THE IDENTIFICATION OF CONDITIONS REQUIRED FOR THE CREATION OF A PROPERTY INDEX IN NIGERIA

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CERTIFICATION

This dissertation has been certified as meeting the requirements of the school of Construction, Economics and Management, Faculty of Engineering and Built Environment, The University of Witwatersrand, Johannesburg, South Africa.

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OMIKUNLE A.D

DEDICATION

To the ALMIGHTY GOD, who is the reason for my existence, my late father Chief M.O Omikunle, my mother Deaconess E.A Omikunle for all the love and finances provided to Execute this programme, my brothers and sisters, my wife Duduzile, nephews and nieces in Diaspora.

Finally to all involved in making sure that Nigeria is a better place to live in.

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TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF GRAPHS

ABSTRACT

A property index is an essential tool not only to provide a comparative measure for the performance of a portfolio but also for the analysis and drawing of conclusion affecting the future management of the portfolio. This performance measurement tool has been created and controlled by different property investment bodies around the world amongst which includes RAAD VOOR ONROERENDE ZAKEN (ROZ) the umbrella organization of the Dutch property industry, INVESTMENT PROPERTY DATA BANK (IPD) responsible for U.K, South Africa and some other countries and NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES (NCREIF) responsible for United State of America. The creation of a property index has brought transparency and standardization into the user's property market, performance measurement is easily done with other asset class, investment decision are taken with accuracy and it also provides an important benchmark against which performance of the managers of different property portfolio can be measured i.e.in U.K, USA, South Africa and Holland. Four major Conditions are required to be in place for the creation of a property index. These conditions were used to benchmark with the situation currently in place in the Nigerian property market.

A total of 40 questionnaires were administered to five categories of real estate investors in Lagos and Abuja and a total of 28 questionnaires were retrieved back. Analysis of the data was done with the use of tables and percentages while presentation was done with the use of bar graphs. The findings from the data analyzed reveals that the Nigerian property market does not have in place the conditions required for the creation of a property index.

CHAPTER ONE

1.0 INTRODUCTION

Recently, real estate investment in Nigeria has assumed a new dimension as a result of risk, uncertainty and the wide spread attention it is receiving from investors when compared to other source of investment. Events unfolding over the years have revealed that there is a growing involvement of institutional investors. Among which include WemaBoard Estate, Oando Plc, Nigerian National Petroleum Corporation (NNPC), Shell Petroleum, Chevron, Global com. In addition, the property market has also witnessed the establishment of the first public property company listed on the Nigerian stock market called UACN Property Development Company Plc. More public commercial banks like Union Bank, Intercontinental Bank, First bank, Diamond Bank, Afri-Bank, Zenith Bank are also now heavily involved in real estate investment and the provision of mortgage facilities. Some state governments like Lagos State Development Property Corporation (LSDPC), Ogun state property Investment Corporation, just to mention a few, all have stakes in the emergence of property investment in the Nigeria. With the growth in real estate over the last 13 years, investors are now keen to know how well their real estate investments are performing against other asset classes.

The above question can only be answered with the assessment of the investor's portfolio returns.' Returns are the fundamental measures of investment performance both at the micro level of individual properties and deals, and at the macro level of the big picture of overall investment strategy and real estate as an asset class among others in the capital markets'*Geltner et al (2001:181)*·There are two types of returns ,they are :period-by-period returns and multiperiod returns. These returns are calculated on the availability of data on income return of asset, appreciation return on asset and some other valuation data supplied by valuers. The availability of these data are combined together to produce a property index. " A property index is an essential tool not only to provide a comparative measure for the performance of a portfolio but also for the analysis and drawing of conclusion affecting the future management of the portfolio" *Hordijk et. al, (1997:103).* A property index is a performance measurement tool that is widely used in United State, Europe, and Australia, some parts of Asia and South Africa. With the assistance of property investment bodies like RAAD VOOR ONROERENDE ZAKEN (ROZ) the umbrella organization of the Dutch property industry, INVESTMENT PROPERTY DATA BANK (IPD) responsible for U.K, South Africa and some other European countries, NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES (NCREIF) and IPD in America, property index creation and usage has been successful. The creation of a property index has brought transparency and standardization into the user's property market, performance measurement is easily done with other asset class and it also provides an important benchmark against which performance of the managers of different property portfolio can be measured.

