

Does Stock Market Promote Economic Growth In Nigeria?

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ABSTRACT

The stock market is a common feature of a modern economy and it is reputed to perform some necessary functions, which promote the growth and development of the economy. This study examines whether stock market promotes economic growth in Nigeria.

To achieve this objective, ordinary least squares regression (OLS) was employed using the data from 1980 to 2000. The results indicated that there is a positive relationship between growth and all the stock market development variables used. With 99 percent R-squared and 98 percent adjusted R-squared, the result showed that economic growth in Nigeria is adequately explained by the model for the period between 1980 and 2000. By implications 98 percent of the variation in the growth of economic activities is explained by the independent variables.

The results of the study, which established positive links between the stock market and economic growth, suggests the pursuit of policies geared towards rapid development of the stock market. Also, all sectors of the economy should act in a collaborative manner such that the optimum benefits of linkages between stock market and economic growth can be realized in Nigeria.

1.0 Introduction

Mobilization of resources for national development has long been the central focus of development economists. As a result of this, the centrality of savings and investment in economic growth has been given considerable attention in the literature (Rostow, 1960; Malivaud, 1979; Soyode, 1990; Aigbokan, 1995; Samuel, 1996; Demirguc-Kunt and Levine, 1996). For sustainable growth and development, funds must be effectively mobilized and allocated to enable businesses and the economy harness their human, material, and management resources for optimal output. The stock market is an economic institution, which promotes efficiency in capital formation and allocation. The stock market enables governments and industry to raise long-term capital for financing new projects, and expanding and modernising industrial/commercial concerns. If capital resources are not provided to those economic areas, especially industries where demand is growing and which are capable of increasing production and productivity, the rate of expansion of the economy often suffers. A unique benefit of the stock market to corporate entities is the provision of long-term, non-debt financial capital. Through the issuance of equity securities, companies acquire perpetual capital

for development. Through the provision of equity capital, the market also enables companies to avoid over-reliance on debt financing, thus improving corporate debt-to-equity ratio.

The existing literature clearly shows that developed economies had explored the two channels through which resources mobilization affects economic growth and development – money and capital markets (Samuel, 1996; Demirguc-Kunt and Levine, 1996). This is however, not the case in developing economies where emphasis was placed on money market with little consideration for capital market (Nyong, 1997).

Since the introduction of structural adjustment programme (SAP) in Nigeria, the country's stock market has grown very significantly (Alile, 1996; Soyode, 1990). This is as a result of deregulation of the financial sector and the privatization exercises, which exposed investors and companies to the significance of the stock market. Equity financing became one of the cheapest and flexible sources of finance from the capital market and remain a critical element in the sustainable development of the economy (Okereke-Onyiuke, 2000).

Though stock market is growing it is however characterized by complexities. The complexities arise from trends in globalization and increased variety of new instruments being traded: equity options, derivatives of various forms, index futures etc. However, the central objectives of the stock exchanges worldwide remain the maintenance of the efficient market with attendant benefit of economic growth (Alile, 1997).

The link between stock market performance and economic growth has often generated strong controversy among analysts based on their study of developed and emerging markets (Samuel, 1996; Demirguc-Kunt and Levine, 1996; Akinifesi, 1987; Levine and Zervos, 1996; Obadan, 1998; Onosode, 1998; Emenuga, 1998; Osinubi, 1998). According to Nyong (1997) the financial structure of a firm, that is, the mix of debt and equity financing, changes as economies develop. The tilt is however, more towards equity financing through the stock market.

As economies develop, more funds are needed to meet the rapid expansion. 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 (Alile, 1984).

The determination of the overall growth of an economy depends on how efficiently the stock market performs its allocative functions of capital. As the stock market mobilizes savings, concurrently it allocates a larger proportion of it to the firms with relatively high prospects as indicated by its rate of returns and level of risk. The importance of this function is that capital resources are channelled by the mechanism of the forces of demand and supply to those firms with relatively high and increasing productivity thus enhancing economic expansion and growth (Alile, 1997).

Given that the stock market provides some services that ginger economic growth, this study, therefore, empirically investigates whether the stock market promotes economic growth in Nigeria using ordinary least square method of analysis on secondary data covering the period 1980 to 2000.

The remainder of the study is organized as follows. Section two reviews the literature. Section three contains a review of recent developments in the Nigerian stock market, while section four is the methodology and section five is empirical analysis. Section six concludes the study with summary and recommendations.

Literature Review

2.1 Stock Market and Economic Growth: Channels of Linkage

In recent times there was a growing concern on the role of stock market in economic growth (Levine and Zervos, 1996; Demirguc-Kunt and Levine, 1996; Oyejide, 1994; Nyong, 1997; Obadan, 1998; Onosode, 1998; Emenuga, 1998; Osinubi, 1998). The stock market is in the focus of the economist and policy makers because of the perceived benefits it provides for the economy. The stock market provides the fulcrum for capital market activities and it is often cited as a barometer of business direction. An active stock market may be relied upon to measure changes in the general economic activities using the stock market index (Obadan, 1995).

The stock market is viewed as a complex institution imbued with inherent mechanism through which long-term funds of the major sectors of the economy comprising households, firms, and government are mobilized, harnessed and made available to various sectors of the economy (Nyong, 1997). The development of the capital market, and apparently the stock market, provides opportunities for greater funds mobilization, improved efficiency in resource allocation and provision of relevant information for appraisal (Inanga and Emenuga, 1997).

