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</tr>
</tbody>
</table>
CONTENTS OF THE ISSUE

i. Copyright Notice
ii. Editorial Board Members
iii. Chief Author and Dean
iv. Contents of the Issue

1. Herd Bias in Indian Stock Market under Extreme Market Conditions. 1-7
2. Resource Based View on Growth of Emerging Economies Multinationals: A Case Study of Tata Motors. 9-16
3. Assessment of the Impact of Land use Planning on Property Values in Lagos State, Nigeria. 17-24

v. Fellows
vi. Auxiliary Memberships
vii. Preferred Author Guidelines
viii. Index
Herd Bias in Indian Stock Market under Extreme Market Conditions

By Nithin Jose, Anjana K & Shalina Abdul Hameed

Abstract- Behavioural Finance is an area that needs to be studied within the context of the Indian stock market to assist investors in making rational investment decisions. This study examines the existence of herding behaviour in the Indian stock market considering various determinants of herd formation such as rising and declining market conditions and extreme market situations. The study is based on 46 companies selected from NSE Nifty 50 index based on their trading period. The methodology applied to validate the presence of herd formation is Cross-Sectional Absolute Deviation (CSAD) method. The results revealed that over the study period of extreme up market condition and high trading volume has shown herding behaviour in the Indian stock market.

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Nithin Jose a, Anjana K a, & Shalina Abdul Hameed b

Abstract- Behavioural Finance is an area that needs to be studied within the context of the Indian stock market to assist investors in making rational investment decisions. This study examines the existence of herding behaviour in the Indian stock market considering various determinants of herd formation such as rising and declining market conditions and extreme market situations. The study is based on 46 companies selected from NSE Nifty 50 index based on their trading period. The methodology applied to validate the presence of herd formation is Cross-Sectional Absolute Deviation (CSAD) method. The results revealed that over the study period of extreme up market condition and high trading volume has shown herding behaviour in the Indian stock market. On the other hand, every other result declined the presence of herding behaviour in the Indian stock market during the study period. Thus, it can be inferred that the Indian stock market is not efficient nits complete sense due to the presence of anomaly like herding behaviour and thus violates the Efficient Market Hypothesis.

Keywords: herding behaviour, market efficiency, cross-sectional absolute deviation method (CSAD).

I. INTRODUCTION

Behavioural finance is a field of study that helps in analyzing the influence of psychology on the behaviour of financial market investors and the subsequence effect on stock prices. It explains various anomalies in the capital market and also tries to identify why people make certain investment decisions by studying their biases. One such anomaly is herding. Herd instinct in finance is the phenomenon where the investors tend to mimic the actions of other market participants. Herding is a behavioural bias that arises when individual investors suppress their own emotions, beliefs and private information and there by follow the collective action of the market while making investment decisions. Social psychologists believe that investors herd to feel confident about their investment decisions when they encounter uncertainty and ambiguous information from the market. Thus, they follow the direction of others who they believe are better informed and possess information that is unavailable in the market. Therefore, herding behaviour gives an indication of market inefficiency because investors need not be necessarily rational, rather they abide by the decisions of other market participants thinking that they possess more reliable information.

Thus, in a market where herding prevails, the Efficient Market Hypothesis (EMH) is said to be violated, which is a theory based on the assumption that all investors are rational, possess the same set of information, and stocks always trade at their true value on the stock exchanges.

Herding behavior can be either irrational or rational. Irrational in the sense, the investors simply ignore their own beliefs and information and blindly follow other’s investment decisions to reduce uncertainty and avoid the fear of making a wrong decision. On the other hand, it is said to be a rational behaviour when one herd to protect his reputation. This occurs commonly among professional fund managers because their performance is evaluated based on their decisions. So, they are tempted to ignore their analysis and follow the decisions of other managers who might have access to more reliable information or possess better decision-making skills.

This research is an attempt to study herding behaviour in the Indian stock market under different market conditions.

II. LITERATURE REVIEW

A large number of studies have been conducted to identify the evidence of herding in international markets. Herding is linked with market inefficiency, indicating the existence of herding asymmetry in emerging markets. Christie & Huang (1995) adopted the cross-sectional standard deviation method to investigate herding behaviour and found that dispersions increase significantly during periods of large market movements indicating evidence against the presence of herding in developed US markets. Cheng Cheng and Khorana (2000) used the Cross-sectional Absolute Deviation of returns (CSAD), a modification of Christie & Huang’s (1995)’s model for detecting herd formation in different international markets such as the US, Hong Kong, Japan, South Korea, and Taiwan. The empirical test results indicate that during periods of extreme price movements, equity return dispersions for the US, Hong Kong, and Japan tend to increase, providing evidence against herd behaviour. Still, in the case of South Korea and Taiwan, the evidence is in favour of herding.

Tan et al. (2008) observed herding asymmetry in dual-listed Chinese A-share and B-share stocks. They report significant evidence of herd formation within both
the Shanghai and Shenzhen A-share markets that are dominated by domestic individual investors and also within both B-share markets, in which foreign institutional investors are the main participants. Investor herding is witnessed during both a bull market and a bear market. Still, during times of rising markets, high trading volume, and high volatility, herding behaviour by A-share investors in the Shanghai market is more pronounced, while no asymmetry is apparent in the B-share market.

Demirer, Kutun, and Chen (2010) focused on an emerging market, namely the Taiwanese stock market, and concluded that Cross-Sectional Standard Deviation (CSSD) testing methodology yields no significant evidence of herding. In contrast, the non-linear model proposed by CCK (2000) has led to consistent results indicating strong evidence of herd formation. Chiang & Zheng (2010) examined herding behaviour in global markets. They find that it is prevalent in both rising and declining market situations but is more prominent in Asian markets when it follows a bullish trend. Bhaduri and Mahapatra (2012) provided another approach to check herd behaviour in the Indian equity market, especially during market crashes collecting the data of all the firms listed on the BSE 500 index from 2003 to 2008. It was observed that equity return dispersions during periods of acute price movements be inclined to decrease rather than increase provides evidence of herding. P. Lao & H. Singh (2011) facilitated their study to detect herd behaviour in the Indian and Chinese stock markets. Their findings suggest that herd asymmetry is more likely to exist during large market movements. Their study leads to results indicating strong evidence of herd formation in the Chinese market when the market is falling and trading volume is high. They found herd activity in the Indian market as low and only exist during a bull market.

Fu & Lin (2010), Lan & Lai (2011) investigated the turn over effect on herding behaviour in the Chinese stock market (China’s A and B-markets) using the Christie & Huang (1995)’s model. Their results indicated that trading volume affected herd formation. Lan & Lai (2011), Lao & Singh (2011) find the existence of herd behaviour in the Chinese stock market during periods of down markets and high trading volumes, a lower prevalence of herding was detected in the Indian stock market concerning trading volume. Chiang, Li, Tan & Nelling (2013) attempted to analyse the investor herding behaviour for ten Pacific-Basin markets, namely Australia, China, Hong Kong, Indonesia, Japan, Malaysia, South Korea, Singapore, Thailand, and Taiwan. The study period ranges from July 2, 1997, to March 23, 2009. The test results reveal that the level of herding is time-varying and is present in both rising and declining market conditions. Garg & Jindal (2014) investigated the presence of herd behaviour in the Indian Stock Market during the period 2000-2012 by using methodologies suggested by Christie and Huang (1995) and Chang et al. (1995). Daily as well as monthly data have been considered for the same. The result indicates that herd behaviour is not present in the Indian stock market. Poshakwale & Mandal (2014) investigated herd behaviour in the emerging Indian stock market using the daily data of the S&P CNX Nifty 50 index of the National Stock Exchange throughout 1997–2012. The study confirmed that the investors in the Indian market show significant herding behaviour and are persistent in both bull and bear markets, and seem to increase in bear market conditions. Yao, Ma, & He (2014) opined that, in Chinese markets, more herding was detected during the period of the higher trading volume.

Dr Ashish Kumar, Ms Bharti & Dr Sanchita Bansal (2016) analysed the existence of herding behaviour in the Indian stock market using the daily closing prices of NSE’s benchmark index Nifty and thirty-six companies that are listed in NSE for a period commencing from January 1, 2008, to December 31, 2015. The empirical results based on Chang et al. (2000) model confirm no herding in the Indian stock market for bull and bear market and also during the extreme price movements in the market, indicating that the investors tend to make investment decisions of their own and do not imitate the investment behaviour of other fellow investors.

Batchu Satish & Dr Padmasree K (2018) examined herding behaviour in the Indian stock market with a sample of firms listed on the National Stock Exchange of India during the year from 2003 – 2017. CSAD methodology was used to study the effect of the global financial crisis on herd behaviour. The study found no herd formation during the pre-financial crisis period, crisis period, and post-financial crisis period and the market is in an arising and declining state, but the volatility of the stock is high. Babu J, James V, & Anooja S (2018), in their study, concluded that investors in the Indian stock market do not exhibit any kind of herd activity during rising and declining market conditions. At the same time, Kumar & Sharma (2018) reported weak evidence of herding during different market conditions.