For a property index to be created, certain conditions must be in place. The focus of this study will be to identify these conditions needed for the creation of a property index and to benchmark the conditions identified with the current state of the Nigerian property market.

1.1 PROBLEM STATEMENT:

Real estate as an investment medium with a performance level somewhere between that of equity and fixed interest security is always coming under scrutiny. Increasingly legitimate questions were asked on the performance of a particular property, a whole portfolio or property as a sector within Nigeria. Due to lack of transparency, objective data on property returns and accurate valuation figures which are needed to produce a benchmark tool i.e. a property index, no satisfactory answers were available.

The availability of this tool will help investors improve their setting and implementing of strategies in relation to their property portfolios, improve performance evaluation, increase transparency in the property market and also help investors and portfolio managers make more accurate decisions with regards to their portfolio investments.

1.2 RESEARCH QUESTION:

This research is based on the question:

"Does the Nigerian property market have the conditions in place for the creation of a property index"?

1.3 OBJECTIVE OF RESEARCH:

The objectives of this study are:

1. To identify the conditions in place for the creation of property index in other countries like south Africa, Holland and United Kingdom.
2. To review literatures on the benefits of property index to the users property market.
3. To benchmark the conditions identified and required for a property index creation in South Africa, Holland and United Kingdom with the state of the Nigerian property market.

1.4 HYPOTHESIS

The research study attempts to test the following with a view to confirming or refuting pre-conceived opinions/notions that,

'The Nigerian Property market does not have at present the conditions required for the creation of a property Index'

1.5 SCOPE OF STUDY

The scope of the study is limited to property investors in Lagos state and Abuja. The justification for these two geographical locations is that major real estate investments takes place there and greater number of property investors agglomerate around these places due to the high level of economic activity. These investors are categorized into five. They are Public owned property company, private property development companies, property management and valuation firms, State Government owned Property Company and property financing institution (banks). All the five categories of investors will be covered in Lagos because they all have their head office in Lagos while two categories which are private property development companies and property management and valuation firms will be covered in Abuja because this is what is currently available within the state.

1.6 METHODOLOGY

There are three categories of research. These are Survey research, Experimental research and Ex post facto research.

Based on this type of research which is a Survey research or also known as quantitative research, the administration of questionnaire blended with some personal interviews will be used to collect the data needed. From the two geographical locations selected, 30 questionnaires will be administered to property investors in Lagos, while 10 questioners will be administered to investors in Abuja. The justification for this distribution is that 30 questionnaires will cover majority of property investors both on Lagos main land and the island while 10 questionnaires will be enough for Abuja because it's an emerging capital with couple of investors with new base there, but majority resides in Lagos due to its status as the formal capital of Nigeria.

The sampling technique to be adopted is the stratified method of sampling in which the area of study has been divided into various strata i.e. for Lagos we have six strata(Ikeja, surulere/yaba,VictoriaIsland/Ikoyi/lekki,Apapa,Ojo/festactown,LagosIsland) and for Abuja we also have six strata(Abuja, Abaji, Gwagwalada,Kuje,Bwari and Kwali). This technique gives better precision than ordinary random sampling. It is more convenient, practicable and better result accuracy is guaranteed.

The data collected shall be analyzed with the use of tables and qualitative descriptive analysis method i.e. the use of mean and presentation done with the use of bar graph in order to make our conclusion

1.7 LIMITATIONS

No doubt, a research of this magnitude cannot be executed smoothly without having some constraints, no matter how small. Thus in the course of this study, the main constraint encountered was inadequacy of financial resources to enhance the extensive coverage of my scope of study.

In spite of all the above, it is important to note that sufficient data required for the research were gathered.

Furtherance to this research work, chapter two of this work reviews literatures on the conditions that need to be in place for a property index to be created in other countries which will be used as a benchmark for the current state of Nigeria property market. Chapter 3 looks at the methodology that is most appropriate for the collection of data, the companies that were survey and how the data collected will be analyzed. Chapter 4 deals with the analysis of the data collected which will form the bedrock of the recommendation and conclusion that will be made in chapter 5.
In conclusion to this chapter, the carrying out of this research work will help to show the state of the Nigerian property market in readiness for a property index creation which will help enhance the database and the transparency of the Nigerian property market.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

The word investment is subjective and its has different definitions to different disciplines. Investment in terms of economics is defined as the per-unit production of goods, which have not been consumed, but will however, be used for the purpose of future production

Investment in terms of business management refers to tangible assets like machinery and equipments and buildings and intangible assets like copyrights or patents and goodwill.