There is a boom in the developed and emerging stock market with a substantial part of the growth accounted for by the emerging market. The reasons adduced for this are that: one, investing firms enjoy lower cost of equity when the stock market functions efficiently; two, the opportunity to trade securities and also hedge allows for relative reduction in risk; three, the ability of the market to adjust share prices almost instantaneously imposes control on the investment behavior of firms; and lastly, countries that are desirous of foreign investment are able to secure it, through the stock exchange (Demirgüç-Kunt and Levine, 1996).

Stock market contributes to economic growth through the specific services it performs either directly or indirectly. Notable among the functions of the stock market are mobilisation of savings, creation of liquidity, risk diversification, improved dissemination and acquisition of information, and enhanced incentive for corporate control. Improving the efficiency and effectiveness of these functions, through prompt delivery of their services can augment the rate of economic growth.

At any stage of a nation's development, both the government and the private sectors would require long-term capital. For instance, companies would need to build new factories, expand existing ones, or buy new machinery. Government would also require funds for the provision of infrastructures. All these activities require long-term capital, which is provided by a well functioning stock market.

Stock market may also affect economic activities through the creation of liquidity. Liquid equity market makes available savings for profitable investment that requires long-term commitment of capital. Hitherto, investors are often reluctant to relinquish control of their savings for long periods. As asserted by Bencivenga, Smith and Starr (1996), without liquid capital market there would be no industrial revolution. This is because savers would be less willing to invest in large, long-term projects that characterized the early phase of industrial revolution.

Closely related to liquidity is the function of risk diversification. Stock markets can affect economic growth when they are internationally integrated. This enables greater economic risk sharing. Because high return projects also tend to be comparatively risky, stock markets that facilitate risk diversification encourages a shift to higher-return projects (Obstfeld, 1994). The resultant effect is a boost in the economy leading to growth through the shifting of society's savings to higher-return investments.

Accelerated economic growth may also result to acquire information about firms. Rewards often come to an investor able to trade on information, obtained by effective monitoring of firms for profit. Thus, improved information will improve resource allocation and promote economic growth.

The nature and economic significance of the relationship between stock market development and growth vary according to a country's level of economic development with a larger impact in less developed economies (Filler, Hanousek and Campos, 1999). The proponents of positive relationships between stock market development and economic growth hinged their argument on the fact that the stock market aids economic growth and development through the mobilization and allocation of savings, risk diversification, liquidity creating ability and corporate governance improvement among others. Nyong (1997) reported that as far back as

1969 Goldsmith Raymond observed that the emergence of equity markets and its rapid development indicate the level of economic growth and development.

Using the liquidity argument, Bencivenga, Smith and Starr (1996) reasoned that the level of economic activities is affected by the stock market through its liquidity creating ability. The logic of this reasoning is that profitable investment requires long-term capital commitment; often investors are not willing or are reluctant to trade their savings for a long gestation period. With liquid equity markets, risks associated with investment are reduced, making it more attractive to investors. Thus, the easy transfer of capital ownership facilitates firms' permanent access to capital raised through equity issues. Therefore, as liquid market improves the allocation of capital, the prospect for long-term economic growth is enhanced. Also, savings and investment are increased due to reduction in the riskiness of investment facilitated by stock market liquidity.

However, an alternative view on stock market and long term economic growth by Demirgüç-Kunt and Levine (1996) observed that there are some channels through which liquidity can deter growth: Firstly, savings rate may be reduced, this happens when there is increasing returns on investment through income and substitution effect. As savings rate falls and with the existence of externality attached to capital accumulation, greater stock market liquidity could slow down economic growth. Secondly, reducing uncertainty associated with investment may impact on savings rate, but the extent and the direction remain ambiguous. This is because it is a function of the degree of risk-aversness of economic agents. Thirdly, effective corporate governance often touted as an advantage of liquidity of stock market may be adversely affected. The ease with which equity can be disposed off may weaken investors' commitment and serves as a disincentive to corporate control and vigilance on the part of investors thereby negating their role of monitoring firm's performance. This often culminates in stalling economic growth.

Edo (1995) asserts that securities investment is a veritable medium of transforming savings into economic growth and development and that a notable feature of economic development in Nigeria since independence is the expansion of the stock market thereby facilitating the trading in stock and shares. Osinubi (1998) reported that Harry Johnson in 1990 recognized that one of the conditions of being developed pertains to having a large stock of capital per head, which must always be replaced and replenished when used up. Where this is lacking the condition of being under developed prevails.

The Structural Adjustment Programme (SAP) promoted by the World Bank and the International Monetary Fund, embarked upon by the developing countries, according to Soyode

(1990) emphasized that self-sustained growth process requires substantial investible resources, which are readily available at the stock market.

2.2 Empirical Studies on the Impact of Stock Market on Economic Growth

Levine and Zervos (1996) examines whether there is a strong empirical association between stock market development and long-run economic growth. The study used pooled cross-country time-series regression of forty-one countries from 1976 to 1993 to evaluate this association. The study tow the line of Demirgüç-Kunt and Levine (1996) by conglomerating measures such as stock market size, liquidity, and integration with world markets, into index of stock market development.

