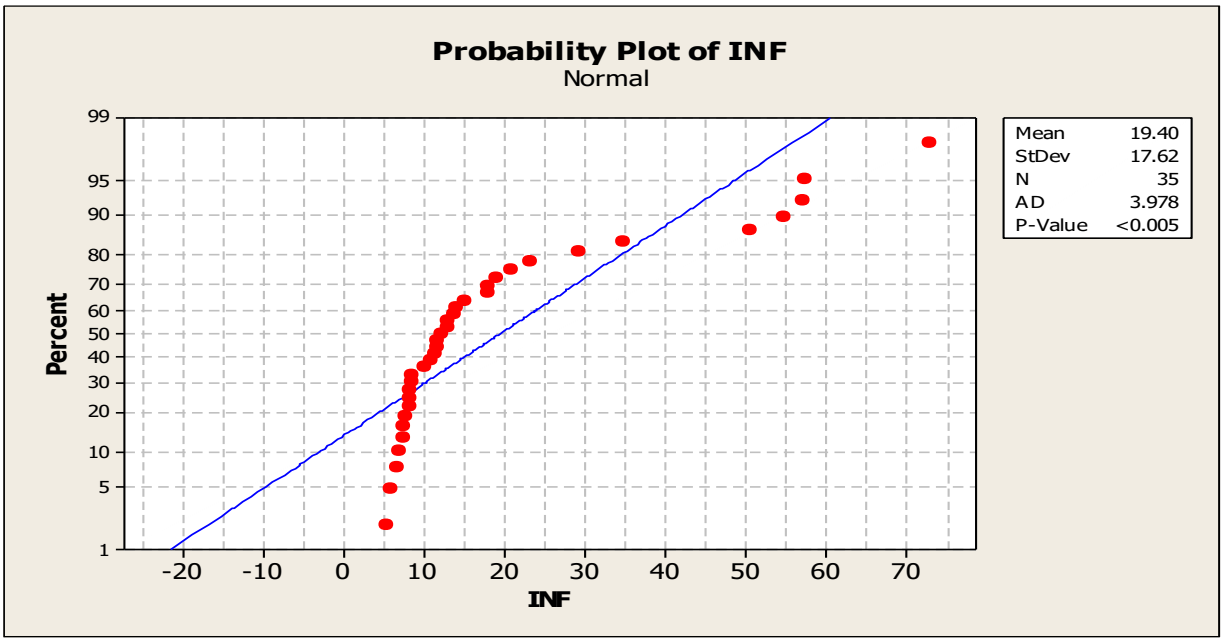

Figure 2: Probability Plot of INF

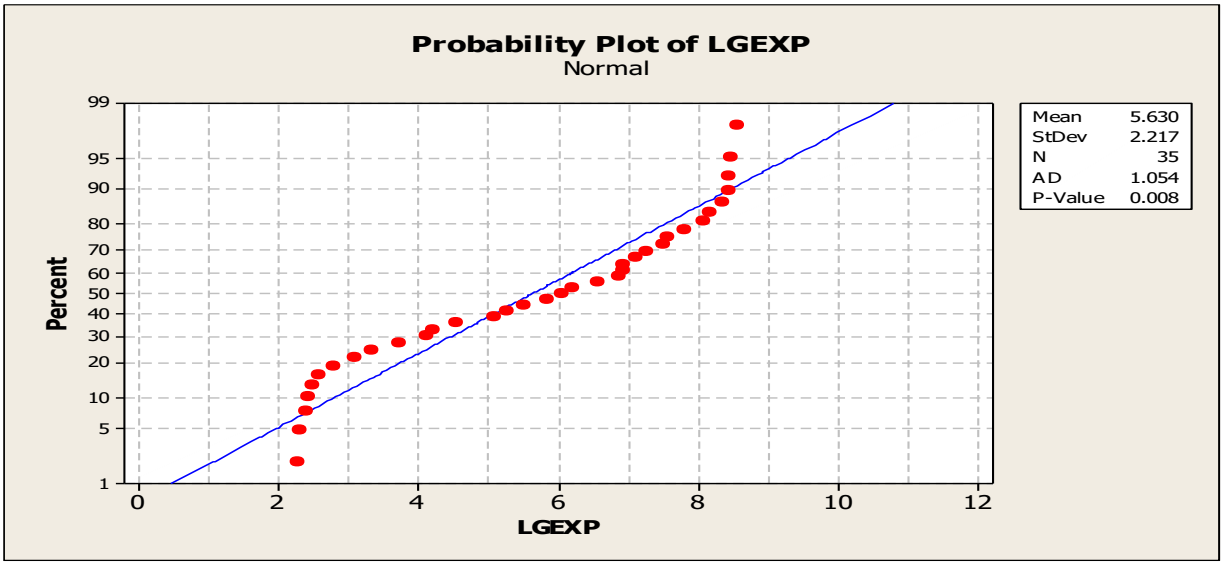

Figure 3: Probability Plot of LGEXP

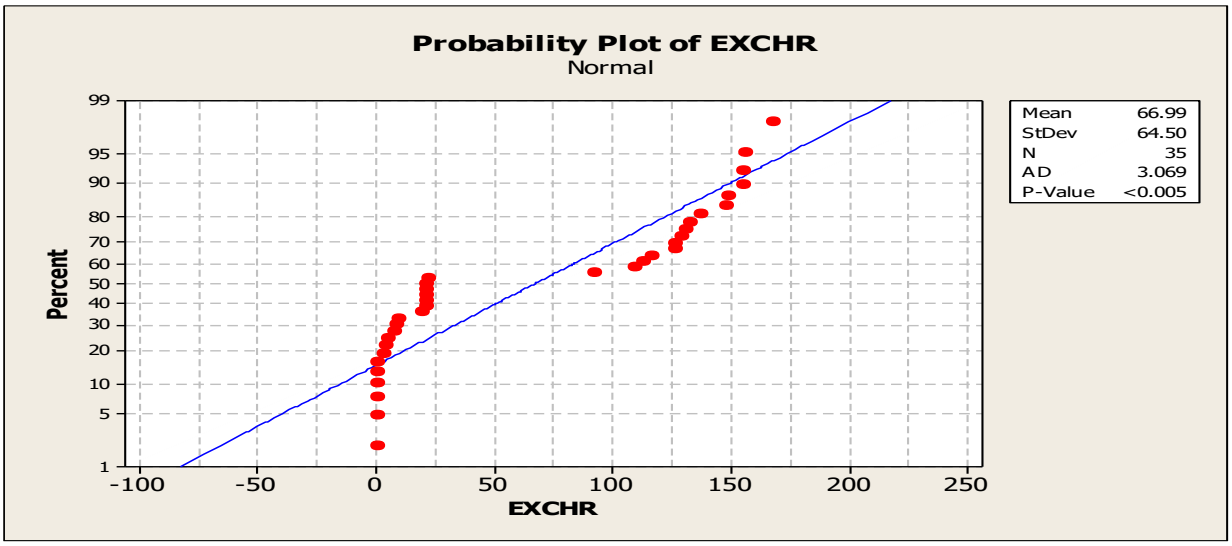

Figure 4: Probability Plot of EXCHR

Decision Rule

The null hypotheses will be accepted if the significant value is greater than 0.05 significant level, otherwise, accept the alternative hypothesis. From the above hypothesis testing, it was observed that their p-values or significant value is less than 0.05 significant level which means Inflation has a significant effect on the stock exchange market transactions in Nigeria.

Hypothesis Two

Ho- Government expenditures do not have any significant effect on the stock exchange market transactions in Nigeria.

The above hypothesis was tested using graphical summary statistical analysis using variables from table --- which has a 94.65% relationship.

