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Correlating disposable incomes and investing in equities in the Nigerian capital market

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Abstract
Capital markets in all economies globally, signify the economic performance and level of growth and development of the country. A vibrant market indicates positive performance and a non-vibrant market reflects economic downturn. For investors to engage in capital market activity, there must be interest and appropriate incomes that are disposable. The level of poverty plays a great role in allowing the investor to have incomes that will allow such investment activity. This study intends to update literature by using a behavioural approach to look at investment in equities in the Nigerian capital market. Specifically, the level of disposable incomes towards investing in equities. The objective of the study is to investigate the behaviour of investors on disposable incomes and investing in equities in the Nigerian capital market. The research question formulated to guide the study was to what extent are additional income of investors having an effect on investing in equities in the Nigerian capital market? The research is a qualitative study. Primary data was used to conduct the research through questionnaires. The dependent variable was capital market proxy by awareness on equities in the Nigerian capital market, and the independent variable was disposable income proxy by additional income of investors, savings of investors, and investors interest. SPSS was used to analyse the data, and the results revealed that additional income of investors had no effect on investing in equities in the Nigerian capital market.

Keywords: Capital market, equities, income, savings

1. Introduction

Capital markets globally reflect economic performance of countries and ensure that growth and development is achieved through its activities. Such markets ensure the channelling of funds from the surplus to deficit sectors of the economy. Investors are willing to provide funds to areas that are in need of such funds to finance business activities. A vibrant market reflects economic activity and performance, and, a market that is not vibrant signals that the economy is not performing as well as expected and that there is not much investment activity from investors. This position is not encouraging and possibly an indication of downturn in businesses.

The Nigerian capital market over the years has been one which has recorded booms and inactivity. It is a market which encourages investment and economic development, but the investing public of recent have not been showing interest of investing in the market. From the perspective of individual investors, there are two prominent ways of investing in the capital market. The equities market and the bond market. Whichever form of investment that one is interested in, will be determined by the level of excess funds available to the investor and investors' interest.

Additional income can be seen from many perspectives. Incomes available from other sources can generally be referred to as additional income. When an investor has excess income from what is obtained, such monies can be used to invest in the Nigerian capital market. There are instances where an investor may be interested in patronising the capital market, but lack of excess funds can prevent the investor in buying share or bonds in the capital market.

Savings is corelated to additional income. An investor can save from all incomes to make use of unforeseen circumstances, undertake investments in the capital market by buying shares or bonds. Traditionally, savings have been eroded in the Nigerian context due to the current economic hardship being experienced in Nigeria. Such economic issues include increase in the price of fuel, increase in inflation rates, devaluation of the Naira in the foreign exchange market, and so on, which has practically and completely eroded savings culture amongst Nigerians. This situation has practically made it difficult for investors to buy equities in the capital market.

One of the most important determining factors for investment is in the area of interest. Prayudha and Kuswanto (2019) are of the view that many things determine investor's interest when investing in the capital market, some of which include performance of the investment in terms of risks and returns, annual report information, and risk about the capital market itself. These issues play a significant part in determining whether to invest in the market or not.

Correlating disposable incomes in respect to additional incomes, savings and investors interest becomes important in investing in equities in the capital market because without the incomes, savings and interest, participating in capital market activities will be quite low. Obamuyi (2013) in the study investigating factors influencing investment decisions highlighted socio-economic factors which included age, gender, marital status, educational qualifications as factors which influenced investment decisions. This study goes a step further to include disposable incomes as a correlation to determine investing in equites in the Nigerian capital market.

Many studies conducted on the capital market looked at market performance from the perspective of stock behaviour Miller (1977); Zariphopoulou (1999); or from the perspective of investor preferences Dunusinghe and Ranasinghe (2015); Gneezy, Kapteyn and Potters (2003). Similarly, the Gneezy, Kapteyn and Potters (2003) Gneezy, Kapteyn and Potters (2003) Gneezy, Kapteyn and Potters (2003). Similarly, theories developed by Sharpe (1964) and Lintner (1965) and other stock market behaviour of the capital asset pricing model, the arbitrage theory and random walk hypothesis all looked at market behaviour. This research intends to look at capital market from a different perspective, a behavioural approach which is a practical contribution, to look at disposable income from the perspective of the individual investor as regards to investing in equities in the Nigerian capital market. This study intends to investigate this gap and update the literature.