The growth rate of Gross Domestic Product (GDP) per capita was regressed on a variety of variables designed to control for initial conditions, political stability, investment in human capital, and macroeconomic conditions; and then include the conglomerated index of stock market development. The finding was that a strong correlation between overall stock market development and long-run economic growth exist. This means that the result is consistent with the theories that imply a positive relationship between stock market development and economic growth.

Efforts were also made by Nyong (1997) to develop an aggregate index of capital market development and use it to determine its relationship with long-run economic growth in Nigeria. The study employed a time series data from 1970 to 1994. For measures of capital market development the ratio of market capitalization to GDP (in percentage), the ratio of total value of transactions on the main stock exchange to GDP (in percentage), the value of equities transaction relative to GDP and listings were used. The four measures were combined into one overall composite index of capital market development using principal component analysis. A measure of financial market depth (which is the ratio of broad money to stock of money to GDP) was also included as control. The result of the study was that capital market development is negatively and significantly correlated with long-run growth in Nigeria. The result also showed that there exists bi-directional causality between capital market development and economic growth.

Review of developments in Nigeria's stock market

3.1 Establishment of the Nigerian stock market

The Nigerian stock market came into fruition with the establishment, in 1960, of the Lagos Stock Exchange. It became the Nigerian Stock Exchange in 1977 with branches established in different parts of the country. As at the end of 1999 there were six branches at

Kaduna, Port Harcourt, Kano, Onitsha, Ibadan and Lagos, which also serves as the head office of the exchange. Each of the branches is with a trading floor. The stock exchange creates a market place where companies can raise capital, often referred to as primary market. At this market shares are issued for the first time to the public; and shareholders can trade in shares of listed companies, that is, secondary market. At this market, shareholders buy and sell existing shares.

3.2 Nigerian Stock Market Measures

Stock Market size

A common index often used, as a measure of stock market size is the market capitalization. Market capitalization equals the total value of all listed shares. In terms of economic significance, the assumption is that market size and the ability to mobilize capital and diversify risk are positively correlated. For the two decades covered by the study (1980 -1999) the average market capitalization was ₦78.33 billion with highest capitalization of ₦300 billion in 1999 and lowest capitalization of ₦4.46 billion in 1980. The trend is shown in Table1. Adeyemi (1998) identified a number of factors that account for lack of interest by Nigerian companies in being listed in the exchange: (i) high cost of public quotation, (ii) reluctance to dilute ownership and control through public quotation, (iii) the interest rate structure in the past which favoured debt financing over equity financing, and (iv) stringent requirement for listing.

(i) Liquidity

Liquidity is used to refer to the ability of investors to buy and sell securities easily. It is an important indicator of stock market development because it signifies how the market helped in improving the allocation of capital and thus enhancing the prospects of long-term economic growth. This is possible through the ability of the investors to quickly and cheaply alter their portfolio thereby reducing the riskiness of their investment and facilitating investments in projects that are more profitable though with a long gestation period. Two main indices are often used in the performance and rating of the stock market: total value traded ratio; and turnover ratio.

Total value traded ratio measures the organized trading of equities as a share of the national output. For the period 1980-1999 it averaged 0.25 per annum with the highest of 12.14 in 1999 and lowest of 0.24 in 1991. It is expected that it will positively reflect liquidity on an economy-wide basis. Year by year break down is shown in column 6 of Table 1.

Turnover ratio is used as an index of comparison for market liquidity rating and level of transaction costs. This ratio equals the total value of shares traded on the stock market

divided by market capitalization. It is also a measure of the value of securities transactions relative to the size of the securities market. The Nigerian Stock Exchange had an annual average turnover ratio of 0.04 between 1980 and 1999. This low index is an indication of relative illiquidity and stunting of the overall growth of the market. Column 7 of Table 1 gives the trend for the study period.

Table 1: Market Capitalization Ratio, Value Traded Ratio and Turnover Ratio 1980 – 1999

Year	Market Capitalization	Gross Domestic Product (<i>at 1984 factor cost</i>)	Market Capitalization Ratio	Total Value of Domestic Shares Traded	Value Traded Ratio	Turnover Ratio
(1)	(2)	(3)	(4) = (2÷3)	(5)	(6) = (5÷3)	(7) = (5÷2)
	₦ billion	₦ billion	%	₦ billion	%	%
1980	4.46	96.19	4.64	0.52	0.54	11.66
1981	4.84	70.40	6.88	0.33	0.47	6.82
1982	4.92	70.16	7.01	0.22	0.31	4.47
1983	5.80	66.39	8.74	0.40	0.60	6.90
1984	5.50	63.01	8.73	0.25	0.40	4.55
1985	6.40	68.92	9.29	0.31	0.45	4.84
1986	7.70	71.08	10.83	0.49	0.69	6.36
1987	8.90	70.74	12.58	0.29	0.41	3.26
1988	9.70	77.75	12.48	0.25	0.32	2.58
1989	12.00	83.50	14.37	0.65	0.78	5.42
1990	15.90	90.34	17.60	0.31	0.34	1.95
1991	22.60	94.61	23.89	0.23	0.24	1.02
1992	32.50	97.43	33.36	0.49	0.50	1.51
1993	46.90	100.02	46.89	0.66	0.66	1.41
1994	65.50	101.33	64.64	0.99	0.98	1.51
1995	171.10	103.51	165.30	1.84	1.78	1.08
1996	285.60	107.02	266.87	7.06	6.60	2.47
1997	292.00	110.40	264.49	11.07	10.03	3.79
1998	263.30	112.95	233.11	13.57	12.10	5.22
1999	300.00	116.00	258.62	14.08	12.14	4.69