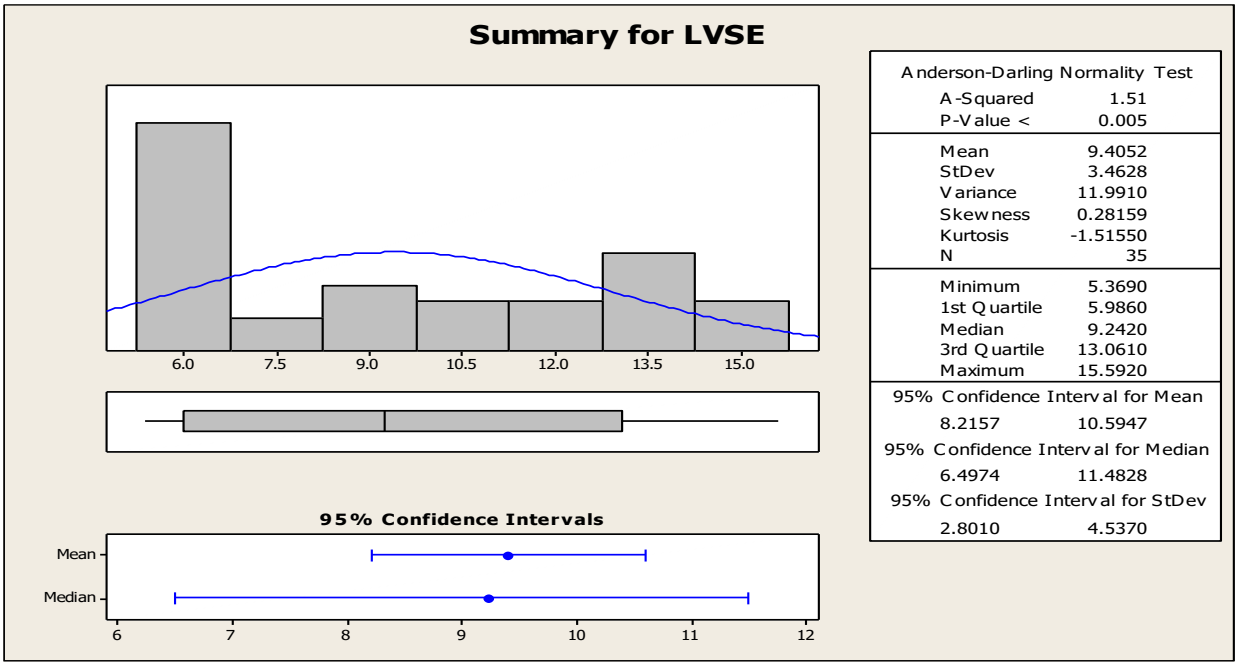

Figure 5: Summary for INF

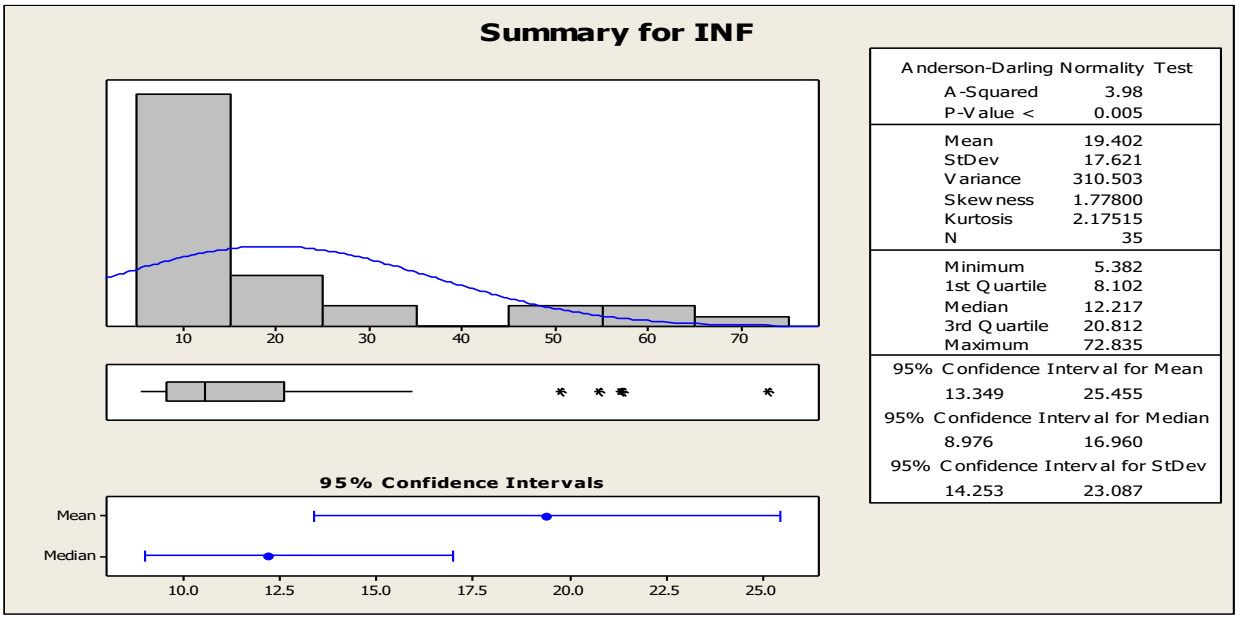

Figure 6: Summary for LVSE

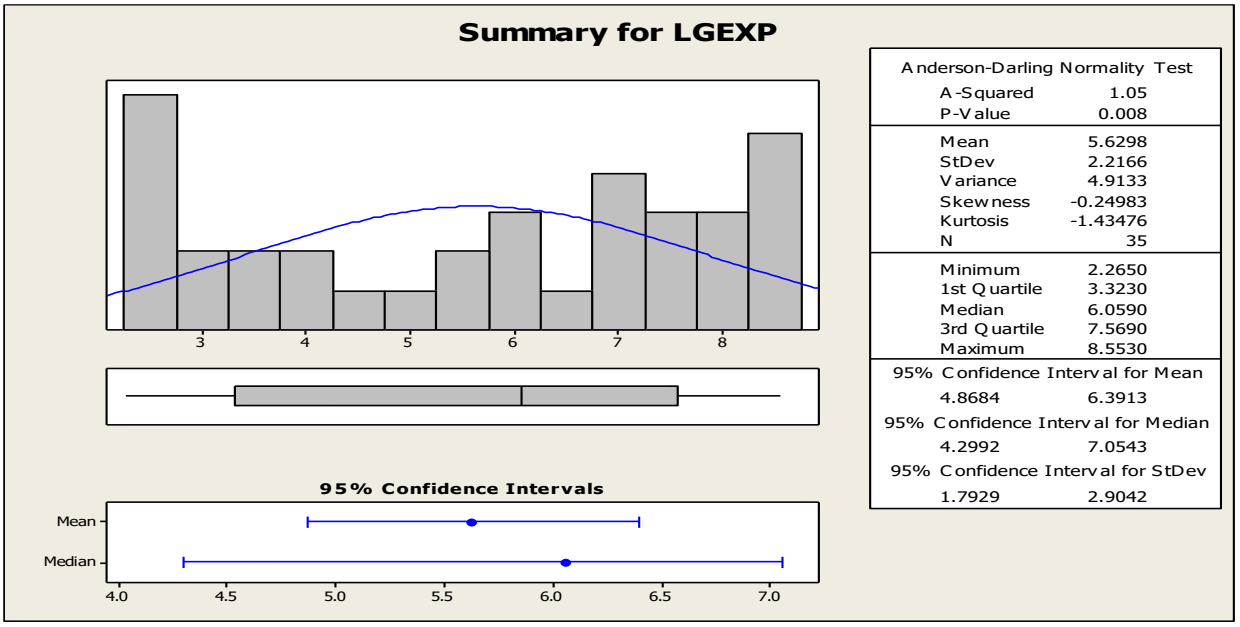

Figure 7: Summary for LGEXP

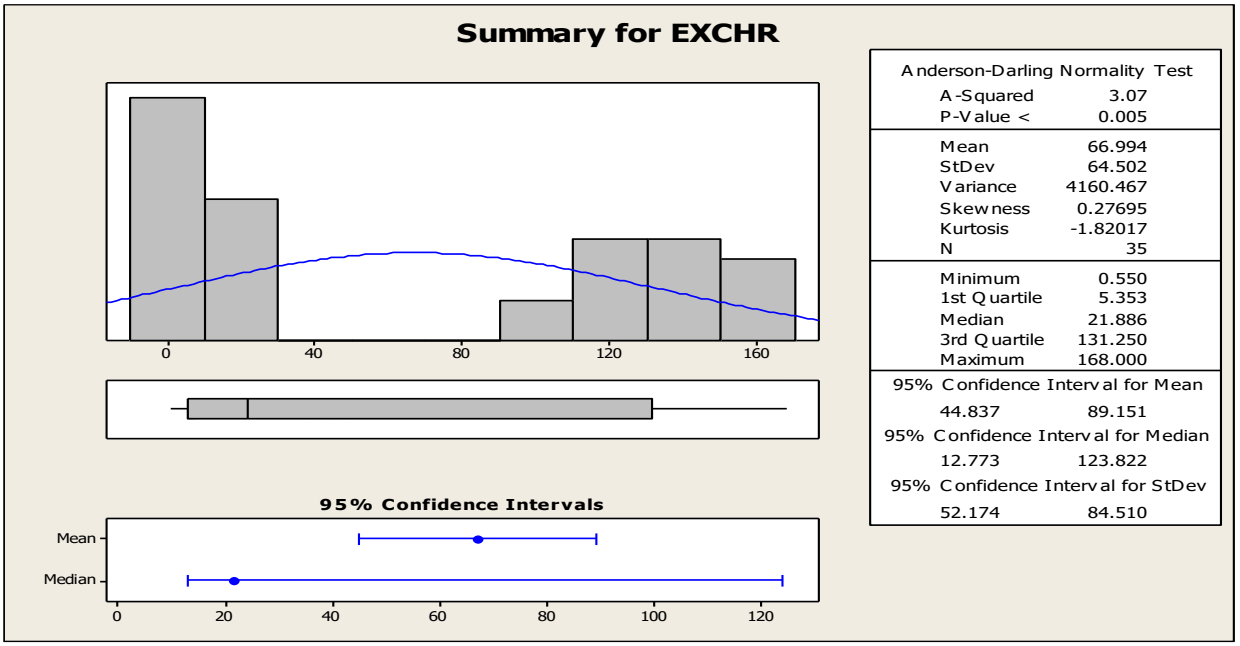

Figure 8: Summary for EXCHR

Decision Rule

The null hypotheses will be accepted if the significant value is greater than 0.05 significant level, otherwise, accept the alternative hypothesis. From the above hypothesis testing, it was observed that their p-values or significant values are less than 0.05 significant level which states that Government expenditures have a significant effect on the stock exchange market transactions in Nigeria.

10. Summary of Findings

From the study above, the researcher observed that Inflation, Government Expenditures and Exchange Rate are significant to Total Value of Nigeria Stock Exchange Transactions. By this

we say inflationary trend to a large extent has a tremendous effect on Nigeria stock exchange market.

References