The general objective of the study is to investigate the behaviour of investors on disposable incomes and investing in equities in the Nigerian capital market, the specific objectives are identified as:

To examine whether any additional income of investors is used to invest in equities in the Nigerian capital market

To investigate whether investors save from incomes to invest in equities in the Nigerian capital market

To investigate whether investors are interested in buying equities in the Nigerian capital market

To guide the research and in line with the objectives of study, the following research questions were formulated:

To what extent are additional income of investors having an effect on investing in equities in the Nigerian capital market?

To what extent is savings of investors having an effect on investing in equities in the Nigerian capital market?

To what extent are investors interest in buying equities having an effect on investing in the Nigerian capital market?

The hypotheses of study are formulated in null form:

H_{01}: Additional income of investors has no effect on investing in equities in the Nigerian capital market

H_{02}: Savings of investors has no effect on investing in equities in the Nigerian capital market

H_{03}: Investors interest in buying equities has no effect on investing in the Nigerian capital market

The scope of the study covers investors that are 20 years of age and above. This is because the minimum age for investing in capital market activities is 18 years. Also, the scope covers investment in equities in the Nigerian capital market. The scope of disposable incomes looks at additional incomes, savings, and interest, and does not include income net of tax and expenses.

2. Literature Review

Ituma (2015) informs that the history of the capital market dates back to as far back as 1959 when calls were made to develop the money and capital markets. The Barback Committee was thereafter commissioned by the government which eventually led to the establishment of the Lagos Stock Exchange in 1960. The market since then has grown in volumes and sophistication, and with the Privatisation and commercialisation of public enterprises, the awareness of the capital market increased and created more avenues for investors.

The level of poverty has played a significant role in allowing the investor to have incomes that will allow investment activity. People are generally concerned about the basic necessary items for survival than looking at investment activity. The level of awareness and interest on investing in the capital market has equally played a great role in investing in the Nigerian capital market. Of recent, the government has engaged and encouraged capital market activities to finance many projects. The bond market has therefore become very active.

Many definitions have been made on disposable incomes. Normally incomes remaining after taxes and expenditure are deducted consist the wholistic definition of disposable income, the corporate finance institute (2023) includes the definition of disposable income to include factors which determine demand.

In the area of low disposable incomes and investment attitudes to capital market, many Nigerians live below the poverty line. They are poor and may not have the additional income to embark on investing in the capital market. The ordinary Nigerian is looking for food to consume. Consumption therefore plays a significant role in their day-to-day activity. As a result of increased consumption, the tendency to save is almost practically eroded leading the country into a poverty trap. The need therefore arises to build a savings and investment culture amongst Nigerians as it is of concern for developing countries which is also the view of Dorsainvi (2019).

Malik (2017, as cited in Rosdiana, 2020), is of the view that interest play an important role for investment decisions. Rosdiana, (2020), opines that increasing consumption hinders investing in the capital market and that many do not understand the importance of having the knowledge of managing finances and that such knowledge and activities are undertaken by wealthier people. Investment decisions however, to the rational investor is more about choice and results.

Awareness of investing in the capital market is key for driving capital market activities, awareness both in terms of education and knowledge makes the investment public to be cumbersome with capital market activities, and gives the knowledge on the advantages and disadvantages associated with such investment. From experience many people who were aware of capital market activities before the global economic crises of 2007 to 2008 and invested heavily in the market. The losses they encountered during the downturn gravely discouraged their attitudes for investment. Deeene and Pathi (2013) looked at such awareness and feel that much was needed to increase the level of awareness in capital market investing. Awareness and participation would significantly increase the level of market activity and in turn grow the economy. Similarly, policies should be targeted at making the investment climate and market environment very conducive to operate in so that value can be maximized and more wealth created.

Other studies conducted capital market activities include those of Zariphopoulou (1999) who looked at optimal consumption and portfolio choice, Gneezy, Kapteyn and Potters (2003) looked at the frequency of feedback information on the performance of an investment portfolio and the flexibility with which the investor can change to influence risk attitude in markets, and Dunusinghe and Ranasinghe (2015) who looked at factors influencing the investor's decisions in stocks. These studies and more give more insight on market behaviour that were derived from the various theories on capital market.