III. Data and Methodology

a) Research Data

The data used for the study include the closing prices of the Nifty 50 index and closing prices of shares of 46 selected companies for 2011-2019. Also, to study the effect of trading, volume on herding behaviour, volume data for the period of 2013-2019 has been collected. The empirical study on herding behaviour with different data frequency provides mixed results and thereby felt to use daily data, will be helpful to capture the short-term herding behaviour prevailing in the market. In addition to this, many studies like Christie and Huang (1995), Henker, and et al. (2006), Christoffersen
and Tang (2009), Zhou and Lai (2009) suggested that since herding is a short-lived phenomenon, high-frequency data would provide more accurate results.

b) Research Methodology

i. Unit Root Test (Stationarity Test)

Unit root examines the stationarity of data using an autoregressive model. There will be serious mistakes in the inferences if we use non-stationarity data for the analysis. Brooks (2008) defined a stationary series as “one with a constant mean, constant variance and constant auto covariances for each lag”. It can be explained as, a series is said to be stationary if it has a time-independent mean, variance, and autocorrelation, which are consistent over time. In this study, the null hypothesis is set as CSAD has a unit root. If the null hypothesis is accepted, it means that the series is non-stationary. The Augmented Dickey-Fuller test (ADF test) is the unit root test used in this study for testing the stationarity of data.

ii. Cross Sectional Absolute Deviation (CSAD) Model

Christie & Huang (1995) suggested the first established methodology to study herd formation in the stock market. They used the CSSD (Cross-Sectional Standard Deviation) model to test the presence of herding in the market. Since this model was influenced by outliers and gave biased results, Chang et.al (2000) suggested modified methodology which was CSAD (Cross-Sectional Absolute Deviation). CSAD can be explained as the absolute average of the aggregate difference between the expected return of individual securities and market return. The study employs the methodology suggested by Chang et al. (2000) of Cross-Sectional Absolute Deviation (CSAD) to test the presence of herding behaviour in the Indian stock market.

According to CSAD Approach, when the investors tend to herd in the stock market, the absolute dispersion between the market return and the individual stock return decreases or increases at a decreasing rate. Thus, the individual stock returns tend to cluster around the overall market return resulting in lesser dispersion. Chang et al. (2000) proposed that the relationship between market return and CSAD should be negative and non-linear. The CSAD is calculated using the following equation:

\[
CSAD_t = \frac{1}{N} \sum_{i=1}^{N} | R_{i,t} - R_{m,t} | \quad m.t \tag{1}
\]

\[
CSAD_t = \alpha + y_1 R_{m,t} + y_2 R^2_{m,t} + \varepsilon_t \quad \tag{2}
\]

Where N is the number of securities, \( R_{i,t} \) is the individual stock return on firm \( i \) at time \( t \), \( | R_{m,t} | \) is the average return of the equal-weighted market portfolio at time \( t \), \( y_1 \) is the coefficient of \( | R_{m,t} | \) and \( y_2 \) is the square of the coefficient of \( R_{m,t}^2 \).

In a rational market, the relationship between individual securities return and market return is positive and linear. If the investors exhibit herding behaviour the difference between individual securities return and market return will decrease or may increase at a decreasing rate. This indicates the violation of a positive and linear connection between return dispersion and market return. Therefore, in Eq 2, if \( y_2 \) coefficient is negative, there exists herding behaviour.

The daily closing prices of the Nifty 50 index and 46 selected companies are converted into a log form, to smoothen the data, to enable the use of parametric statistical tools. Using the log values of closing prices, log returns are computed using the following equations.

\[
R_{t,t} = \frac{\log(P_t) - \log(P_{t-1})}{100} \quad \tag{3}
\]

Where \( \log P_t \) is the price of the stock at time \( t \), and \( \log P_{t-1} \) is the price at time \( t-1 \) and \( t \) stands for the specific day.

Herding behaviour during increasing and decreasing markets:

\[
CSAD^{down}_t = \alpha + y_1 | R_{m,t} | \times D_t^L + y_2 R^2_{m,t} \times D_t^L + \varepsilon_t , if R_{m,t} < 0 \tag{4}
\]

\[
CSAD^{up}_t = \alpha + y_1 | R_{m,t} | \times D_t^U + y_2 R^2_{m,t} \times D_t^U + \varepsilon_t , if R_{m,t} > 0 \tag{5}
\]

Here the level of herding is examined by introducing dummy variables \( D_t^L \) and \( D_t^U \), where \( D_t^L = 1 \) if the market returns on day \( t \) depict a decreasing market condition and equal to zero otherwise, and \( D_t^U = 1 \) if the market return on day \( t \) depicts an increasing market condition and equal to zero otherwise.

c) Herding Behaviour During Extreme Market Conditions

It is believed that herding behaviour is more likely to exist in extreme up or down market conditions due to psychological reasons. Christie & Huang (1995) employed 1% and 5% levels of significance as the cut-off points to determine extreme up and down returns in their study. In this study, we employ a 5% level of significance to determine the extreme up and down-market conditions. The extreme up market is defined as 5% of the upper tail of the market returns distribution, whereas the extreme down market is defined as 5% of the lower tail of the market returns distribution.

Herding behavior under extreme market situations is computed using the following equation:
\[ CSAD_{\text{Down}}^t = \alpha + \gamma_1 |R_{m,t}^{\text{Down}}| + \gamma_2 (R_{m,t}^{\text{Down}})^2 + \epsilon_t \quad \text{if } R_{m,t} < 0 \]  
\[ \text{Eq(6)} \]

\[ CSAD_{\text{Up}}^t = \alpha + \gamma_1 |R_{m,t}^{\text{Up}}| + \gamma_2 (R_{m,t}^{\text{Up}})^2 + \epsilon_t \quad \text{if } R_{m,t} > 0 \]  
\[ \text{Eq(7)} \]

Where \( \gamma_{\text{Down}} \) is the coefficient of the equally weighted market portfolio return at time \( t \) when the market return lies in the extreme lower tail of the distribution, \( R_{m,t}^{\text{Down}} \) is the equally weighted market portfolio return at time \( t \) when the market return falls in the extreme lower tail of the distribution, the case for an extreme up market condition is similar.

\[ d) \text{ Herding Behaviour under high and low trading volume state} \]

In this study, we also check for herding behaviour during high and low volume days. Previous studies suggest that trading volume varies according to the information in the market and subsequent revision by investors.

Herding behaviour under high and low volume state is computed using the following equation:

\[ CSAD_{V-\text{high}}^t = \alpha + \gamma_{V-\text{high}}^1 |R_{m,t}^{V-\text{high}}| + \gamma_{V-\text{high}}^2 (R_{m,t}^{V-\text{high}})^2 + \epsilon_t \]  
\[ \text{Eq(8)} \]

\[ CSAD_{V-low}^t = \alpha + \gamma_{V-low}^1 |R_{m,t}^{V-low}| + \gamma_{V-low}^2 (R_{m,t}^{V-low})^2 + \epsilon_t \]  
\[ \text{Eq(9)} \]

Where \( \gamma_{V-\text{high}} \) is the coefficient of the equally weighted market portfolio return at time \( t \) where the market is in high volume state, \( R_{m,t}^{V-\text{high}} \) is the equally weighted market portfolio return at time \( t \) when the market is in high volume state; the case is similar for a low volume state.

### IV. RESULTS

Table 4.1: Descriptive Statistics of Cross-Sectional Absolute Deviation (CSAD)

<table>
<thead>
<tr>
<th>CSAD</th>
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<tr>
<td>Mean</td>
<td>0.529732</td>
</tr>
<tr>
<td>Median</td>
<td>0.506427</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.558260</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.184270</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.143436</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.531356</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>8.280507</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>3729.501</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000000</td>
</tr>
<tr>
<td>Observations</td>
<td>2402</td>
</tr>
</tbody>
</table>

Table 4.1 explains the descriptive statistics of the variables under study. The data is for the period 01-01-2010 to 11-11-2019 and the table shows the details of the daily data. Table 4.1 shows that the average CSAD for the whole study period is 0.529732, and the standard deviation is 0.143436. The standard deviation will be higher if the market had a higher level of cross-sectional variation due to unexpected news or shocks and explain higher volatility in the market and this can also be attributed to higher information asymmetry existed in the market.

Skewness helps to assess the level of asymmetry in the probability distribution. Since the value of skewness of CSAD here is 1.531356, the series is said to be positively skewed. Also, the value of Kurtosis is 8.280507 (which is more than 3), and thus, the series depicts leptokurtic features. Jarque-Bera (JB) is a test that is used to test the normality of the distribution. In the study, the value of Jarque-Bera (JB) is so high for CSAD (i.e., 3729.501), indicating that stock returns differ significantly from the normal distribution.
Table 4.2: Testing Stationarity using ADF (Augmented Dickey-Fuller Test)

<table>
<thead>
<tr>
<th>Augmented Dickey-Fuller test statistic</th>
<th>t-statistic</th>
<th>Prob*</th>
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<tr>
<td>Test critical values:</td>
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<tr>
<td>1% level</td>
<td>-10.28813</td>
<td>0.0000</td>
</tr>
<tr>
<td>5% level</td>
<td>-3.432886</td>
<td></td>
</tr>
<tr>
<td>10% level</td>
<td>-2.862546</td>
<td></td>
</tr>
</tbody>
</table>

Stationarity is an important feature of time series data. A preliminary analysis, the Stationarity of the data series is tested using the Augmented Dickey-Fuller test (ADF). The results from Table 4.2 show that the series is stationary at the level itself. Here, since the t-statistic value is more than the critical value, there is a possibility of rejecting the null hypothesis that there is a unit root in the selected variable. Hence the series is stationary.