Investment in terms of finance refers to the purchasing of securities or other financial assets from the capital market. It also means buying money market or real properties with high market liquidity. Financial investment are in stocks, bonds, and other types of security investments .Indirect financial investments can also be done with the help of mediators or third parties, such as pension funds, mutual funds, commercial banks and insurance companies.

Investment in terms of real estate is refered to as money utilized for buying property for the purpose of ownership or leasing. This involves capital risk.

The act of investment is carried out by investors. Investors buy and sell capital assets, thereby making up both the demand and supply side of the capital markets. *Geltner et.al (2001; 128).* Investors have majorly two objectives in mind. They are

a) .Growth objective; - Investors with growth objective can put money away for a relatively long period of time.
b) Income objective: - Investors with income objective need to consider how much cash the investment will generate initially, as well as how this cash flow stream may change overtime.

Having those two objectives in mind, there are four major investment classes available to invest in and they are

a) Cash (T-bill)

b) Stocks

c) Bonds

d) Real Estate

In deciding on any choice of investment, investors are faced with numerous challenges among which includes risk, liquidity, time horizon, size, capital and investor's expertise and management burden.

Haven looked at the above investment options, we shall zero in on real estate investment and its performance measurement assessment.

Real estate is an 'asset class' that should normally be included in a multi-asset portfolio along with stocks and bonds. Academic research suggests that real estate investments are not highly correlated with stocks and bonds and therefore offer diversification benefits, *Fisher (2002).*

There are different classes of real estate investment. *Thorn Croft (1976)* classified property investment into Residential, Commercial, Industrial and Agricultural Property Investment, while *Corlet, (1994)* identifies only residential, Commercial and Industrial Investment. According to *Isaac, (1998:83)* 'the established classification of property investment changed in the 1980s with the addition of high tech developments, retail warehouses, retail parks, mixed use developments and specialty shops, but admitted that the classes of investment however remains Retail and Retail warehousing, office and business spaces, Industrial and warehouses, Agricultural land and woodland, leisure and healthcare and Residential.

Who are the real estate Investors?

We have various types of investors according to *Isaac (1998)* they are:

- Individual and Corporate Investors
- Overseas Investors
- Financial Institutions
- Property Companies
- Investment Trusts and Unit Trusts

How does an investor invest in Real Estate?

'There are four ways to invest in real estate from the equity side (as opposed to the debt side)' *Poorvu and Cruikshank (1999:44)*

There are:

- Buying a property directly: - whereby you and me, or in combination with partners buy a property.
- Investing in private syndications: - where you look at a prospectus and decide whether or not you want to become a partner in a particular property or properties.
- Investing in multi-property funds: - they are sponsored by financial advisors and specific properties held by the funds may or might not have been identified in advance.
- Investing in public securities: - getting real estate through the stock market.

Haven different options of property investment, investors globally compare their property investment with other asset class. This act is called benchmarking.

From the business perspective, benchmarking is increasing in popularity as a tool for identifying the highest standards of excellence for product, services, or processes, and making the improvements necessary to reach those standards, commonly called "best practice". The ultimate objective of benchmarking is process improvement that meets the attributes of customers or investors expectation. It began in the late 1970's by Xerox Corporation. During this time Xerox was losing market share and feeling a lot pressure from its competitors. In an attempt to try to 'get back to the game', Xerox decided to compare its operations to those of its competitors. After finding quality standards with which to compare itself, Xerox began one of the greatest trends in the business world today, *Elmuti et.al. (1997)*

Reasons for Benchmarking

a) Growth Potential: - Benchmarking may cause a necessary change in the culture of an organization. After a period of time in the industry, an organization may become too practiced at searching inside the company for growth. The company would be better off looking outside its walls for potential areas of growth. An outward looking company tends also to be a future oriented company; this often leads to a more enhanced organization and increased profits.