Abu, N. (2009) Does stock market development raise economic growth? Evidence from Nigeria.

Journal of Banking and finance. 1(1)15-26

Agenor, P. R. and Montiel, P. J. (1996): .Development Macroeconomics., Princeton, NJ: Princeton University Press.

Ajakaiye, O. and Fakiyesi, T. (2009). Global Financial Crisis. *Discussion Series Paper 8*: Nigeria. London: Overseas Development Institute.

Aluko, E. M. (2008). The Global Financial Meltdown: Impact on Nigeria's Capital Market and Foreign Reserves. http://www.gamji.com/aluko/aluko209.htm[downloaded [5-6-2010]

Aminu U. and Anono A. Z. (2012). Effect of Inflation on the Growth and Development of the Nigerian Economy (An Empirical Analysis), *International Journal of Business and Social Science* Vol. 3 No. 10 [Special Issue – May 2012] Pp.183 – 191

Awogbemi, C.A and Taiwo, J. K. (2012).Empirical Analysis of the Causes and Effects of Inflation in Nigeria. *Journal of Economics and Sustainable Development* www.iiste.org

Baekaert, G. and E.C. Engstrom (2009), Inflation and the Stock Market: Understanding the 'Fed Model'(June 2009). NBER Working Paper No. w15024. Available at SSRN: http://ssrn.com/abstract =1413588

Daferighe, E. & Sunday, C. S. (2012), The impact of inflation on stock market performance in Nigeria, *American Journal of social and management sciences*.

Daferighe, E.E. and Aje, S.O. (2009). The Impact Analysis of Real Gross Domestic Product, Inflation and Interest Rates on Stock Prices of Quoted Companies in Nigeria. *International Research Journal of Finance and Economics*. Issue 25.

Donwa, P. and Odia, J. (2011). Effects of the Consolidation of the Banking Industry on the Nigerian Capital Market. *Journal of Economics*, 2(1), 57-65.

Engle, R. F. and Rangel. J. G. (2005). The Spline GARCH Model for Unconditional Volatility and its Global Macroeconomic causes. Econometica, 50, pp 987-1007.

Ewah, S.O.E. Esang, A. E. and Bassey, J. U. (2009). Appraisal of Capital Market Efficiency on Economic Growth in Nigeria. *International Journal of Business and Management*, December, 219-225.