Sources: Nigerian Stock Exchange Annual Reports and Accounts, Various years; Securities and Exchange Commission Annual Reports and Accounts; Central Bank of Nigeria Statistical Bulletin 1998 and the Federal Office of Statistics Statistical Bulletin

(ii) Concentration

This factor measures the level of domination of the market by a few enterprises. The significance of concentration as a measure of performance of stock market is because of the adverse effect it may have on the liquidity of the market. The share of market capitalization accounted for by the 10 largest stocks often measures the degree of market concentration. In Nigeria, a few companies dominate the market as the market capitalization of the top ten equities listed on the Nigerian Stock Exchange accounted for about 40 percent of the total stock market capitalization in 1999.

(iii) Number of listed Companies:

The average number of listed companies in the Nigerian stock market for 1980-1999 period was 129 companies. At the end of 1999, the number of listed securities stood at 269 including 196 companies. This indicates that 10 more companies were listed in 1999 as against 186 in 1998. Column 4 of Table 2 gives the trend for the study period.

On the African scene, the Nigerian stock market performed relatively well. The stock market ranked 3rd in the number of listed companies with 196 after Egypt with 1032 companies and South Africa with 668 companies. In effect, the Nigerian stock market provides greater option to investors in terms of choice of equities than most African market do. Over the years, the Nigerian stock market witnessed growth of equity listings, especially in the 1990's. This was attributable to economic policies put in place by the government, notable among which was privatization of public enterprises. Also, the establishment of second-tier securities market (SSM) which allowed small/medium-sized enterprises to participate in the capital market. As at the end of 1999 16 firms were listed in SSM market. The market capitalization, which opened the year at ₦263.3 billion, closed the year at ₦300 billion. This growth was attributed to new listings and recovery of equity prices.

The market turnover in 1999 at the exchange closed at 3.95 billion shares worth ₦14.1 billion up by 88.1% and 3.7% respectively on the volume and value of shares traded in 1998. A significant portion of the turnover in 1999 was linked with the internationalization of the stock market, which recorded the first foreign listing on the Nigerian Stock Exchange. This represents a breakthrough in the Exchange controls of the stock market, at the same time enhancing opportunities for portfolio diversification by domestic investors.

The world stock market performance review in 1999 showed that the Nigerian stock market was ranked 73 out of 97 countries based on percentage change in the price indices in US dollars; 78 out of 105 countries when ranked by turnover ratio; and 87 out of 100 based on average company size. Also, based on the market capitalization, value traded, and number of

listed domestic companies in 1999; the Nigerian market failed to make the top 40 in the world (Standard and Poor's Emerging Stock Markets Factbook, 2000).

**Table 2: Growth in the Number of Listed Securities
1980 – 1999**

Year (1)	Government Stock (2)	Industrial and Bonds (3)	Equities (<i>including Second-tier Securities Market</i>) (4)	Total (5)	Percentage Change (6)
1980	54	12	91	157	0.00
1981	56	14	93	163	3.82
1982	57	18	93	168	3.07
1983	61	25	92	178	5.95
1984	56	27	92	175	-1.69
1985	57	28	96	181	3.43
1986	58	29	99	186	2.76
1987	54	31	100	185	-0.54
1988	51	35	102	188	1.62
1989	47	40	111	198	5.32
1990	43	43	131	217	9.60
1991	40	57	142	239	10.14
1992	36	62	153	251	5.02
1993	32	66	174	272	8.37
1994	39	70	177	286	5.15
1995	28	67	181	276	-3.50
1996	24	69	183	276	0.00
1997	22	60	182	264	-4.35
1998	19	59	186	264	0.00
1999	15	58	196	269	1.89

Source: Nigerian Stock Exchange, Annual Reports and Accounts, Various years.

The exchange all shares index established in 1985 helped in gauging the mood of the market. The index witnessed an astronomical increase of 131% from 2,205 in 1994 when it closed at 5,092.2 in 1995. This increasing trend continued until 1998 when it decreased from 6,440.5 in 1997 to 5,716.1 in 1998 and 5,266.4 in 1999. This was due to the backdrop of a series of upward adjustment in the Minimum Rediscount Rate (MRR), which attracted funds away from the capital market, among other economic problems associated with the high interest rates in the economy. In percentage term, the figures represents an annual percentage change of 37.3%, -7.9%, -11.2% and -7.9% in 1996, 1997, 1998 and 1999 respectively. The trend is shown in Table 3.

In April 1999, the Nigerian Stock Exchange launched its Automated Trading System (ATS). This new computerized system was designed to make the market more efficient and transparent. This new computerized system complements the Central Clearing Depository System (CCDS) which was introduced in 1997.