Table 4.3: Overall Market Regression Results
(Analysis of herding in NSE stocks)

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>α</td>
<td>0.4753</td>
</tr>
<tr>
<td>γ₁</td>
<td>1.1158</td>
</tr>
<tr>
<td>γ₂</td>
<td>0.0961</td>
</tr>
</tbody>
</table>

The above table analyses the level of herding in different NSE stocks from 1st January 2010 to 11th November 2019. As per the CSAD model, herding will be significant only when the γ₁ coefficient becomes negative and significant. The result of regression analysis shows that the γ₂ coefficient is positive, indicating that there is no significant herding behaviour in the Indian stock market. The relatively lower incidence of herding in the Indian stock market may be due to the large institutional investors in the Indian market. They are believed to have better information sources, more skilled traders and are therefore less likely to herd.

Table 4.4: Regression Results for Increasing Market

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>α</td>
<td>0.5232</td>
</tr>
<tr>
<td>γ₁</td>
<td>-0.1117</td>
</tr>
<tr>
<td>γ₂</td>
<td>0.2686</td>
</tr>
</tbody>
</table>

Table 4.4 contains the regression results of analyzing herding for an increasing market for the given period. All daily returns which are equal to or above zero are considered to be an increasing or rising state. From the given table, it is understood that both the coefficients are positive. Since the herding coefficient (γ₂) is positive for up market it indicates the absence of herd formation for the given period.

Table 4.5: Regression Results for Declining Market

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>α</td>
<td>0.5134</td>
</tr>
<tr>
<td>γ₁</td>
<td>0.0406</td>
</tr>
<tr>
<td>γ₂</td>
<td>0.1144</td>
</tr>
</tbody>
</table>

The table given above reports the results of regression analysis of herding for decreasing markets. In this case also both the coefficients are positive. Hence the results suggest that the investors did not exhibit herding behaviour in the Indian stock market during a declining state for the given period. As a result, it shows a positive and linear relationship between the market return and stock return.
During extreme up market conditions, as shown in Table 4.6, the \( \gamma_2 \) coefficient is significantly negative and thus proves the existence of herding behaviour during the given condition. It may be due to the irrational behaviour of inexperienced investors who are easily misled by media and blinded by greed and envy. During up market condition, the institutional investors, rather than relying on their analysis, they tend to follow the market consensus by engaging in positive feedback trading.

The above table 4.7 shows the regression results of analyzing herding behavior under extreme down-market condition. Since the \( \gamma_2 \) coefficient is positive, it is interpreted that there was no herding behaviour in the Indian stock market under the given condition during the period of study. In a down market, investors in the Indian market seem to base their decisions on their analysis rather than following market consensus. This may be because investors may be long-term investors who do not panic and sell in a hurry under an extremely down-market situation.

The results from table 4.8 suggest that during the period of high trading volume, investors showed herding behaviour. This is evident because the \( \gamma_2 \) coefficient is negative.

The above table 4.9 shows that during the period of low trading volume, herding behaviour is not detected in the Indian stock market since the \( \gamma_2 \) coefficient is positive. Thus, we can infer that investors act more rationally during the low trading volume and do not tend to follow the market consensus.

V. Conclusion

Herding Behavior is a component of behavioural finance. The investors ignore their analysis of information and tend to imitate the action of others, thus causing the price of the shares to deviate from its fundamental value which ultimately results in market inefficiency. Investigating herding behaviour helps to identify the potential risks and guide the investors in forming proper strategies while making investments in these markets.

Using the CSAD approach suggested by Chang et al. (2000), this study measures the presence of herding behaviour in the sampled stock market under rising and declining market situations, extreme market conditions, and also during changing trading volume conditions.
situations. Accordingly, the results reveal that herding behaviour exists under extreme up market condition and during the state of the high trading volume. Thus, the concerned authorities like SEBI must take appropriate measures to avoid herd formation under these situations. However, no herding behaviour was detected during the other states of the market under study. It is assumed that investors react more rationally under these situations and do not follow the market consensus. The results of previous studies revealed that herding behaviour was rarely present in the Indian stock market. But from our study, we can conclude that over the period the attitudes of investors have changed, and there has been herd formation under various extreme situations. So, this is to be noted by the concerned authorities, and remedial measures need to be adopted to ensure market efficiency in the Indian stock market.

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Resource based View on Growth of Emerging Economies Multinationals: A Case Study of Tata Motors

By Sandeep Yadav

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Keywords: firm growth, internationalization, resource based view, emerging market, multinational firms.

GJMBR-B Classification: JEL Code: E00

Strictly as per the compliance and regulations of:

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Resource based View on Growth of Emerging Economies Multinationals: A Case Study of Tata Motors

Sandeep Yadav

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I. Introduction

Tata motors initially started as Telco (Tata Engineering & Locomotive Company Limited) in 1945. It was established in India to manufacturer the steam locomotives. They formed a strategic alliance with Daimler-Benz from 1954 to 1969 to get expertise in producing the commercial vehicles. Telco has acquired enough resources to independently manufacturer and design the commercial vehicles till the time (Singh & Srivastava, 2012). Later, Telco started production of the engineering equipment’s and finally the large scale construction equipment machinery and automobiles. In July, 2003 Telco was renamed as Tata Motors. Tata motors emerged as a leader in the commercial vehicle segment. In the year 2009-10, Tata motors became the world second largest bus manufacturer and fourth largest truck manufacturer (Singh & Srivastava, 2012).

Tata motors started internationalization by starting export in 1961. The export of the passenger and commercial vehicles expanded in the many regions outside India gradually such as Africa, Europe, South America, South Asia and Middle east. They also started their international manufacturing facilities through strategic alliances with other firms and own subsidiaries in Thailand, Spain, Kenya, Bangladesh, South Korea, Ukraine, Russia, South Africa and Senegal. Tata motors also has several manufacturing plant across India (Singh & Srivastava, 2012). Tata motors growth can be explained by the important factors as understanding of customer needs, response to economic changes and ability to innovate with transition of market needs and demands. Resources play an important role for the growth of the firm. As per the resource based view the valuable, rare, inimitable and no substitutable resource provide a competitive advantage to the firms.

This paper review the growth and internationalisation of the Tata Motors using the resource based view. We emphasize on the process of acquisition of the resources and the process of internationalization of the Tata Motors. We have used a case study approach to explain the process of growth of Tata motors as a late entrant in the international markets from an entrant in the medium sized passenger vehicle manufacturer. This study reveal a pattern of catchup process by emerging economies multinationals. This helps in understanding the process of internal capability building as well complementing by external resource acquisition. Tata motors is affiliated by one of the India largest business group called Tata group. Study also reveal the resource sharing within the group firms and catch up process of Tata motors. We found that group level capabilities help in creation of new resources and acquisition of external resources. The speed of the catch-up process is accelerated by the group affiliation. Group affiliation advantage is realized by resources sharing among group affiliated firm and the central group support.

Tata motors is an interesting case to explain the growth of the firm using the resource-based view. The theory helped to understand the growth pattern of the emerging market multinational firms. The historical perspective of business restructuring and leadership by Ratan Tata is an important part of Tata motors growth (Crainer, 2010). The initial stage of the firm growth is to development the internal resource capabilities and latter the firm expanded in the various product markets. The expansion of the firm boundaries helped to create a market power and expanding in to various market. The complementarity of the external and internal capabilities of the firm is a competitive advantage for the firm. The innovation plays a large role in the internationalization of
the firms. The business group affiliation played a large role in the grown of TM’s as an emerging market multinational firm. The business group affiliation provided the brand name, reputational advantage, complementary resources, developed project execution capabilities and improved the dynamic capabilities of the firms.

II. Case Selection and Research Method

We have selected the case of Tata motors. This sufficiently cover the growth of an emerging economy multinational firm. Tata Motors(TM) case also helps to understand the relationship between the firm internationalization and group embeddedness. TM is a subsidiary of the India’s largest private Tata business group. TM is a major manufacturing firm of passenger cars in the India emerging economy. TM have faced the intense competition pressure from the domestic as well as international players in the segment. The competition is neutralized by TM by the process of internationalization to acquire the capabilities and assets. The firm has made required efforts to become the internationally known player and exploited it resource capabilities across the borders. TM is also benefited by the group learning spillover by other sectors such as consumers goods, business process outsourcing and steel segment internationalization. The selection of TM for the case of internationalization of emerging market multinationals (EMNCs) has various advantage such as enabled comparative case analysis. This case can be compared with earlier EMNCs internationalization such as Hyundai and Mahindra & Mahindra. TM case can also be compared with the other emerging economies multinational firms such as Geely, Cherry and BYD from China. The another advantage of selecting TM is the rich source of the archival data availability about the company. The data for the case is taken from newspapers, companies website, academic articles, case studies, company reports, Prowess database by CMIE.