b) Increasing productivity and increasing design: - Companies do benchmark for different reasons. The reasons may include but not limited to issues like increasing productivity or improving an individual design or improving the quality of the product or output.

c) Strategic tool: - Leapfrogging competition is another reason to use benchmarking as a strategic tool. A company's competitor may be struck in the same rut as the company deciding to benchmark. It would be possible to get a jump on competitors by using new found strategies. This opens up an opportunity for growth that the competitors may not be aware of.

d) Continuous improvement tool: - Organizations that faithfully use benchmarking strategies achieve a cost savings of 30 to 40 percent or more. It establishes methods of measuring each area in terms of unit output as well as cost. In addition, benchmarking can support the process of budgeting, strategic planning and capital planning.

e) Vehicle to improve performance: - Benchmarking acts as a vehicle to improve performance by assisting in setting achievable goals that have already been proven successful. It overcomes disbelief that there are, by example, other ways of achieving and creating overall enhancement of an organization.

As an important tool for identifying the highest standard of excellence for products, services, or and then making the improvement necessary to reach those standards, also known as 'best practice', there are four types of benchmarking and they are :

i) Internal benchmarking: - It's one of the simplest forms of benchmarking since most companies have similar functions inside their business and it entails companies benchmarking against its operations. The main objective of internal benchmarking is to determine the internal performance standard of an organization and it also enables the sharing of a multitude of information.

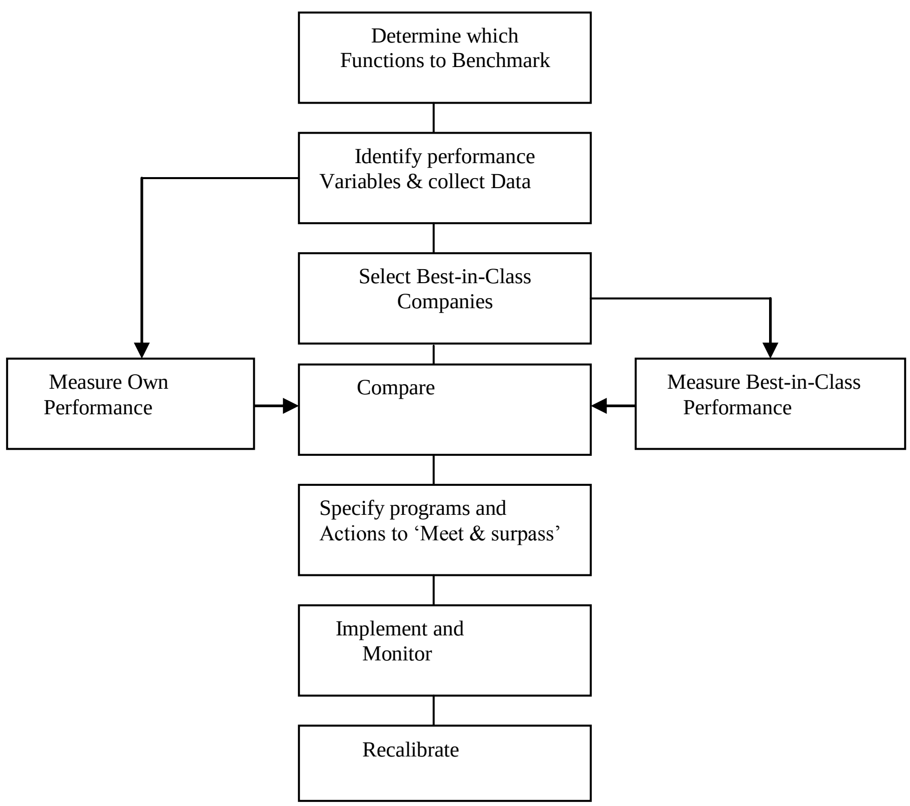
ii) The process or generic benchmarking: - This focuses on the best work processes. Having been proven to be very effective, it is difficult to implement and it requires a broad conceptualizing of the entire process and the careful understanding of the procedure. Instead of directing the benchmarking to the business practices of a company, the similar procedures and functions are emphasized.

iii) Competitive benchmarking: - This is done with direct competitors and mostly done externally. The main aim of this type of benchmarking is to compare companies in the same markets which have competing products, services, or work processes. Under this type of strategy, it is advantageous to see what a company's related performance is. Only under certain conditions with direct competitors, information would be easy to reach. Most times, competitors make it difficult to obtain their priceless information.