Theories of Capital Market

Theoretically, Miller (1977), Sharpe (1964) and Lintner (1965) amongst others have studied investment behaviours in the market which eventually gave rise to Capital Asset Pricing Model, Arbitrage Pricing Theory and Random Walk Hypothesis.

The Capital Asset Pricing Model was developed by Sharp (1964) and Lintner (1965) and they gave a prediction on how systematic risk is measured in relation to expected return of stocks. Ibenta, (2005) states that "prices are determined in such a way that risk premiums are proportional to the systematic risk. That the expected risk premium from any investment should lie on the Security Market Line and the relationship between the expected rate of return on a share is expressed as a linear function of a measure of risk." This provided a baseline for evaluating securities that is used to determine the company's cost of equity.

The model equation states:

$$ER = R_f + \beta_i(ER_m - R_f) \quad (1)$$

where the variables are defined as:

ER = expected return of investment
R_f = risk free rate of return
β_i = investment beta
ER_m = expected return of the market
$ER_m - R_f$ = risk premium of the market

The Arbitrage pricing theory as stated by Ibenta (2005), argues and states that "return on assets are subject to a series of actors unlike the capital assets pricing model which looks at the rates of return on an asset as a function of a single factor, which is the market portfolio." Ross (1976) was the proponent of the arbitrage pricing theory and that it is a method of estimating asset prices. Also, that returns are dependent on factors such as the market, the security itself and macro-economic variables.

In equilibrium, the expected returns of the assets are expressed as follows:

$$E(r) = R_f + \beta_{j1}RP_1 + \beta_{j2}RP_2 + \beta_{j3}RP_3 + \beta_{j4}RP_4 + \ldots + \beta_{jn}RP_n \quad (2)$$

where the variables are defined as:

$E(r)$ = expected return of the assets
R_f = risk-free rate
β_j = sensitivity of the asset's return to the particular factor
PP = risk premium associated with the particular factor
R = number of securities

The two aspects that explain the expected return are the macroeconomic security-specific influences and the asset's sensitivity to those influences (https://investinganswers.com/dictionary/a/arbitrage-pricing-theory-apt).

The Random Walk Theory asserts that the share price movements occur in a random order or without any sequence. The share movement of today is not is independent of the share price movement of yesterday. In the random walk hypothesis, the share price of tomorrow (P_{t+1}) can be expressed as today's price P_t plus a random expected error E_{t+1} and has an expected value of zero (Ibenta, 2005).

$$P_{t+1} = P_t + E_{t+1} = 0 \quad (3)$$

The market is efficient and that all information from the past and present as well as knowable in future are the reflection of the market prices of the security. The Random Walk Hypothesis states that:

(i) Market prices of the securities fully reflect all available and relevant information.
(ii) Changes in price are not systematic but random variables.
(iii) There is no specific and recurring pattern in the behaviour of security market prices that would form a basis for formulating a reliable trading rule.

This study adopts the capital asset pricing model theory because it opines that behaviour of investors are determined by the markets where information is available and reflects market share prices.

3. Methodology

The research is a qualitative study approach and a survey design used to conduct the study using 3 main approaches - ethnography, narrative research and phenomenological research. Using the ethnography approach, the study immersed the respondents to understand the investing in the capital market with available funds. Using the narrative approach, it was interpreted to understand how people made sense of their experiences and perceptions on capital market activities, and using the phenomenological approach, the study investigated investor's experiences on investing in equities

Census of the Study

The population and sample of the study was a census consisting of the investing public in Nigeria. This consisted of people in the age of 20 years and above. 300 people were selected using convenience sampling technique for the research.

Data Collection

Primary data was used to conduct the research. Closed ended structured questionnaires were administered. This was to give direction and avoid questions that do not relate with the research. The questionnaire issued informed the respondents that the research was for academic purposes.

Variable Measurement

The dependent variable was level of awareness and a 5-point likert scale was used starting with little, some, moderate, good, and ending with extensive. The independent variables were, additional income, savings and investor's interest and a 2-point scale of yes or no was used to measure the variables of study.