III. Results and Discussion

a. TATA Motors Growth: Resource Based View

This section includes the case analysis of the TM growth by internationalization. The first section of the case analysis includes the Tata Group responsiveness to the uncertain institutional environment. The second section of the case includes the catch up process of TM in the passenger car segment. The final section of the case analysis includes the impact of business group affiliation on the firm growth.

b. Dynamism of the Tata Group

India is having many business groups such as Wipro, Birla, Reliance, Tata and others as controlled by the family ownership. Tata is the largest and oldest business group in India with 30 companies along the 10 verticals (“Business Overview | Tata group,” n.d.). The restructuring of the group in 1990 opened the doors for many affiliated firm to grow internationally (“Business Overview | Tata group,” 1010). During the restructuring the group went through many cross-border acquisition and the divestment of the unprofitable businesses (annex, exhibit 1&2) (“Business Overview | Tata group,” 2010). Ratan Tata become the fifth chairman of the group in the 1991. The leadership of Ratan Tata caused many changes in the organisational function of the group and a drastic change in the leadership style which enabled faster catch-up of TM’s (Bruche, 2010). The chairmanship of the Ratan Tata enabled a loosely bounded holding of the group on the independent organisational units. They allowed the autonomous unit run by the independent CEO’s with rich experience in the fields (Bruche, 2010). The emotional bond and the personal bonds of Ratan Tata created a shared culture in the group companies. The inter organizational shareholding and interlocking board of directors created a robust governance structure (Kakani & Joshi, 2008; Kumar, 2009). After the ten years of the Ratan Tata chairmanship the group was able to change the core central functions of the group companies, governance structure of the group companies and the structure of the top management team. This enabled the major expansion of the firm boundaries by internationalization (Khanna, Palepu, Conneely, & Massaro, 2003). Tata Sons Limited is the primary shareholder in the group along with four promoters. Kakani & Joshi, (2008) reported the ownership structure of the group as following:

a. Ownership by Tata Family Trust: 65.9%
b. Ownership by the group affiliated firms: 12.8%
c. Family ownership by Tata’s: 2.9%
d. Ownership by P S Mistry: 18.4%

Tata sons acted as a major facilitators for the growth of the group companies by financial investment. The group major companies with the major shareholding by the Tata Sons are controlled by cross-holding. The cross-holding in the group firms reduced the agency cost between the owners and the managers, this also reduced the transaction cost of monitoring by the outside shareholders. The cross-holding also enabled the well informed network among the companies managers (Kakani & Joshi, 2008). The significant cross-holding by the five major group companies including TM,s enabled the decentralized structure with strong central control at group level. Also the chairman of the Tata sons has shared responsibilities in the core companies of the Tata Group (Bruche, 2010). Another successful scheme launched by the Tata Group was ‘Tata Brand Equity and Business Promotion Agreement’ initiated in 1995 (Branzei, 2010; Khanna et al., 2003). In this scheme the group companies can use the brand name of the Tata Group
for doing business but they have to pay 0.1% of their income before tax to the Tata Sons. Along this if the group companies want to use the group name on their product brands, they have to pay 0.25% of their net income before tax deduction (Bruche, 2010). TAS (Tata Administrative Services) was the earlier initiative in 1950’s was taken by the group for internal training and development of the future premium leaders for the group companies (Khanna et al., 2003; Wadia, J. 2007). Branzei (2010) has also detailed the CSR initiatives taken by the group companies from the early time.

The group was well established before the transformational changes of the leadership and group restructuring in 1990. The strategic routine of the Tata Group companies and their organisational practices before and after the group restructuring can be explained using the resource based view (RBV). RBV helps to understand the dynamic capabilities development by the companies during organisational transformation and high competitive environment. This is based on the creation of the group internal and external resource capabilities and integrating with the existing resource base in the dynamic environment (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997).

c) Resource Based View on Catch-up of Tata Motors in Passenger Cars

TM’s started as a domestic player in the passenger car segment. Later internationalization of the TM’s through sales and manufacturing across the borders. The internationalization helped in acquisition and accumulation of the knowledge as a learning process. We have discussed the process in the various phases. These phases are driven by the strategic intent of the TM’s leadership. This external evolutionary process of the growth is complemented with the internal capabilities of the firm.

d) Pre-entry capabilities development

TM’s developed enough internal capabilities to survive and compete before independently entering into the commercial vehicle (CV) manufacturing of passenger cars. TM’s is supported by the group companies in the process. Initially they started as a manufacturer of the steam rollers and locomotives. Later in 1954 they came into collaboration with Daimler Benz AG to start commercial vehicle manufacturing. The learning from the initial collaborations is used to develop the internal capabilities to start its own manufacturing of the CV. The low cost Indian market leadership is maintained by its internal effort of engineering and designing the various products combined with the technological learning from the external sources. The Indian CV market shrinkage in the 2000-2001 forced the firm to restructure and re-innovate the strategic layout for future challenges (India 8 Knowledge Wharton 2010, Kumar 2009). They established a R&D and engineering centre in Pune in 1996 (“Latest Innovation in Automobile Industry, New Generation Cars—Tata Motors,” 2019). This internal research and product development capabilities helped to improve the absorptive capacity of the firm. The increase in absorptive capacity helped to identify, acquire and integrate the external knowledge. This immediately helped in developing the platform for manufacturing and engineering of the internal design based CV’s (Bruche, 2010).

e) Product scope expansion: duplication and sequencing

Passengers car entry was based on the existing resource leveraging and extension of the light vehicles segment. The pick-up plate form helped to launch Sierra in 1991 and Estate in 1992. B. Bowonder, the management training training centre director at Tata Group said during the TM’s small car development assignment: “the learning needed for making a car essentially started with the pickup vehicle 207” (“Tata Motors,” 2019). The Indian passenger car segment was more foreseeable for the small cars in compare to their initial strategy of the large cars market (Becker-Ritterspach & Bruche, 2012). They made their first attempt to launch the small car in the India in 1994 as Indica. The Indica was in direct competition with the Maruti 800 of Suzuki, a Japanese car maker. The approach followed was to limit the boundaries of the firms. They believed to produce internally all the components of the car. The special product which are not manufactured inside the firm are outsourced by making joint ventures with the suppliers (Becker-Ritterspach & Becker-Ritterspach, 2009). Initially they focused on the reliable suppliers from India only. They formed long term contracts with suppliers for learning purpose of strategic alliances (Bowonder, 2004). The Indica project is perfect example of integration of external technology and knowledge resources from various stakeholders. (Bowonder 2004 Bruche 2010) have listed external alliance for resource acquisition as shown in Table 1.
TACO (Tata Automobile Components) was started in 1995 as a Tata Group affiliated firm to support the core companies for suppliers management. In the later period it helped TM’s to develop the project management capabilities and improving the management skills. The Concurrent Engineering capabilities developed by the R&D centre and manufacturing of tools at the same place in Pune (Bowonder, 2004; Bruche, 2010).

The platform established by launching Indica helped to leverage the learning and launched Indigo in 2002 with following variants of the model (“Tata Motors launches the all-new Tata Indigo e-CHS, the most fuel efficient sedan in the country,” 2010). This sequence of the product development was an important resource for capabilities development (Helfat & Raubitschek, 2000; Kim, 1998). Further they formed alliance with the two international players in the market. RM’s formed a joint venture with Daimler Chrysler in 1995. The purpose of the joint venture was to establish a local assembly line for the E220 Mercedes. The alliance was later failed in 2001. They formed another alliance with Fiat in 2006. The purpose of the strategic alliance was manufacturing and distribution of the Fiat cars in the Indian market (Mitchell, J./Hohl, B. 2008). This alliance helped to develop the manufacturing and diesel engine capacities. Later in the decade after the success of Indica they were the third largest players in the Indian passenger market segment followed by Maruti Suzuki and Hyundai(currently they are the fourth largest) (www.ETAuto.com, 2019). They are able to establish the wide service provider and dealers network in the Indian market. They started export of the Indica in Malta, South Africa and other countries. The increased pressure by the multinational firms in the Indian market put an immense pressure on TM’s for product development and innovation.

f) Innovation and internationalization

The innovation of the low cost car started with the Tata Nano conception. Ratan tata committed to launch a low cost car of one lac INR in the Geneva Auto show in 2003(“Tata Motors displays Tata Nano EV at the 80th Geneva Motor Show,” 2010). The car was proposed to steel the two wheeler market and proving affordable solution to travel with comfort. The lowest priced car in the market at that time was Maruti 800. In the leadership of the Girish Wagh (old engineer and head on development team) a team of young engineers was formed in 2005. Ratan Tata gave the broad parameters of low cost, minimum viable performance and meeting of regulatory norms for development of Tata Nano project to the team. Ravi Kant as the CEO of TM’s at the time monitored the project progress. The product development process started to make a car with combination of Indian traditional three-wheeler and Maruti 800 to achieve the low cost and performance at the same time. This process is called as reverse exploratory innovation (Lim, Han, & Ito, 2009; Palepu, Anand, & Tahilyani, 2011). They have involved various component suppliers and consultant for the success of the project. They invited various number of supplier for Tata Nano parts supply and finally selected only 100 for the platform development. TM secured the property right of own and suppliers. In the later stage they opted for international suppliers such as Denso, Bosch and others. Many of the international suppliers shifted their production facilities nearer to TM manufacturing plant to reduce cost of transaction. This process of involving with international service providers is called complementary upstream internationalisation (Bruche, 2010). The international R&D centre in UK is established in 2005 by TM’s. This centre is known as TMETC(Tata Motors European Technical Centre) under the affiliation of University of Warwick with the British motor industry centre (Agrawal S., 2007). The complementarity of the TMETC and Pune R&D centre in India enabled rapid product development. They also acquired INCAT, an engineering outsourcing firm integrated in India, Europe and North America. This was integrated with TM’s subsidiary called Tata Technologies. This enabled developing resource base in form of technology and R&D in the shorter duration. These subsidiaries were closely associated with Tata Nano development (“Agrawal, S. (2007)& Partners in Progress—Google Search,” n.d.). TM’s and Tata Group companies get connected with various other firm during the Nano car project and learned from the external knowledge and also the most of the knowledge asset developed in the project remained with the suppliers of the major components (Bohr, B. 2010).