**Table 3: The Nigerian Stock Exchange All-Shares Index
Percentage Change
(1984 –1999)**

Year	Index	Change (%)	Cumulative Change (%)
1984	100	--	--
1985	127.3	27.3	27.3
1986	163.8	28.7	56.0
1987	190.9	16.5	72.5
1988	233.6	22.4	94.9
1989	325.3	39.3	134.1
1990	513.8	57.9	192.1
1991	783.0	52.4	244.5
1992	1,107.6	41.5	285.9
1993	1,548.8	39.8	325.8
1994	2,205.0	42.4	368.1
1995	5,092.2	130.9	499.1
1996	6,992.1	37.3	536.4
1997	6,440.5	-7.9	528.5
1998	5,716.0	-11.2	517.2
1999	5,266.4	-7.9	509.4

*Source: Nigerian Stock Exchange, Annual Reports and
Accounts, Various years.*

3.3 CHARACTERISTICS OF THE NIGERIAN STOCK MARKET

Stock market development can be categorized using three main characteristics: traditional, institutional and asset pricing (Demirgüç-Kunt and Levine 1996). Traditional characteristics are concerned with basic growth measures of stock market. These measures include number of listed companies and market capitalization. There are also the Institutional characteristics measures. These Institutional characteristics measures are the regulatory and legal role that may influence functioning of the market, information disclosure and transparency requirements as well as market barriers and trading costs. Lastly, the Asset Pricing characteristics measures focus on the efficiency of the market especially in relation to the pricing of risk.

3.3.1 Traditional Characteristics

a) Market Size

With 269 securities listed and a market capitalisation of approximately ₦300 billion or US\$3,000 million, relatively to international standards, the Nigerian Stock Exchange can still be regarded as small. In Africa, Nigeria ranked 4th after South Africa, Egypt and Morocco in term of market size (Standard and Poor's Emerging Stock Markets Factbook, 2000). Among the emerging markets, Nigeria's share of emerging market capitalization out of 54 markets covered by Standard and Poor's was just 0.1% as at the end of 1999 (Standard and Poor's Emerging Stock Markets Factbook, 2000).

Alile and Anao, (1986) adduced possible reasons for the small size. One of the reasons is that indigenous entrepreneurs were not too keen in to going public due to fear of losing control. However, an innovative move by the stock market through the creation of second-tier securities market (SSM) tried to find solution to the problem. Measures taken by the governments and the exchange itself are expected to boost the resource base of the stock market in Nigeria. These measures are: Privatization of Public Enterprises, linking up of the exchange with Reuters Electronic Contributors System for on line global dissemination of stock information, launching of the exchange's Intranets System (CAPNET) and the transition of the exchange from manual call-over Trading System to Automated System (ATS) in April 1999. It is also expected that the present democratic dispensation will impact positively on the turnover of the exchange.

b) Liquidity

Basically, liquidity refers to the ease with which an asset (in this case securities) can be turned into cash through an efficient market. That is, the ability to easily buy and sell securities. Demirgüç-Kunt and Levine (1996) identified two main reasons why liquidity is important in the

characterization of stock market. The first is that liquidity relates to the riskiness of the investment. An investment is deemed to be less risky where investors are able to alter their portfolios quickly and cheaply. While the second, theoretically, allocation of capital is more efficient and as such liquid market enhances long-term economic growth. Added to the points above Osinubi (1998) pointed out that liquidity of the stock market facilitates profitable interaction between the stock market and the money market in that shares become easily acceptable as collateral for bank lending thereby boosting credit and investment.

There are two main measures of liquidity; total value traded ratio and turnover ratio.

- a) *Total value traded ratio* is the total value of shares traded on the Stock market exchange divided by GDP. It measures trading of equities as a share of national output. Normally, it should positively reflect liquidity on an economy wide basis. The market has an average of 0.25 per annum for the study period.
- b) *Turnover ratio* is the value of total shares divided by capitalization. High turnover reflects low transaction costs. The Nigerian stock market turnover ratio for the period under study has an average of 0.04. These two main measures are set out in column 6 and 7 of Table 1.

3.3.2 Institutional Characteristics

a) *Regulatory Institutions*

Regulation is seen as a way of buoying investor's confidence in brokers and other capital intermediaries and stakeholders. It ensures fair play and transparency in the market operations. This in turn encourages investment and trading in the stock market. Nigerian capital market had from the onset ensured that a strong institutional framework was in place through the establishment of Capital Issue Commission (though with no legal status), which later metamorphosed, to Nigeria Securities and Exchange Commission in 1979 and serves as the apex regulatory body of Nigerian capital market. Of added importance is that the Nigerian Stock Exchange itself is a self-regulatory institution (Akamiokhor, 1984; Inanga and Emenuga, 1997).

b) *Transaction costs*

One of the relative measures of the efficiency of a stock market is the level of transaction cost. The higher the transaction cost the highly inefficient the market is perceived to be. Transaction cost can either be viewed from the perspective of an investor or that of the companies. From a company's point of view, it includes all expenses incurred in the bid to make public offer of equity or loan stock. For an investor on the hand, transaction cost comprises all expenses incurred in the purchase of shares or loan stock. Identifiable transaction cost in Nigerian capital market includes: application fee (0.5%), valuation fee (0.75%), brokerage fee (1%) and vending fee (1%). Other cost item includes payment to

auditors, solicitors, advertising and administrative expenses (Inanga and Emenuga, 1997).

c) *Openness and market Barriers*

Until 1972 when the Indiginisation Decree was promulgated, there was no restriction to foreign investors in the Nigerian capital market. The Decree also known as Nigerian Investment Promotion Decree was amended in 1977 and it effectively restrict capital inflows to a maximum of 40% equity holding in listed security among other stringent measures. The Decree was again amended in 1989 during the privatization era. This time it was aimed at encouraging domestic investment by foreigners. However, total deregulation of the capital market was helped by the Nigerian Investment Promotion Commission Act of 1995, Foreign Exchange (Miscellaneous Provisions) Act of 1995 and recently, the Investment and Securities Act of 1999. Foreigners now participate in the Nigerian capital market both as operators and investors. There is no limit any more to the percentage of foreign holding in any company registered in Nigeria. As at 2000, foreign holdings on the Nigeria stock exchange is 3.96 on the average (BGL Financial Monitor, 2001).