Data Analysis

Statistical Package for Social Sciences (SPSS) was used to interpret the data. The dependent variable was capital market proxy by awareness on equities in the Nigerian capital market. The independent variable was disposable income proxy by additional income of investors, savings of investors, and investors interest.

The Model

The model was a multiple linear regression model which captured the dependent and independent variables.

In functional form, the dependent and independent variables are expressed as follows:

$$AWE = f(DIS) \quad (4)$$

Where:

AWE = Awareness of investing in equities the Nigerian capital market

DIS = Disposable income

In equation form the relationship was expressed as follows:

$$AWE = \alpha + \beta_1(ADI)_n + \beta_2(SAV)_n + \beta_3(INT)_n + \varepsilon \quad (5)$$

Where:

AWE = Awareness of investing in equities the Nigerian capital market

ADI = Additional income of investors

SAV = Savings of investors

INT = Investors interest in buying equities

α = Constant
$\beta_1 .. \beta_3$ = Coefficient of the regressors
$_n$ = number of respondents
ε = error term

A Priori Expectation of the Results

The A Priori expectation of the dependent and independent variables of the results is that:

1. Additional income of investors will have a positive effect on investing in equities in the Nigerian capital market.
2. Savings of investors will have a positive effect on investing in equities in the Nigerian capital market.
3. Investors interest in buying equities will have a positive effect on investing in equities in the Nigerian capital market.

4. Results and Discussion

Demographics of the Respondents

Table 1: Age group

	Frequency	Percent
20 -25	49	18.5
26 – 30	42	15.8
31 – 35	47	17.7
36 – 40	55	20.8
41 – 45	38	14.3
46 – 50	20	7.5
50 & above	14	5.3
Total	**265**	**100**

Source: SPSS output

From the analysis of questionnaires issued 265 people disclosed their age groups. Majority of the respondents were between the ages 36 – 40 years (representing 20.8% of the respondents). The least were aged 50 years and above.

Table 2: Gender

	Frequency	Percent
Male	159	60.0
Female	102	38.5
Missing	4	1.5
Total	**265**	**100.0**

Source: SPSS output

From the respondents, 60 percent were male, while 38.5 percent were female. 4 people representing 1.4 percent refused to disclose their gender.

Table 3: Occupation

	Frequency	Percent
Business	75	28.3
Government service	94	35.5
Private service	48	18.1
Others	42	15.8
Missing	6	2.3
Total	**265**	**100**

Source: SPSS output

From the respondents, 259 people representing 97.7 percent, were either employed or were engaging in one business or the other. From the analysis, the highest occupation was those who were employed in government, representing 35.5 percent. This was followed by people engaged in business (28.3%) and those in private service (18.1%). From this analysis, the respondents having some sources of income should be able to embark on investment in capital market activities.

Table 4: Education

	Frequency	Percent
Below graduation	45	17.0
Graduation	109	41.1
Postgraduation	86	32.5
Higher (Ph.D.)	16	6.0
Missing	9	3.4
Total	**265**	**100**

Source: SPSS output

109 respondents representing 41.1% were graduates, 45 respondents (17.0%) were not graduate, 86 people (32.5%) had education up to postgraduate level, 16 people (6.0%) had Ph.D. degrees. 9 people refused to state their level of education. From this analysis, majority of the respondents should be able to have knowledge on capital market activities.

Table 5: State of work

	Frequency	Percentage
Kaduna	193	72.8
Others	17	6.4
Missing	54	20.4
Total	**265**	**100**

Source: SPSS output

From table 5 above, 72.8% representing 193 of the respondents work in Kaduna State.17 people work outside Kaduna State, while 54 people did not indicate the State they worked for.

Table 6: State of residence

	Frequency	Percentage
Kaduna	216	81.5
Others	21	7.9
Missing	27	10.2
Total	**265**	**100.0**

Source: SPSS output

From table 6, majority of the respondents representing 216 people reside in Kaduna State. 21 people live outside Kaduna State, while 27 people did not indicate their State of residence.