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Alliance Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior and interior design</td>
<td>I.D.E.A., an Italian design consultancy</td>
</tr>
<tr>
<td>Development of power train design and gasoline engine</td>
<td>Le Moteur Moderne (LMM) of France</td>
</tr>
<tr>
<td>Welding systems, process engineering</td>
<td>designed by German HLS and manufactured by TML</td>
</tr>
<tr>
<td>Design of robots</td>
<td>Nachi Fukikoshi, Japan</td>
</tr>
<tr>
<td>Skin panels die design</td>
<td>Ogihara from Japan</td>
</tr>
<tr>
<td>Production line</td>
<td>unused production line from Nissan, Australia</td>
</tr>
<tr>
<td>Supplier qualification, testing and quality assurance</td>
<td>Cummins, US/India assisted TML to develop state-of-the-art organisational capabilities</td>
</tr>
</tbody>
</table>
g) Internationalization and diversifying scope of products

The Tata Nano project was completed in early 2008. TM’s faced various problem in their Singur manufacturing plant which caused financial losses in the year. In spite of the fact, TM’s acquired JLR (Jaguar Land Rover) From Ford Motors. JLR acquisition was finalised in June 2008 with an total cost of 3 billion USD financed by short term loans. Bruche, (2010), has mentioned following transformational changes in TM’s due to JLR acquisition:

a. The revenue of the TM’s doubled after the acquisition and the sales from passenger car segment increased significantly
b. JLR acquisition provided a product expansion or related diversification in the premium car segment.
c. Enable the outward internationalization in the passenger car market

Table 2: JLR Acquisition Benefits to TATA Motors (Source: Bruche (2010))

<table>
<thead>
<tr>
<th>Factors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalisation</td>
<td>Enabled operation in the Asia, Europe and North America region</td>
</tr>
<tr>
<td>Brand Value</td>
<td>JLR was an iconic brand</td>
</tr>
<tr>
<td>Product flow</td>
<td>The product development and innovation investment by Ford Motors in JLR realised in future</td>
</tr>
<tr>
<td>Fit</td>
<td>Synergies with the TM’s existing product development facilities</td>
</tr>
<tr>
<td>Scale</td>
<td>Outsourcing of parts for JLR from India at low cost can reduce the cost of manufacturing at high scale of production</td>
</tr>
<tr>
<td>Demand</td>
<td>Large market in emerging markets</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Access to modern manufacturing plants</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Access to human resource skills and external knowledge resources</td>
</tr>
</tbody>
</table>

h) Business Group Affiliation and Growth of Tata Motors: Resource Based Perspective

As discussed in the previous section the growth of TM’s is due to its internalization and expansion in the home market. The previous section has explicitly not explained the role of group affiliation in the growth of the firm. The supporting role of the group companies and also the parent company support for various acquisitions is very important in explaining the growth of TM’s. The following capabilities are developed due to the group affiliation:

i) Dynamic capabilities

In the 1980s the firms has grown in the CV manufacturing segment in the India. Later under the strategic intent of Rata Tata chairmanship the firm has taken the initiative to expand the product market as well as expanded the boundaries internationally. TM’s restructuring enabled the top management team changing and the process of developing their technical core as engineers become more strong. Ratan Tata’s transformational leadership provided the vision and strategic intent to the firm by aligning the TM’s strategy with the business group strategy (Kumar, 2009). The transfer of experienced human resource from the group companies increased the working efficiency of TM’s (India Knowledge Wharton 2010). The group affiliated changes and assisting asset enabled the dynamic capabilities development in the TM’s and infused the capabilities (Bruche, 2010).

j) Execution capabilities

The Tata Group affiliation helped TM’s to take riskier project and complete the rapid catch-up. Also the internalization and technology asset acquisition helped in creating internal capabilities of firm (Amsden & Hikino, 1994). Tata Group provided experience, knowledge and internal group capabilities for successful execution of the product development and launching projects. The internal group firm network simplified the process of handling the complex projects execution. For example, the group subsidiary Tata Consulting engineering limited serves the group companies at a discount with preference (Bruche, 2010). The experienced professional in the consulting firm enabled faster project execution with group responsibility. Other group company such as Tata Quality Management Services heled in executing the business models. The financial support is provided by Tata Financial Services.

k) Leverage of underutilised resources

Tata group has tradition of developing its internal pool of human resources. The brand of Tata also attract the top universities student pool for the job applications. The well designed training programmes and the fairly effective system of the promotions attract the top school. The liability of foreignness (Zaheer, 1995), is overcomed by transfer of the candidates with multicultural international exposure for the foreign projects. The Tata Nano project was challenging because of requirement of the innovative and open minded pool of talent. To overcome the challenges, the company had two third of human resource pool from the
lateral recruitment from the group companies and rest was young campus talent.

1) **Business group reputation and brand value effect**

   The Tata group companies use the name of brand as an strategic asset. The corporate communication and personal relation by the parent firm helped to create the market power. For the group, the trust of the external stakeholders was very important. When TM’s faced the technical issue with the performance of the new product launch at various stages, the Tata brand was guarantee for fixing the bugs. The Tata brand also helped in the Tata Nano project to establish the relationship with the cross-border suppliers. TM’s alliance with Fiat was also enforced by the Tata group trust and the chairman’s personal relationships (Zaheer, 1995). The hurdle by local government is also resolve by the political contact of the parent firm.

2) **Resource complementarity**

   Tata group is a conglomerate of various related and unrelated businesses. The internal network of the group, TACO (Tata Autocomp Systems) formed various joint ventures with the leading manufacturer in the various parts of India and established its manufacturing facilities in China and India. This played a huge role in the development of Nano by TM’s (Machinist, in 2009). The resource and knowledge held by the Tata group companies provided TM’s a bed for absorptive capacity for external knowledge integration.

   Figure 1 shows a theoretical framework to explain the growth of emerging economies multinationals firms using resource based view. The initial phase of the growth is building the internal capabilities of the firms and also expanding in the existing product market. The later phase of internationalization started with innovation and after establishing footprints in the foreign market, the firm expand their product-market portfolio. Business group affiliation benefits are moderators in the growth of the firm.

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**Figure 1:** A Theoretical Framework: Growth of Tata Motors

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**IV. Conclusion**

Tata motors is an interesting case to explain the growth of the firm using the resource-based view. The theory helped to understand the growth pattern of the emerging market multinational firms. The historical perspective of business restructuring and leadership by Ratan Tata is important part of Tata motors growth (Crainer, 2010). The initial stage of the firm growth is to
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Assessment of the Impact of Land use Planning on Property Values in Lagos State, Nigeria

By Orekan, Atinuke Adebimpe

Bells University of Technology

Abstract- This study examined the effects of land use planning on property values in Lagos. The target populations for the study were the practicing Estate Surveying and Valuation firms in Lagos. Structured questionnaires were administered to the respondents and the results were analysed using descriptive statistics, weighted mean score, Trend Analysis, ANOVA, T-test and regression analysis. The study revealed that the major land use planning and policy tools used and implemented in Lagos are building permit/approval, zoning, land use charge, town ordinances and building codes. The study also revealed that inadequate implementation, inadequate monitoring and evaluation; cost of compliance with planning and development standards, inadequate access to residential land and existing land use pattern and master plan were the major challenges of land use planning and policies in Lagos.

GJMBR-B Classification: JEL Code: R39
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I. INTRODUCTION

From the planning point of view, land represents a surface decoration realised to ensure an act in accordance to the built-environment. Ajibola, Olaniyi-Adekola and Simon (2011) also noted that the purpose of land use planning in urban centres is to enable events in urban areas to be well organized and developed in any open space, having put into consideration the protection of people, this which also include environmental quality, social quality amongst others. However, Hardoy and Satlierwaite (1989) and Bernstein (1994) have made it known from their study that the deficiencies in developing country’s land use plan and policies and inadequate land management policies amongst others have been identified as major issues revolving around existing uses in land in some countries.

Lack of appropriate tools and weak structures have also been noticed as some of the problems plaguing communities.

Aribigbola (2008) further opined that striking urban land control and management most especially in areas where there is growing land problem such as urban sprawl in Nigeria; is significant in dealing with problems such as slum formation, hike in the land price, congestion and others for the purpose achieving a sustainable city development.

Having critically examined the various cities in Nigeria, it has been revealed that there are plethora of problems associated with land and this cut across land use, allocation, land tenure and ownership. Also problems such as housing, urban sprawl, lack of adequate facilities and infrastructure, lack of accessibility, etc. are issues associated with metropolitan areas/ mega cities. Non-compliance of planning standards has also increased the potentials for environmental degradation within our environs and this has resulted to urban problems such as squalors, slum and sprawls as seen in major cities in Nigeria especially Lagos. It is therefore imperative to scrutinize the effect of land use planning on property values in other to determine the impacts that adherence to land use planning has revealed on residential property values (rental) values in Lagos metropolis and recommend improvement as necessary.

II. LITERATURE REVIEW

a) Concept of land use Planning

The general idea of planning can be linked to the creation as it always said that God (himself) was the first planner and the originator. God planned land and created the earth in six days. It was obvious that planning process was adopted in the concept of zoning land and its use, separation from water, birds, air and animals. The creation of the world is an example of zoning and planning concepts.

Cheshire and Sheppard (2001) noted that land use planning acts in various purposes, control of the spatial structure of residential development can reduce the cost of providing some local public goods and serve to isolate land uses which are likely to generate costly external effects; regulation of building types; regulation of land use can be a method of providing valued public goods and amenities such as planned neighbourhood and open space respectively. They further stated that
Land use planning produces a variety of local amenities and regulates industrial land use and separates it from residential land use.