3.3.3 Asset Pricing Characteristics

This deals with the efficiency of the asset pricing process in the securities market. The major yardstick for measuring efficiency in terms of market prices is the informational content inherent in such prices. A market price is touted as reflecting a strongly efficient market if it adequately and correctly reflects all available information (past, present and future) and are at the disposal of all market participants simultaneously and instantaneously. It is regarded as semi-strong where current stock prices reflect both the information contained in the historical prices and all publicly available information. Where the current prices reflect only the historical information with little predictive value, the market is regarded as weak (Inanga and Emenuga 1997).

Methodology

4.1 Model Formulation

The linkage between stock market and economic growth has occupied a central position in the development literature (see Samuel, 1996; Demircuc-Kunt and Levine, 1996; Akinifesi, 1987; Levine and Zervos, 1996; Obadan, 1998; Onosode, 1998; Emenuga, 1998; Osinubi, 1998). In examining this on Nigeria's data, the study use the neoclassical growth model, otherwise referred to as the growth accounting framework, to explain the source of growth in an

economy. The national accounts form the basis of the economies to be analyzed and it is used in conjunction with the aggregate production function. This approach has got a wide application in econometric analysis (for example, Akinlo and Odusola, 2000; Levine and Zervos, 1996; Obstfeld, 1994).

Using a production function approach, it states that the growth rate of output (GDP) is principally determined by the following factors:

the rate of growth of gross labour and/or the rate of growth of its quality,
multiplied by the labour income share;

the rate of growth of gross capital input and/or the rate of growth of its
quality, multiplied by the capital income share; and

change in technology or total factor productivity (TFP).

This is given as: $g = f(L, K, T) \dots\dots\dots(1)$

Where: g = growth of GDP

L = labour

K = capital formation / investment

T = technology

The application of this method, however, has been extended to incorporate other determinants of economic activities such as financial sector development (proxy: by stock market development index); trade (openness); debt overhang; state of political stability; public policy (proxy: by public investment); and country/ policy dummies (for example, Collier and Gunning, 1998; Demirguc-Kunt and Levine, 1996; Emenuga, 1998; Filler et al., 1999).

In line with the above specification, our model is specified thus:

$g = f(gpci, cmi, gk, pce, debthang, openes, polca, sapd) \dots\dots\dots(2)$

where:

g = growth rate of GDP;

$gpci$ = growth rate of per capita income;

cmi = capital market index proxy by growth of market capitalization (g_{lmcap}), new issues (ni),
and growth of value traded ratio (grv)

gk = gross capital formation;

pce = public capital expenditure;

$debthang$ = debt overload proxy by export - GDP ratio;

$openes$ = openness proxy by the sum of export and imports as a ratio of GDP;

$polca$ = political dummy (coup or no coup); and

$sapd$ = Structural Adjustment Programme dummy (changes in government policy).

The estimate form of the model is as given below:

$$g = (\alpha_0 + \beta_1 \text{gpci} + \chi_2 \text{cmi} + \delta_3 \text{gk} + \phi_4 \text{pce} + \gamma_5 \text{debthang} + \eta_6 \text{openes} + \varphi_7 \text{polca} + \psi_8 \text{sapd} + \varepsilon_t) \dots\dots\dots(3)$$

where $\alpha_0, \beta_1, \chi_2, \delta_3, \phi_4, \gamma_5, \eta_6, \varphi_7, \psi_8$ are the parameter estimates and ε_t is the error term.

Equation 3 will be estimated using ordinary least squares technique (OLS). The equation will also be subjected to a dynamic estimation, using the lagged structure of the variables. There will be the determination of the existence of substantial co-movements among time series variables. The reason for this is that when the dependent and independent variables have unit roots, traditional estimation method, using observations on levels of those variables, would likely find a statistically significant relationship, even when meaningful “economic” linkage is absent (Akinlo and Odusola, 2000).

To determine the time series properties of the variables the data will be subjected to Augmented Dickey-Fuller Unit Root Test (Dickey and Fuller, 1981). The Univariate time series behaviour will therefore be determined.

This study used data covering 1980 to 2000 mainly from the secondary sources on the Nigerian economy and the Nigerian stock market. The choice of these secondary sources is based on their authenticity and reliability. The sources are the Nigerian Stock Exchange Fact Book 2000, The Nigerian Stock Exchange Annual Report and Accounts (for various years), Central Bank of Nigeria Statistical Bulletins and Federal Office of Statistic Statistical Bulletin.

Analysis of the Results

5.1 Time Series Properties

As noted in the last section, the time series of the variables were examined. The results are as contained in Table 10. With the exception of **g** and **grv** that are stationary at the level, all other variables are stationary at first differencing. This therefore implies the use of first difference in our model. This allows the outcome of the model to have policy implications.