iv) Lastly Functional or industry benchmarking:-This is performed externally against industry leaders or the best functional operation of certain companies. The benchmarking partners are usually those who share common technological and market characteristics. They also seem to concentrate on specific functions. Due to the shortage of competitors involved, the benchmarking partner is more willing to contribute and share. A disadvantage could be the cost and scheduling of the already overwhelmed benchmarked companies. *Elmuti et.al (1997)*

Benchmarking is a structured process that consists of several steps. These steps are provided for as a model below.

(Fig1.0)



Source: -Batemȧn in Elmuti et.al (1997, pp233)

From the flow chart above, it can be concluded that different companies have different approach to benchmarking, but regarding the method that is used, the major steps involved in benchmarking are as follows:

1) Measure the performance of the best-in-class relative to critical performance variables such as cost, productivity and quality
2) Determine how the levels of performance are achieved
3) Use the information to develop and implement a plan for improvement.

From real estate perspective, property benchmarking also known as performance measurement when compared to operational benchmarking posses some challenges to its users. *Stapleton (1981)* affirms that measurement of property investment performance presents challenging conceptual and technical problems. Measurement is not an end itself, but rather a means to an end, that of the improvement of the performance of the portfolio, which requires the application of a wide range of skills to the management of the underlying assets.

The following are some of the challenges faced when designing an effective performance measurement system, these include the following

1. How to measure non- financial performance
2. What measure to choose and why
3. How to use them, what to do with the result
4. Who should be responsible for using the results?
5. How and to whom, to communicate the results
6. The resources needed to consider the above and design and deploy the measurement system

Hargitay and Yu (1993:201)' confirmed that the performance of an investment portfolio is an aggregate of two elements'. The two main elements are return and risk.

Performance measurement can be used to measure the relative performance of different types of property investment or to compare the performance of one property to another *Hargitay and Yu, (1993)*. It is also used in the stock market, and it provides bond traders, managers of traders and investors insights into what the sources of returns of a portfolio are, over a past measurement period. To ensure equal understanding, terms need to be standardized i.e. all data use for benchmarking must be derived from the same method in order to provide for transparency and accountability and the industry-wide participation level are needed to provide reliable information.

It is of importance to note that returns are the fundamental measures of property performance both at the micro level of individual properties and deals, and at the macro level of the big picture of overall investment strategy and real estate as an asset class among others in the capital markets' *Geltner et al (2001:181)*. There are two types of returns, they are

i) Period-by-period returns

The most complete measure of periodic return is called total return because it includes both the change in the capital value of the asset during the period and any income paid out by the asset to the investor during the period. Period-by-period return is broken down into two, we have

a) Income return- It's also known as current yield. The income return equals the cash flow paid out to the asset owner during period (t), as a fraction of the asset at the beginning of the period. Its denoted by the formula

$$Y_t = CF/V_{t-1}$$

Or in words IR= $\dfrac{\text{Property net rent during current year}}{\text{Property value at the end of formal year}}$

b) Appreciation return – Also known as capital growth is the change in the asset market value during period (t) as a fraction of the asset market value at the beginning of period (t)

$$g_t = (V_t - V_{t-1})/V_{t-1}$$

or in words AR = $\dfrac{\text{Property value at the end of current year – property value last year}}{\text{Property value last year}}$

Therefore Total return will be = income return + appreciation return

This return measure is regarded as an appropriate measure for evaluating the performance of fund managers, especially where they have no control over the disbursement of funds in their portfolio.

ii) Multi period returns.

This is the discount rate which equates the initial outlay and the cash flow at the date they occur to the final value of the investment. *Morell (1990),*

$$\frac{CVn + {}_1 - CV_n + I_n - C_n * 100\%}{CV_n + 1/2\, C_n}$$

<u>Where</u>

CVn+1 = Capital value at end of period

CVn = Capital value at start of period

In = Net income received during period

C_n = Capital expenditure during period

The weakness of this measure of performance is that it is very sensitive to the timing and size of new investment. The essential difference between period-by-period and multi period return is that the former assumes a single underlying rate of return over the life of the investment while the latter gives equal weight to the short term returns.