Oyesiku (2009) believed that the practice of planning in Nigeria is not forming a spatially sustainable new cities, due to the fact that planning is similar to a preventive medicine, whereas the professional planners in Nigeria have been focusing on curative medicine. Owei, Obinna and Ede (2010) discussed that land use planning is a process targeted for the purpose of achieving an orderly physical development to evolve a functional and habitable environment.

b) Land-Use Control Tools

Land use controls are institutional, administrative and/or legal tools put into place by the government to minimize, control and prevent intended excessive human actions on land and its resources (ITRC, 2008). The implementation of controls are usually enforced by government which include zoning restrictions, building permits and other provisions of restrictions on land use.

Zoning: Zoning is a well- understood policy and is applicable to our urban space dimension to eradicate land use conflicts such as the reduction in the environmental issues such as pollution and noise. Zoning is a major tool of country and town planning in our cities and suburban centres to curb urban sprawl and enhance a liveable environment. It has been the practice of the local government to use zoning in urban regulation. Fischel (1985) defines zoning as “the separation of a community into districts or zones with restrictions in certain land-use activities while others are allowed. In recent times, there have been zoning codes that have covered many other restrictions. These codes include setting limits on building size, maximum height, lot size, etc. It has also been used to limit the size of off street parking space and size of trees. Zoning is classified into minimum lot-size, maximum lot-size and building height limitation.

c) Effect of Land Use Planning and Control on Property Value

Jaeger (2006) from his study, opined that one of the impact of planning system on land is that it can have an intent impact on the land values. He further explained that a piece of property can worth more than before after the grant of a planning permit. It has been assumed that land use reduces property value, whereas in the actual fact it has positive effect on it. Oni (2008), Oni (2010), and Oni and Ajayi (2011) recommended that government should review laws as regards government intervention in the property market through taxation. They suggested that an appropriate equitable tax should be enacted to ensure a sustainable housing delivery in other to realise the goal vision 20:2020in determining the effects of government intervention in property market through the imposition of property tax on sustainable housing delivery found that government intervention through the imposition of statutory formula for determining the amount payable by property owners as land use charge was inappropriate and that high tax and penalties would discourage investment in new housing and maintenance of existing stock. It recommended a review of the law and suggested an appropriate basis of fair and equitable tax to ensure sustainable housing delivery and the realization of the goal of Vision 20:2020, which was in place to make Nigeria become one of the twenty most advanced countries by year 2020.

Adebayo and Patunola-Ajayi (2017) they also observed that economist recognized three potential effects of land use regulations on land values, these are; restriction effects, amenity effects, and scarcity effects.

a. Restriction effects: this has effect on the “highest and best use” of land which in turn will affect the property value. If par venture the prohibited use will not affect the highest and best use of a piece of land. The regulation will have no effect, but it does, it will bring down the value of the property.

b. Amenity effects: It has many effects mostly positive and this serves as the bases for the introduction of a land-use regulation. Land use regulation are formulated to enhance the livability of a neighbourhood by eliminating conflicting land uses. Rules and orders that protect infrastructure (including open spaces) also have similar positive effects. The quality of any surrounding land, has a positive effect on the value of properties. (Adebayo and Patunola-Ajayi, 2017).

c. Scarcity effects: when there is a change in the supply of land use as a result of land use regulation, then there will be scarcity effect. If there is a law that restrict the use of land for example, “A” there would be a decrease in the supply of “A” and if the law allows the use of land B, there will be increase in the supply of “B”, likewise property that has exception or waiver will also enjoy the benefits B has.

III. STUDY AREA

Lagos state can be referred to as one of the populous cities in the world with a population of about 15 million. Lagos state is referred to as the commercial nerve of the country, having sea and airports. Over 45% of skilled workers resides in the state. It is located at a latitude 6°34’60″N, 3°19’59″ E along the West African coast. It was the capital of the country before and now it has been replaced with Abuja on the 12th of Dec., 1991. Republic of Benin borders it on the western side, the Atlantic Ocean form the southern boundary, and it borders Ogun state on its North and Eastern boundaries. (Balogun et al, 1999).

Lagos state is the smallest state in Nigeria with highest population over 5% of the National estimate with
an area of 356,861 hectares out of which 75,755 hectares are wetlands (Lagos State Government, 2014).

in Lagos would be considered as the study area. There are 363 practising estate surveying and valuation firms in Lagos state, this is in accordance with the National directory of the Nigerian Institution of Estate Surveyors and Valuers. A sample size reduction formula as presented by Yamane (1967) was used for arriving at the sample size formula. The formula is given as:

\[ n = \frac{N}{1 + N (e)^2} \]  

Where:  
- \( n \) = sample size  
- \( N \) = size of finite population  
- 1 = unity (constant)  
- \( e \) = limit of tolerable error (usually taken at 0.05)

The sample size of Estate Surveying and Valuation firms in Lagos is 190.30 approximately 190.

Structured questionnaires were administered randomly on the practising Estate Surveying and Valuation firms in Lagos to elicit information on the effect of land use planning on property values in Lagos. Questionnaires were sent out to each of the respondent's, thus a total of One Hundred and Ninety (190) questionnaires were sent out to the occupants of which a total of 157 were completed and retrieved which was then used for the analysis. Descriptive statistics and likert scale was employed to analyze the data.

Table 1: Land Use Planning and Policy Tools Mostly Used and Implemented in Lagos

<table>
<thead>
<tr>
<th>Land Use Planning and Policy Tools</th>
<th>MU</th>
<th>U</th>
<th>UD</th>
<th>UU</th>
<th>MUU</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Permit /Approval</td>
<td>147(93.6)</td>
<td>7(4.5)</td>
<td>-</td>
<td>2(1.3)</td>
<td>1(0.6)</td>
<td>4.8917</td>
<td>.50102</td>
<td>1\textsuperscript{st}</td>
</tr>
<tr>
<td>Zoning</td>
<td>131(83.4)</td>
<td>19(12.1)</td>
<td>2(1.3)</td>
<td>3(1.9)</td>
<td>2(1.3)</td>
<td>4.7452</td>
<td>.69710</td>
<td>2\textsuperscript{nd}</td>
</tr>
<tr>
<td>Land Use charge</td>
<td>115(73.2)</td>
<td>18(11.5)</td>
<td>15(9.6)</td>
<td>4(2.5)</td>
<td>5(3.2)</td>
<td>4.4904</td>
<td>.99110</td>
<td>3\textsuperscript{rd}</td>
</tr>
<tr>
<td>Town Ordinances</td>
<td>88(56.1)</td>
<td>49(31.2)</td>
<td>13(8.3)</td>
<td>6(3.8)</td>
<td>1(0.6)</td>
<td>4.3822</td>
<td>.84379</td>
<td>4\textsuperscript{th}</td>
</tr>
<tr>
<td>Building Codes</td>
<td>88(56.1)</td>
<td>27(17.2)</td>
<td>33(21.0)</td>
<td>6(3.8)</td>
<td>3(1.9)</td>
<td>4.2166</td>
<td>1.02731</td>
<td>5\textsuperscript{th}</td>
</tr>
<tr>
<td>Sub-Division Regulations</td>
<td>70(44.6)</td>
<td>37(23.6)</td>
<td>50(31.8)</td>
<td>-</td>
<td>-</td>
<td>4.1274</td>
<td>.86770</td>
<td>6\textsuperscript{th}</td>
</tr>
<tr>
<td>Power of Esheat</td>
<td>98(62.4)</td>
<td>11(7.0)</td>
<td>19(12.1)</td>
<td>24(15.3)</td>
<td>5(3.2)</td>
<td>4.1019</td>
<td>1.28195</td>
<td>7\textsuperscript{th}</td>
</tr>
<tr>
<td>Taxation</td>
<td>93(59.2)</td>
<td>23(14.6)</td>
<td>8(5.1)</td>
<td>25(15.9)</td>
<td>8(5.1)</td>
<td>4.0701</td>
<td>1.32101</td>
<td>8\textsuperscript{th}</td>
</tr>
<tr>
<td>Police power</td>
<td>93(59.2)</td>
<td>20(12.7)</td>
<td>13(8.3)</td>
<td>21(13.4)</td>
<td>10(6.4)</td>
<td>4.0510</td>
<td>1.33875</td>
<td>9\textsuperscript{th}</td>
</tr>
<tr>
<td>Building Height Control</td>
<td>61(38.9)</td>
<td>69(43.9)</td>
<td>5(3.2)</td>
<td>15(9.6)</td>
<td>7(4.5)</td>
<td>4.0318</td>
<td>1.10024</td>
<td>10\textsuperscript{th}</td>
</tr>
<tr>
<td>Contravention</td>
<td>91(58.0)</td>
<td>18(11.5)</td>
<td>4(2.5)</td>
<td>18(11.5)</td>
<td>26(16.6)</td>
<td>3.8280</td>
<td>1.59397</td>
<td>11\textsuperscript{th}</td>
</tr>
<tr>
<td>Easement and wayleaves</td>
<td>32(20.4)</td>
<td>51(32.5)</td>
<td>20(12.7)</td>
<td>39(24.8)</td>
<td>15(9.6)</td>
<td>3.2930</td>
<td>1.30217</td>
<td>12\textsuperscript{th}</td>
</tr>
<tr>
<td>Public Right of way</td>
<td>10(6.4)</td>
<td>63(40.1)</td>
<td>40(25.5)</td>
<td>32(20.4)</td>
<td>12(7.6)</td>
<td>3.1720</td>
<td>1.06926</td>
<td>13\textsuperscript{th}</td>
</tr>
<tr>
<td>Rent Control</td>
<td>12(7.6)</td>
<td>55(35.0)</td>
<td>20(12.7)</td>
<td>62(39.5)</td>
<td>8(5.1)</td>
<td>3.0064</td>
<td>1.12373</td>
<td>14\textsuperscript{th}</td>
</tr>
<tr>
<td>Eminent Domain</td>
<td>27(17.2)</td>
<td>18(11.5)</td>
<td>41(26.1)</td>
<td>55(35.0)</td>
<td>16(10.2)</td>
<td>2.9045</td>
<td>1.24953</td>
<td>15\textsuperscript{th}</td>
</tr>
</tbody>
</table>

MU: Mostly Used; U: Used; UD: Undecided; UU: Unused; MUU: Mostly Unused

Source: field survey, 2020
Land use planning policies and tools used in Lagos were considered in the course of the research. The various land use policies and tools in Nigeria are majorly in form of control and planning measures which were assessed on the basis of its monitoring and implementation. As revealed in the table there is a high level of monitoring and implementation of all the land use planning policies tools and control measures. Building permit/approval was ranked 1st with a mean score of 4.8917. Zoning (4.7452) Land Use Charge (4.4904), town ordinances (4.3822) and building codes (4.2166) were ranked 2nd, 3rd, 4th and 5th respectively. Making them the 5 most used and implemented and land use planning and control tools in Lagos. The least considered were rent control (3.0064) and eminent domain (2.9045) which were ranked 14th and 15th respectively.