Table 4: Unit Root Test

Variables	Level	1st Difference at 5%
Gpci	-2.486	-5.042
Openes	-0.135	-4.035
Debthang	1.148	-0.497
Gpcexp	-2.296	-5.954
G	-2.694	-5.234
Debtexpot	-1.955	-2.687
Grv	-3.236	-5.679
Rv	-1.316	-2.182
Rt	-2.494	-5.685
Rmcap	-0.421	-3.656
Ni	1.468	-4.303
Gk	-1.172	-3.103

Note: The statistical software utilized is E-View.

Where:

- gpci = growth rate of per capita income;
- openes = openness proxy by the sum of export and imports as a ratio of
- debthang = debt overload proxy by export - GDP ratio
- gpcexp = growth rate of public capital expenditures
- g = growth rate of gross domestic product
- debtexpot = debt - export ratio
- grv = growth of value traded ratio
- rv = value of shares traded ratio
- rt = turnover ratio
- rmcap = market capitalization ratio
- ni = new issues;
- gk = gross capital formation;

5.2 Regression Results

Explaining the process of economic growth is an intricate issue. This is because many variables can be used to explain economic growth. However, the link between stock market development and economic growth is derived from the services the stock market provides to the

economy as a whole. For instance, it helped in mobilizing resources in the economy and allocates such resources in the most efficient ways to competing sectors of the economy.

The confirmation or otherwise of this assertion as pertains to Nigeria, for the period between 1980 and 2000, was set out in a model of four equations which has as its dependent variables the growth rate of gross domestic product (**g**).

In the model some variables are common to all the equations and they served as the control variables. These variables are per capita income (**pci**), political stability (**polca**), gross capital formation (**gk**), lagged growth rate GDP and SAP dummy (**sapd**).

$$g = \alpha_0 + \beta_1 dgpci + \chi_2 dgpci (-1) + \delta_3 dgk (-1) + \phi_4 gy (-1) + \gamma_5 grv (-1) + \eta_6 polca + \psi_7 sapd + \varepsilon_t \dots \dots \dots \quad 4$$

In equation 4, the lagged growth in value traded ratio (**grv**) and the growth in gross domestic product (**g**) showed positive relationship such that an increase in value traded ratio will lead to 1.85 increase in growth rate of the GDP. This conforms with theory but the statistical significance is low. The results are contained in Table 5.

$$g = \alpha_0 + \beta_1 dgpci + \chi_2 dgpci (-1) + \delta_3 dgk (-1) + \phi_4 gy (-1) + \gamma_5 dni (-1) + \eta_6 polca + \psi_7 sapd + \varepsilon_t \dots \dots \dots \quad 5$$

The use of new issues (which was lagged: **dni**) as an indicator of stock market development in equation 5 also indicated the existence of a positive relationship with economic growth as expected. Though the result is in line with the theoretical proposition, the statistical significance of the relationship could not be established. The results are contained in Table 5.

$$g = \alpha_0 + \beta_1 dgpci + \chi_2 dgpci (-1) + \delta_3 dgk (-1) + \phi_4 gy (-1) + \gamma_5 glmcap + \eta_6 polca + \psi_7 sapd + \varepsilon_t \dots \dots \dots \quad 6$$

Growth in market capitalization, as reflected in equation 6, also conforms with the theory by showing a positive relationship, but is very weak both in parameter estimates and statistical significance. The results are contained in Table 5.

$$g = \alpha_0 + \beta_1 dgpci + \chi_2 dgpci (-1) + \delta_3 dgk (-1) + \phi_4 gy (-1) + \gamma_5 glmcap + \eta_6 polca + \psi_7 sapd + \varphi_8 gpexp + \mu_9 debtpot + \varrho_{10} ar (1) + \varepsilon_t \dots \dots \dots \quad 7$$

The pattern followed by other equations was also reflected in equation 7. The introduction of growth in public capital expenditure showed that there is positive relationship between public capital expenditure and economic growth. This relationship is however, not statistically

significant. Debtexpot, a proxy for debt overhang, is nevertheless statistically significant though the positive relationship is weak. The results are contained in Table 5.

Generally, there is a positive relationship between per capita income and economic growth. The model proved this to be statistically significant in all the equations at one percent level. Also, political instability (polca) conforms with theoretical explanations of negative relationship with economic growth. The period between 1980 and 2000 witnessed more of political instability than stability, thereby resulting in a negative relationship with growth. Furthermore, the Structural Adjustment Programme (SAP) dummy used shows a positive relationship with the growth of economic activities. The relationship is however, not statistically established, even at 10 percent level.

With 99 percent R-squared and 98 percent Adjusted R-squared, the result indicated that economic growth in Nigeria is adequately explained by the model for the period between 1980 and 2000. By implications 98 percent of the variation in the growth of economic activities is explained by the independent variables.