Table 7: Correlations

	Awareness	Additional Income	Save from Income	Interested in Buying Shares
Awareness	1	-.227**	-.210**	-.102
Additional Income	-.227**	1	.310**	-.010
Save from Income	-.210**	.310**	1	.209**
Interested in Buying Shares	-.102	-.010	.209**	1

**. Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS output

From the table 7 of correlations, the variables that were significantly correlated at 0.01 level of significance were, awareness with additional income with -.227, awareness with savings from income with -.210, savings from income with additional income with .310, and savings from income with interested in buying shares with .209. The variables with the least correlation were from interested in buying shares with additional income.

Table 8: Descriptive Statistics

	Mean	Std. Deviation	N
Awareness	10.7282	3.65002	195
Additional Income	1.6512	.47753	258
Save from Income	1.6102	.48866	258
Interested in Buying Shares	1.2598	.74082	254

Source: SPSS output

From Table 8, of descriptive statistics additional income and savings from income had the highest number of variables. The least number of variables was awareness. The highest mean and standard deviation was awareness with 10.7282 and 3.65002 respectively. Interested in buying shares had the least mean and standard deviation with 1.2598 and .74082 respectively.

Table 9: Summary of regression results

Parameters	Coefficients	t	Sig.
Constant		13.290	
Additional Income	-.185	-2.422	.016
Save from Income	-.123	-1.570	.118
Interested in Buying Shares	-.076	-1.041	.299
R	.297		
R^2	.088		
Adj R^2	.075		
Regression F Stat	6.654		

Source: SPSS output

From the summary of regression results, the R^2 value of .088 means that 8.8% of the independent variables is explained in the dependent variables. 91.2% are not explained in the model.

Test of Hypotheses

Decision rule:

The decision rule is that if $p < 0.05$ and t-value is > 1.96, we reject the null hypothesis, otherwise we fail to reject the null hypothesis.

H_{01}: Additional income of investors has no effect on investing in equities in the Nigerian capital market

From the statistics of .016, (Sig. > 0.05), t-value of -2.422 (t < 1.96), we fail to reject the null hypothesis and conclude that additional income of investors has no effect on investing in equities in the Nigerian capital market.

H_{02}: Savings of investors has no effect on investing in equities in the Nigerian capital market

From the statistics of .118, (Sig. > 0.05), t-value of -1.570 (t < 1.96), we fail to reject the null hypothesis and conclude that savings of investors has no effect on investing in equities in the Nigerian capital market. The results of this research did not comply with the study of Ebele (2016) whose findings showed that savings had a significant and positive impact on stock market development in Nigeria.

H_{03}: Investors interest in buying equities has no effect on investing in the Nigerian capital market

From the statistics of .299, (Sig. > 0.05), t-value of -1.041 (t < 1.96), we fail to reject the null hypothesis and conclude that investors interest in buying equities has no effect on investing in equities in the Nigerian capital market. The results of this study did not conform with the findings of Edame and Okoro (2013) who concluded that market capitalisation, number of deals and value of transactions, which indicate interest in capital market activities, were positive and significant in promoting economic growth in Nigeria.

5. Conclusion

From the outcome of results, the research was able to establish that additional income of investors has no effect on investing in equities in the Nigerian capital market. This may likely translate to mean that investors do not have sufficient funds from their incomes to invest in equities in the Nigerian capital market; Savings of investors has no effect on investing in equities in the Nigerian capital market. This could also suggest that investors do not have enough savings to invest in equities; and that investors interest in buying equities has no effect on investing in equities in the Nigerian capital market. This translates to mean that investors are not interested in investing in equities in the Nigerian capital market. From this analysis, Nigerians are

greatly affected by the economic crunch facing the country. Increased fuel prices, interest rates, dwindling incomes, and rising poverty rate has made it virtually difficult and impossible for investors to invest in the Nigerian capital market.
From the conclusion, the following recommendations are made on the research.

1. Investors should embark on investment culture which will generate income to enable them take part in investing in equities market.
2. Investors should adopt a savings culture to enable them embark in investing in equities which is expected to bring returns on their investments.
3. Investors should be enlightened on the potentials of investing in capital market activities. This may restore the eroded confidence of investment behaviour that has affected investment culture.

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