Table 2: The effect of land use planning and policies on residential property values

<table>
<thead>
<tr>
<th>Effect of land use planning and policies on residential property values</th>
<th>SA</th>
<th>A</th>
<th>UD</th>
<th>DA</th>
<th>SDA</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant impact on land values</td>
<td>105(66.9)</td>
<td>26(16.6)</td>
<td>26(16.6)</td>
<td>-</td>
<td>-</td>
<td>4.5032</td>
<td>.76480</td>
<td>1st</td>
</tr>
<tr>
<td>Land use policies ensure planned and controlled developments</td>
<td>77(49.0)</td>
<td>80(51.0)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.4904</td>
<td>.50151</td>
<td>2nd</td>
</tr>
<tr>
<td>protect, enhance, or create amenities or services that benefit property owners</td>
<td>64(40.8)</td>
<td>80(51.0)</td>
<td>13(8.3)</td>
<td>-</td>
<td>-</td>
<td>4.3248</td>
<td>.62241</td>
<td>3rd</td>
</tr>
<tr>
<td>It also ensures environmental sustainability</td>
<td>53(33.8)</td>
<td>53(33.8)</td>
<td>51(32.5)</td>
<td>-</td>
<td>-</td>
<td>4.0127</td>
<td>.81640</td>
<td>4th</td>
</tr>
<tr>
<td>Population explosion and paucity of resources</td>
<td>38(24.2)</td>
<td>67(42.7)</td>
<td>39(24.8)</td>
<td>13(8.3)</td>
<td>-</td>
<td>3.8280</td>
<td>.8928</td>
<td>5th</td>
</tr>
<tr>
<td>Curbs the nefarious and corrupt practices amongst land owners</td>
<td>40(25.5)</td>
<td>53(33.8)</td>
<td>38(24.2)</td>
<td>26(16.6)</td>
<td>-</td>
<td>3.6815</td>
<td>1.0318</td>
<td>6th</td>
</tr>
<tr>
<td>Policies ensure planned and controlled developments</td>
<td>26(16.6)</td>
<td>91(58.0)</td>
<td>17(10.8)</td>
<td>6(3.8)</td>
<td>17(10.8)</td>
<td>3.6561</td>
<td>1.1363</td>
<td>7th</td>
</tr>
<tr>
<td>Equitable distribution and accessibility to land</td>
<td>26(16.6)</td>
<td>91(58.0)</td>
<td>17(10.8)</td>
<td>6(3.8)</td>
<td>17(10.8)</td>
<td>3.6561</td>
<td>1.1363</td>
<td>7th</td>
</tr>
<tr>
<td>The equitable distribution and accessibility to land</td>
<td>51(32.5)</td>
<td>26(16.6)</td>
<td>42(26.8)</td>
<td>25(15.9)</td>
<td>13(8.3)</td>
<td>3.4904</td>
<td>1.3137</td>
<td>9th</td>
</tr>
<tr>
<td>Ensures adequate cadastral surveys and detailed land information system</td>
<td>38(24.2)</td>
<td>13(8.3)</td>
<td>68(43.3)</td>
<td>38(24.2)</td>
<td>-</td>
<td>3.3248</td>
<td>1.0932</td>
<td>10th</td>
</tr>
<tr>
<td>Provides avenue for legal and defensible titles to land</td>
<td>39(24.8)</td>
<td>27(17.2)</td>
<td>13(8.3)</td>
<td>78(49.7)</td>
<td>-</td>
<td>3.1720</td>
<td>1.2819</td>
<td>11th</td>
</tr>
<tr>
<td>Effective utilization of land</td>
<td>25(15.9)</td>
<td>52(33.1)</td>
<td>80(51.0)</td>
<td>-</td>
<td>-</td>
<td>3.1401</td>
<td>1.2113</td>
<td>12th</td>
</tr>
<tr>
<td>Increased cases of squatting and unplanned developments</td>
<td>51(32.5)</td>
<td>54(34.4)</td>
<td>52(33.1)</td>
<td>-</td>
<td>-</td>
<td>2.6433</td>
<td>1.6909</td>
<td>13th</td>
</tr>
<tr>
<td>Ensures adequate cadastral surveys and detailed land information system</td>
<td>-</td>
<td>30(19.1)</td>
<td>18(11.5)</td>
<td>108(68.8)</td>
<td>1(0.6)</td>
<td>2.4904</td>
<td>.80557</td>
<td>14th</td>
</tr>
<tr>
<td>Ensures adequate cadastral surveys and detailed land information system</td>
<td>12(7.6)</td>
<td>65(41.4)</td>
<td>54(34.4)</td>
<td>26(16.6)</td>
<td>-</td>
<td>2.4777</td>
<td>1.0227</td>
<td>15th</td>
</tr>
</tbody>
</table>

SA: Strongly Agree; A: Agree; UD: Undecided; DA: Disagree; SDA: Strongly Disagree
Source: field survey, 2020

Various impacts of land use planning policies and tools on property values as evidenced in various literatures and physical review of the land use planning and policies were assessed and presented in table 4. From the table, the research revealed that the basic effect of land use planning and policies on property values include: significant impact on land values (4.5032); land use policies ensure planned and controlled developments (4.4904); protect, enhance, or create amenities or services that benefit property owners (4.3248); It also ensures environmental sustainability (4.0127) and population explosion and paucity of resources (3.8280) which have been ranked 1st, 2nd, 3rd, 4th and 5th respectively. The least considered were ensures adequate cadastral surveys and detailed land information system (2.4904) and Ensures adequate cadastral surveys and detailed land information system (2.4777) which were ranked 14th and 15th respectively.
Table 3: Group Statistics and Mean Rental Values of Residential Properties based on planned and Unplanned

<table>
<thead>
<tr>
<th>Planned and Unplanned</th>
<th>Mini Flat</th>
<th>1 Bedroom</th>
<th>2 Bedroom</th>
<th>3 Bedroom</th>
<th>Duplex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>N</td>
<td>Std. Dev.</td>
<td>Median</td>
<td>Sum</td>
</tr>
<tr>
<td>Ikoyi</td>
<td>580,000.00</td>
<td>10</td>
<td>856,348.83</td>
<td>575,000.00</td>
<td>580,000.00</td>
</tr>
<tr>
<td></td>
<td>605,000.00</td>
<td>10</td>
<td>831,666.49</td>
<td>600,000.00</td>
<td>605,000.00</td>
</tr>
<tr>
<td></td>
<td>995,000.00</td>
<td>10</td>
<td></td>
<td></td>
<td>995,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agege</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey, 2020

The table above revealed the group statistics and mean rental of residential properties in Ikoyi and Agege axis based on the nature of planning i.e planned and unplanned areas. The mean rental value of a mini flat, one bedroom, 2 bedroom, 3 bedroom and duplex in Ikoyi are 580,000.00; 605,000.00; 995,000; and unplanned areas. The mean rental value of a mini flat, one bedroom, 2 bedroom, 3 bedroom and duplex in Agege are 75,500.00; 85,000.00; 119,500; 221,000 and 1,050,000.00 respectively.