Data from Income returns, Appreciation return, total returns and other valuation figures provided by valuers are combined together to produce a property index used for performance measurement.

2.1WHAT IS AN INDEX

An index is something that serves to guide, point out or otherwise facilitate references. Alternatively, an index may also be considered as an instrument which derives its value from other instruments or indices. The index may be weighted to reflect the market capitalization of its components, or may be a simple index which merely represent the net change in the prices of the underlying instruments.

2.2 TYPES OF INDICES

The following are the types of indices, they are

2.2.1 STOCK MARKET INDEX

It is a method of measuring a section of the stock market. Many indices are cited by news or financial services firms and are used as benchmarks, to measure the performance of portfolios such as mutual funds.

Stock market index may be classified into **global stock market index** which includes large companies without regard for where they are located or traded e.g. S&P Global 100 and **national index** which represents the performance of the stock market of a given nation which also reflects investors sentiment on the state of its economy, example of this includes Johannesburg stock exchange market index (JSE), the Japanese Nikkei 225, the British FTSE 100, Russell 2000 index, Nasdaq- 100 index e.t.c

2.2.2 PROPERTY INDEX

Property Index is an essential tool that helps to provide a comparative measure for portfolio performance and also for drawing conclusions affecting the future management of a portfolio. Its also involves a comparative analysis of data extracted from the portfolios of real property investors, *Hordijk et.al (1997)*. For a property index to be created, the core information comes from valuation data. Hence,

Property index is used in several countries around the world and they are of two types, appraisal based index and transaction based index. Majority of these indices are appraised-based indices and it is of important to note that commercial property indices record market trends and not market movements, *Brown et.al (1995)*.

These property indices around the world have been produced with the help of various property investment bodies coming together under an umbrella name.

In the U.S.A the NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES (NCREIF) property index (NPI) is the most authoritative index which has been existing since 1978 and it shows the performance of institutional-grade commercial properties and their returns also available in the USA is the IPD index, in Holland in 1995 RAAD VOOR ONROERENDE ZAKEN (ROZ) the umbrella organization of the Dutch property industry merged with (IPD) for the production of the Dutch property index now called ROD/IPD index while in the major part of Western Europe including the United

Kingdom , the INVESTMENT PROPERTY DATA BANK (IPD) is the most authoritative property index producer . In Africa, the South African property association in Collaboration with the IPD launched the SAPOA/IPD index in 1995. The first SAPOA/IPD has 2,500 properties having a value of R54bn.

TYPES OF PROPERTY INDICES

There are two main types of property indices

1) APPRAISAL BASED INDICES

Appraisal Based Indices relies on valuation to determine start-of-period and end-of – period values so that the amount of change in capital value can be calculated. The main problem with these indices is that they tend to suffer from "valuation smoothing" or inaccurate valuation data. The different types of appraisal based indices that exist include the following, the NCREIF Index in the U.S, the IPD Index in most European countries (France, Germany, Portugal, The Netherlands, Spain, Sweden, and the U.K), the KTI index in Finland, and the Investment Performance Indices in Australia and New Zealand. This research will take a look at some of the appraisal based indices and the valuation methods applied in the countries in which they exist.

2) TRANSACTION BASED INDICES

Transactions-based indices are indices that are constructed using averages of transactions prices, *Brunette (1991)*

Geltner and Ling (2007) classified the two types of commercial real estate indices that exist to be,

1) Asset class 'research' indices

2) Agent evaluation 'benchmark' indices

ASSET CLASS 'RESEARCH' INDICES

An asset class research index is constructed to support quantitative analysis useful for property portfolio level valuation and investment. Asset class research indices should be constructed using stratified samples optimized for making statistical inference about research oriented questions and the indices are said to have many characteristics of ‘public goods’ in that the long run collective benefit they provide to the real estate industry is greater than the short-run or private benefit they provide to anyone firm or industry.

The following are some of the features of asset class ‘research’ indices

1. Compiled in an unbiased, neutral manner not susceptible to manipulation
2. Accessible widely to industry and academic researchers at a reasonable cost.
3. Subject to public and academic scrutiny
4. Based on state of the art data and index construction methodology

In a nut shell, the ultimate objectives of asset class research index are to improve fundamental understanding of the risk and return characteristics of private market commercial real estate investments and to improve practical decision-making.