Falahati, A. Nouri, F. Rostami, A. (2012), The Effect of Inflation on Development of Stock Market, J. Basic. Appl. Sci. Res., 2(11)11460-11468, 2012.

Fama, E. F. (1981) "Stock Returns, Real Activity, Inflation and Money," American Economic Review71 (September 1981), 545-565,

Feldstein, M. (1982a), 'Inflation, capital taxation, and monetary policy', in R Hall (ed), Inflation: causes and effects, University of Chicago Press, Chicago, pp 153–167.

Friend, I. and Hasbrouck, J. (1981). Effect of inflation on the Profitability and Valuation of U.S. Corporations. University of Pennsylvania.

Gerolamo, D. (2001). Inflation and its effects on Investment. Retrieved from http:// econ10.bu.edu/Ee341_money/papers/Geramo_paper. htm on 1/9/2010.

Girma, F. D. (2012) Relationship between Inflation and Economic Growth in Ethiopia: An Empirical Analysis, 1980-2011, University of Oslo.

Keynes, J.M. (1930). *Treatise of Money,* Vol. II, New York: Harcourt, Brace and Company.

Kimani, D. K. & Mutuku, C. M. (2013), Inflation dynamics on the overall stock market performance: The case of Nairobi securities exchange in Kenya, Economics and Finance Review Vol. 2(11) pp. 01 – 11, January, 2013

Kolari, J. (2001). "Stock Prices and Inflation". *Journal of Financial Research*

Kuttner, K. and Posen, S. (2000) "Inflation, Monetary Transparency and G3 Exchange Rates Volatility", Institute for International Economics Workings Papers 006 Washington DC.

Maduka, A.C. and Onwuka, K.O. (2013). Financial Market Structure and Economic Growth: Evidence from Nigeria Data. Asian Economic and Financial Review. 3(1): 75-98

Melberg, H.O. (1992). Inflation: an overview of Theories and Solutions. (www.geocities.com/hmelberg/papers/921201.htm).

Modigliani, F. and Cohn, R. A. (1979) Inflation, Rational Valuation, and the Market. Financial Analysts Journal, 35: 24-44.

Nwankwo, G. O. (1991). Money and Capital Markets in Nigeria Today, University of Lagos Press Nigeria.

Ojo, M.O. (2000). The role of the Autonomy of the Central Bank of Nigeria (CBN) In Promoting Macroeconomic Stability"". Central Bank of Nigeria Economic and Financial Review, Vol.38, Number 1, March.

Omeke, P.C. and Ugwunyi, C.U. (2010) Money, Price and Output: A Causality Test for Nigeria. *American Journal of Scientific Research* ISSN 1456- 223X, Issue 8, pp.78-87. Euro Journals Publishing, Inc.

Omotor D G (2010), Relationship between Inflation and Stock Market Returns: Evidence from Nigeria, Delta State University, *Journal of applied statistics* Vol. 1 No. 1.

Orubu, C. O. (2009), "Inflation in Nigeria: Concept, Measurement and Control, Bullion, Central Bank of Nigeria, Vol.33 (1), January – March, 2009

Osaze, B.E. (2009). "Paradigm Shift a Misplaced Concreteness and the Nigerian Financial System". Inaugural lecture series.41. University of Benin. 40-41.

Pak, O. & Bhatti, R. H. (2013), Stock returns and inflation in Kazakhistan, Russia and Ukraine, *International Journal of Economics and Finance studies* Vol. 5, No 1, 2013 ISSN: 1309-8055.

Patra, T. & Poshakwale, S. (2006). Economic variables and stock market returns; evidence from The Athens stock exchange. Applied Financial Economics Vol. 16. 993-1005.

Sampson, E. (2009) Financial Meltdown: The Rate and Shape of Capital Markets. *Zenith Economic Quarterly* 4(1): 67-80

Svensson, L. E. (2000) "Open-Economy Inflation Targeting", *Journal of International Economics*, Issues 50, pp 155-183

Taofik M.I. and Omosola M. A. (2013). The Relationship Between Stock Return and Inflation in Nigeria. *European Scientific Journal February* 2013 Edition Vol.9, No.4

Ugur, S. & Ramazan, S. (2005). Inflation, Stock Returns, and Real Activity in Turkey. The Empirical Economics Letters Vol, 4 (3), 181-192.