Table 4: ANOVA Table for difference in rental values between Residential Properties in Ikoyi and Agege

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini Flat * Planned &amp; Unplanned</td>
<td>(Combined) 127,260,125,000.00</td>
<td>1</td>
<td>127,260,125,000.00</td>
<td>342.289</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within Groups 66,922,500,000.00</td>
<td>18</td>
<td>3,717,916,666.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total 133,952,375,000.00</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Bedroom * Planned and Unplanned</td>
<td>(Combined) 135,200,000,000.00</td>
<td>1</td>
<td>135,200,000,000.00</td>
<td>384.455</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within Groups 63,300,000,000.00</td>
<td>18</td>
<td>3,516,666,666.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total 141,530,000,000.00</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Bedroom * Planned and Unplanned</td>
<td>(Combined) 383,250,125,000.00</td>
<td>1</td>
<td>383,250,125,000.00</td>
<td>389.147</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within Groups 177,272,500,000.00</td>
<td>18</td>
<td>9,484,722,222.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total 400,977,375,000.00</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Bedroom * Planned and Unplanned</td>
<td>(Combined) 1,564,680,050,000.00</td>
<td>1</td>
<td>1,564,680,050,000.00</td>
<td>43.386</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within Groups 649,149,000,000.00</td>
<td>18</td>
<td>36,063,833,333.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total 2,213,829,500,000.00</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplex * Planned and Unplanned</td>
<td>(Combined) 252,001,250,000.00</td>
<td>1</td>
<td>252,001,250,000.00</td>
<td>77.775</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Within Groups 583,225,000,000.00</td>
<td>18</td>
<td>32,401,388,888.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total 3,103,237,500,000.00</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey, 2020
One way ANOVA was conducted to compare the mean rental values of different typology of residential properties based on the nature of planning as either planned area or unplanned area. Analysis of Variance was further used to test for any statistical difference in values between the different typologies of residential properties based on the nature of planning. The results as presented in Table 7 showed that there is a differential statistical values between the properties based on the nature of planning $F(1,18)= 342.289$, $P=.000$ for mini flats; $F(1,18)= 384.455$, $P=.000$ for 1 bedroom flat; $F(1,18)= 389.147$, $P=.000$ for 2 bedroom flats; $F(1,18) = 43.386$, $P = .000$ for 3 bedroom apartments and $F(1,18)= 77.775$, $P=.000$ for duplexes. There are therefore statistical differences in the mean rental values for the different housing typologies in the planned and unplanned areas.

### Table 5: Measure of Association for rental values of planned and unplanned properties in Ikoyi and Agege

<table>
<thead>
<tr>
<th></th>
<th>Eta</th>
<th>Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini Flat * Planned and Unplanned</td>
<td>.975</td>
<td>.950</td>
</tr>
<tr>
<td>1 Bedroom * Planned and Unplanned</td>
<td>.977</td>
<td>.955</td>
</tr>
<tr>
<td>2 Bedroom * Planned and Unplanned</td>
<td>.978</td>
<td>.956</td>
</tr>
<tr>
<td>3 Bedroom * Planned and Unplanned</td>
<td>.841</td>
<td>.707</td>
</tr>
<tr>
<td>Duplex * Planned and Unplanned</td>
<td>.901</td>
<td>.812</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2020

The measure of association and effect size reveals a clue of the size of the difference between the natures of the areas as been planned and unplanned (not just whether the difference could have occurred by chance). The effect size is large as revealed in eta squared. The eta squared for difference in values between the properties based on the nature of land use planning for mini flats is .950 representing 95.0%. This reveals 95.0% of the difference among values is revealed by nature of planning. One bedroom flat is .955 representing 95.5%. This shows that 95.5% of the difference in value is discussed by the nature of land use planning. Eta squared for 2 bedroom flats is .956; 3 bedroom flat is .707 while duplex is 812, thus showing a significant contribution of the nature of land use planning to the changes in values.

### Table 6: Model Summary for the Effect of Urban Land use planning on Property Values

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.723a</td>
<td>.522</td>
<td>.471</td>
<td>815713.76498</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2020

Table 10shows that the correlation coefficient “R” (Linear Relationship) is 0.723 while the coefficient of determination “R$^2$” (i.e. the strength or magnitude of the relationship) is 0.522. With R value of 0.723 and R$^2$ value of 0.522 it is evident that there is statistically significant relationship between land use planning and property values. In other words, 52.2% of the variation in the dependent (property values) variable can be explained by variations in the independent variable land use planning policies and tools.

### Table 7: ANOVA of the Effect of Urban Land use planning on Property Values

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>15</td>
<td>6834929107057.173</td>
<td>10.272</td>
<td>.000a</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>141</td>
<td>665388946238.441</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>156</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey, 2018

Table 11 shows that the between-group mean square (the variation explained by the model or regression) is 102523936605857.500 (i.e. 102523936605857.500÷1), and the within-group mean square (the variation unexplained or residual) is 665388946238.441 (93819841419620.120÷141). The P-value<0.05. The computed F statistic (F = 10.272) of the analysis of variance as shown in table 11 falls within the rejection zone and it indicates that at least one of the model coefficient is non zero hence the model is statistically significant. However the model is useful in predicting the effects of land use planning on property values in Lagos.

### VI. Conclusion

Land use planning and policy control tools are veritable instrument used by government authorities to design, guide and regulate land use. The importance of urban land use planning in the world over today cannot be underestimated with the resulting urban explosion...
and morphological changes in the country. Nigeria, a developing and environmentally conscious country is not left out of this dire need for effective land use planning and control measures. There are many challenges confronting effective implementation and enforcement of land use planning in Nigeria. Hence, this research amongst other also assesses the effects of land use planning on property values in Lagos. The study revealed that the major land use planning and policy tools used and implemented in Lagos are building permit/approval, zoning, land use charge, town ordinances and building codes. The study also revealed that inadequate implementation, inadequate monitoring and evaluation; cost of compliance with planning and development standards, inadequate access to residential land and existing land use pattern and master plan were the major challenges of land use planning and policies in Lagos. The effects of land use planning on property values also revealed that land use planning have significant impact on land values; ensure planned and controlled developments, protect, enhance, or create amenities or services that benefit property owners; also ensures environmental sustainability and population explosion and paucity of resources. The study shows that land use planning leads to increased property values. In other words, the study establishes that there is a statistically significant relationship between land use planning and property values in the study area through the results of the ANOVA, T-Test, eta squared and the linear regression been conducted in the course of the research.

VII. Recommendation

The need for adequate implementation and monitoring of land use planning and policies in the society cannot be over-emphasized. In a bid to ensuring adequate and efficient land use policies and a better sustainable environment; the following were recommended:

i. Implementation and monitoring of land use planning and policies.
ii. Ensure enforcement of land use planning by the society.
iii. Cost of enforcement of planning policies should be reviewed.
iv. It is also recommended that Estate Surveyors and Valuers should be carried along in the town and country planning processes.
v. Adequate development standards should be created and enforced.
vi. Existing master plan should be enforced and where necessary be reviewed.
vii. There should be provision of the technical facilities for effective land use planning.
viii. The use of computer technology should be adopted and combined with political will to enforce land use planning and policies.
ix. Strengthening auditing of the tax records.
x. All government agencies involved in land use planning and policies should be coordinated for effective and sustainable development.
xi. A corrupt-free and efficient administrative machinery with well-trained personnel should be put in place.

References Références Referencias


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Tips for Writing a Good Quality Management Research Paper

Techniques for writing a good quality management and business research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can’t clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.
6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice. Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others’ work: Never copy others’ work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

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21. **Adding unnecessary information**: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

22. **Report concluded results**: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. **Upon conclusion**: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

**Informal Guidelines of Research Paper Writing**

**Key points to remember:**
- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

**Final points:**

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

**The introduction**: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

**The discussion section**: 
This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

**General style**: 
Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

**To make a paper clear**: Adhere to recommended page limits.

**Mistakes to avoid:**
- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
• Use paragraphs to split each significant point (excluding the abstract).
• Align the primary line of each section.
• Present your points in sound order.
• Use present tense to report well-accepted matters.
• Use past tense to describe specific results.
• Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
• Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:
Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.
• Fundamental goal.
• To-the-point depiction of the research.
• Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:
• Single section and succinct.
• An outline of the job done is always written in past tense.
• Concentrate on shortening results—limit background information to a verdict or two.
• Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:
The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:
• Explain the value (significance) of the study.
• Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
• Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
• Briefly explain the study's tentative purpose and how it meets the declared objectives.

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Approach:
Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):
This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:
*Materials may be reported in part of a section or else they may be recognized along with your measures.*

Methods:
- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:
It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer’s interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:
- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

Results:
The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.
Content:
  - Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
  - In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
  - Present a background, such as by describing the question that was addressed by creation of an exacting study.
  - Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
  - Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:
  - Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
  - Do not include raw data or intermediate calculations in a research manuscript.
  - Do not present similar data more than once.
  - A manuscript should complement any figures or tables, not duplicate information.
  - Never confuse figures with tables—there is a difference.

Approach:
As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:
If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:
The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.
  - You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
  - Give details of all of your remarks as much as possible, focusing on mechanisms.
  - Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
  - One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
  - Recommendations for detailed papers will offer supplementary suggestions.
Approach:
When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.
Describe generally acknowledged facts and main beliefs in present tense.

The Administration Rules

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection.

Segment draft and final research paper: You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

Written material: You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.
Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual AssIGNED Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

<table>
<thead>
<tr>
<th>Topics</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A-B</td>
</tr>
<tr>
<td>Abstract</td>
<td>Clear and concise with appropriate content, Correct format. 200 words or below</td>
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<tr>
<td></td>
<td>Above 200 words</td>
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<tr>
<td>Introduction</td>
<td>Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited</td>
</tr>
<tr>
<td>Methods and Procedures</td>
<td>Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads</td>
</tr>
<tr>
<td>Result</td>
<td>Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake</td>
</tr>
<tr>
<td>Discussion</td>
<td>Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited</td>
</tr>
<tr>
<td>References</td>
<td>Complete and correct format, well organized</td>
</tr>
</tbody>
</table>
INDEX

A
Alliance · 16, 18, 19, 22
Appropriate · 14, 25, 26
Asymmetry · 2, 4, 8

C
Christie · 2, 4, 6
Coefficient · 6, 8, 10, 12, 30
Consensus · 12, 14

D
Declining · 2, 4, 10, 12
Dispersions · 2, 4

E
Emerging · 1, 16
Extreme · 1, 2, 6, 12

I
Inexperienced · 12

L
Leptokurtic · 9

R
Ritterspach · 18, 23

S
Subsidiaries · 16, 19

U
Upstream · 19