AGENT EVALUATION ‘BENCHMARK’ INDICES

Benchmark indices are designed for use in evaluating the return performance of an agent /manager relative to the performance of his or her peer. Based on the suggestion of *Geltner and Ling (2007)*, there are at least three reasons why evaluation benchmarking is done in commercial real estate; namely

1. It helps align the interests of the principal party and the agent. If the benchmark reflects an appropriate standard on which to base measurement of the agent’s actual contribution to achieving the principal’s objectives, and if the agent knows his reward will be positively correlated with performance relative to his benchmark, then benchmarking gives the agent a direct incentive to perform in the interest of the principal.
2. It helps to keep inferior managers out of the business. Inferior managers are those who tend to consistently under perform the market on a risk adjusted basis.
3. It helps the principal and the agent to clarify and understand their objectives, functions, and roles in relation to investment objectives, strategies and tactics.

There are two types of evaluation benchmark indices. They are:

1. Peer universe Indices and
2. Passive market Indices

The peer universe index is designed to reflect the performance of all managers that are effectively competitors of the subject manager; that is, all managers who have the same style or specialization as the subject manager. The NCREIF in the U.S is an example of a property-level peer universe index and also the ROZ index in the Netherlands , the IPD index in the Great Britain, the PCA index in Australia can all be viewed as institutional real estate peer universe indices in their countries .

On the other hand, the passive market index is constructed to represent the performance of all the assets in a given market segment or group of segments.

2.3THE COMPOSTION OF THE INDEX

The data requirements of the index are in principle quite straightforward: measures of capital values of properties at both the start and end of the year and cash flow information during the year. This allows the calculation of the total return and of its two components: the capital return (rate of change in the underlying capital values of the properties) and the income return (the annual net rental income generated by the properties)

2.4 THE CREATION OF THE DUTCH PROPERTY INDEX

This property Index is an initiative of RAAD VOOR ONNROERENDE ZAKEN (ROZ), the umbrella organization representing the Dutch property industry; it is also known as the ROZ property index. ROZ acts a forum for discussion on issues affecting the property industry and for making representation to and conducting discussions with government departments, other public bodies and with other business organizations with shared interest. Membership is restricted to organizations. The first ROZ property index was published in 1995 and all was done with the collaboration of IPD of UK.

a) THE NEED FOR A PROPERTY INDEX IN HOLLAND

Due to the wild fluctuation of the real estate market in the 1980s investors became increasingly frustrated attributing this to the fact that standardization and quality of appraisal products must improve if they were to have a chance of improving the quality and liquidity of their portfolios.

This frustration continued into the 1990s and ROZ concluded that they needed a terminology that was common to all, information concerning the market in which the individual properties exist, methods of valuation that reflects the markets perception of values and that are consistently applied; appraisal reports that provide the information necessary to make timely investment decisions and also appraisal reports that are comprehensive, reliable, not misleading and in a consistent format.

ROZ realized that this is a huge task but they were willing to put forward considerable effort to make the real estate investments more tangible and liquid. They also wanted the appraisals of properties in their portfolios to be more reliable and homogeneous and contain sufficient information to be usable for both accounting and decision making, including trade and management. All these ideas gave birth to the Dutch investment real estate index, *Hordijk et.al, (1997)*

b) HOW THE INDEX WAS CREATED

The first trial

In 1989, most of the real estate institutions saw the need for a system of analysis of real property asset portfolios. So in order to establish this property index, a committee was established which fell under the jurisdiction of RAAD VOOR ONROERENDE ZAKEN (ROZ) to research into how this tool could be created for the benefit of all participants concerned.

The members of ROZ included property investment institutions and parties involved in real estate investments like banks, insurance companies, and other developers. There diversities also spread across the following Dutch professional organizations;

- Association of Private Investors in the Netherlands
- Association of Dutch Project Development Companies
- Royal Notarial Brotherhood
- Dutch Association of Banks
- Association of Property Brokers
- Association of Institutional Investors
- Association of Insurance companies
- Association of Pension Funds

There were two data analysis organizations which could produce the desired index; they are world market located in Edinburgh, U.K and IPD with office in London also in U.K. Both had been involved in analyzing investment data. After ample consultation, the world market was chosen. The reason being that the world market has been analyzing their securities portfolio in the past and most especially the issue of confidentiality. They thought that detailed analysis might expose details of their portfolios to the competition and other outsiders. Based on previous experience, they knew that world markets demanded less detail from participants and provided information and comparisons on a more aggregate scale. This helped to minimize unwanted exposure of successes and failures in property and portfolio management while providing what investors perceived as good portfolio analysis.