TABLE 5: REGRESSION RESULTS

Variables	Equation 4	Equation 5	Equation 6	Equation 7
Constant	0.222 (1.515)	0.222 (1.506)	0.087 (1.929)	0.455 (3.209)
DGPCI	0.002 (13.477)*	0.002 (14.534)*	0.002 (28.107)*	0.002 (15.308)*
DGPCI(-1)	0.001 (1.196)	0.001 (1.1586)	6.780 (0.143)	0.001 (2.585)
POLCA	-0.000 (-0.603)	-0.000 (-0.528)	-0.001 (-0.577)	-0.000 (0.299)
DUMMY	0.001 (0.771)	0.001 (0.940)	0.001 (0.389)	0.001 (0.723)
DGK(-1)	1.430 (1.177)	1.620 (1.180)	1.340 (0.992)	3.400 (2.311)
GY(-1)	0.779 (5.343)	0.779 (5.341)	0.910 (19.072)	0.543 (3.840)
GRV(-1)	1.850 (0.341)			
DNI(-1)		2.210 (0.357)		
GLMCAP			0.004	0.001

			(0.529)	(0.183)
GPCEXP				2.210 (0.263)
DEBTEXPOT				0.001 (2.437)
AR(1)				0.226 (2.135)
R-squared	0.993	0.993	0.992	0.995
Adjusted R-squared	0.982	0.982	0.985	0.983
S.E. Regression	0.001	0.001	0.001	0.001
Sum of squared resid	8.220	8.200	1.160	5.150
Durbin-Watson stat	1.25	1.300	1.446	1.603
Mean Dependent var	1.007	1.08	1.007	1.008
S.D. dependent var	0.009	0.009	0.010	0.009
F-statistic	90.077	90.39	130.925	78.627
Prob(F-statistic)	0.00	0.00	0.00	0.000

Note: t-values are in parenthesis

** indicates significance at 1 percent*

6.1 Summary of major findings

The study examines whether stock market promotes economic growth in Nigeria between the period 1980 and 2000. The study, from the regression results, confirms that there exist positive relationship between the economic growth and the measures of stock market development used. However, these relationships are statistically insignificant. This in essence means that the effect of stock market on economic growth is weak and insignificant. This is in line with Alile (1984) assertion that the Nigerian stock market contribution to gross fixed capital formation was very minimal fluctuating between 2.9 percent and 15.3 percent between 1971 and 1980.

This result is a reflection of the structural rigidities prevailing in the economy which makes the stock market more of an appendage of the government institutions rather than a market driven by efficiency through the interplay of the forces of demand and supply. This is even more pronounced in the nonchalant reactions of the stock market index to shocks in the economy contrary to what obtain in the developed economies. To buttress this point, the neutrality of the dummy used to represent government policy, (the Structural Adjustment

Programme) showed the degree of insensitivity of stock market development to macroeconomic and sectoral policies.

The overbearing influence of the per capita income in the model indicates that an increase in per capita income is very crucial for economic growth and it may increase savings, which may in turn help in boosting stock market activities, other things remaining the same. The place of political stability is well pronounced by the result. For an economy to grow there must be political stability, which was lacking in the period covered by the study. Political stability helps in instilling confidence in the market operators thereby enhancing the development of the market.

Another major outcome of the study was the fact that the stock market during the period was faced with legislation and policy instability. Thus, the enabling environment was not so conducive and this partly affected the activity of the market and its slow development as witnessed during the period under study. The attractiveness of the stock market as a veritable source of funds was therefore jeopardized.

The results of the study invariably showed that some serious policy issues will have to be put in place to promote stock market development and stimulate economic growth. For example, the liberalization of restriction on portfolio and dividend flow must be high on the agenda of reform (Nyong, 1997). Also, the international integration of the stock market must be vigorously and relentlessly pursued.

6.2 Policy Recommendations

The findings from this study raise some policy issues and recommendations, which will reinforce the link between the stock market and economic growth in Nigeria.

Given that the stock market operate in a macroeconomic environment, it is therefore necessary that the environment must be an enabling one in order to realize its full potentials.

The demand for the services of the stock market is a derived demand. With the existence of a positive relationship between stock market development and economic growth, it is pertinent to recommend that there should be sustained effort to stimulate productivity in both the public and private sectors.

The determination of stock prices should be deregulated. Market forces should be allowed to operate without any hindrance. Interference in security pricing is inimical to the growth of the market.

The stock market is known as a relatively cheap source of funds when compared to the money market and other sources. The cost of raising funds in the Nigerian market is however,

regarded to be very high. There should be a review downward, of the cost, so as to enhance its competitiveness and improve the attractiveness as a major source of raising funds.

Considering the benefits being enjoyed by the stock market through the internationalization of its operations, there should be no policy turn around but a sincere pursuit of this policy.

Though the recent legislations on the stock market have been hailed in many quarters as one of the best thing to happen to the stock market in recent times, there are still some gray areas. For instance, the removal of the double taxation effects on the returns of the investors in the stock market must be effected if the market is to develop as envisaged.

Given the present political dispensation, all the tiers of government should be encouraged to fund their realistic developmental programmes through the stock market. This will serve as a leeway to freeing the resources that may be used in other sphere of the economy.

6.3 Conclusions

That the stock market promotes economic growth is not in doubt. It serves as an important mechanism for effective and efficient mobilization and allocation of savings, a crucial function, for an economy desirous of growth.

This study attempted to place this role in the Nigerian context between the period of 1980 and 2000. By the use of some notable stock market development indicators, the relationship between stock market development and economic growth was found to be positive. This suggests that for a significant growth the focus of policy should be on measures to promote growth in the stock market.

The Nigerian stock market has a bright prospect given the recent policy direction especially the abrogation of all laws that hitherto hamper its effective and efficient functioning. Also, the internationalisation, the improvement in the infrastructural facilities in the market in line with what obtains in the developed market and also the present democratic dispensation will all work individually and jointly to ginger the prospect of the stock market.

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