World market then proceeded with data collection and analysis of participants in the Netherlands. Each participant had their properties appraised, if required according to local or institutional procedures but there was no standardized appraisal identified.

During the year 1990-1992 an index was produced and it was discovered that the index produced was faulty and not useful for several reasons. Firstly, the index was too general which implies that the index produced only one comparative norm (benchmark or index), total return, which they thought was sufficient but turned out not to be. Secondly, without standardized appraisal terms and procedures and because 80% of the properties had not been appraised, the data were unreliable and out of date. As a result of these deficiencies, the analyses were concluded to be useless and misleading. After three years, the first attempt to produce a real estate property index was discontinued.

The Second trial

Due to the new trend that started in 1993 which saw large investors directly placing property under newly formed property management subsidiaries and these subsidiaries were dedicated to improving the quality of property management, this therefore gingered the urgency for the creation of a method of measuring the performance of property investments. As a result of this, participants were now willing to input the expertise and information that would provide meaningful data to an index and would facilitate full use of subsequent analysis and more importantly they are willing to compromise the confidentiality of their portfolios. Towards the end of 1993, all participants promised their co-operation in creating an index that is similar to the one generated by IPD in the U.K.

Early 1994 saw the emergence of a new consultative body that fell under the jurisdiction of ROZ and they were made up of several large Dutch property investors i.e. pension funds, insurance companies, and investment companies and the index construction was carried out on 28(twenty-eight) various subject properties within the country. In the construction of this index, six factors were looked into or given attention and they are:

1. Benchmarks – the norms against which properties would be compared
2. Establishment and definition of rates, yields and value
3. Definition of terms
4. Operation costs.
5. Valuation and reporting
6. Segmentation by property type (office, industrial, residential) e.t.c

From the above issues that were identified, the valuation or appraisal of properties was of particular interest i.e. how to standardize the appraisal of properties.

Hence, in developing the proposed standards, professional organizations were consulted, including NVM (Nederlandse Vereniging van Makelaars in onroerende goederen), RICS (Royal Institute of Chartered Surveyors), the University of Amsterdam and other professionals. Also appraisal standards and procedures used by members of the appraisal institute and the standard recommended by TEGOVA (The European Group of Valuers Associations) were also studied. After all the consultation, the appraisal guidance and definitions to be used in the test valuations were written. In order to address the past appraisals inconsistencies, the guidelines emphasized the following areas;

1. Anticipation and analysis of items (e.g. contract expirations, renovations) that might cause major impact on income and expenses.
2. Uniformity in identifying, justifying, and using operating cost and yields. This includes establishing a minimum holding period of five years.
3. Verification of yields, return rates and capitalization rates.
4. Types of vacancies (e.g. market, contract)
5. Identification, justification, and analysis of comparable transactions.

6. Use of standard source for inflation.

Also numerous appraisers were interviewed and their work reviewed. Those who best understood the appraisal problems and methods were selected to participate in the test. Finally, the 28 properties representing a cross-section of investment property types held by investors were selected, *Hordijk et.al (1997)*

Quality control of data

IPD decided to use the method of data acquisition that was similar to that of the one used in U.K, which involves gathering of information directly from the property investment institutions and if necessary, extract data from their respective property data system. But what was unique about the ROZ/IPD index was that a Dutch accountant auditor must be selected to review the information or data provided prior to submission to IPD and each participants would be required to sign a report (containing the data from their properties) declaring agreement with that presented.

The data for the first index went forward with 28 Dutch property investment institutions (separate from the 28 test properties sampled earlier), whose 4,648 properties represented 75-80 per cent of the institutional capital invested in real property in The Netherlands. The total values of the asset are shown in table 2.1 below

Table 2.1 Showing the distribution of total real property asset as 1995 in Netherlands

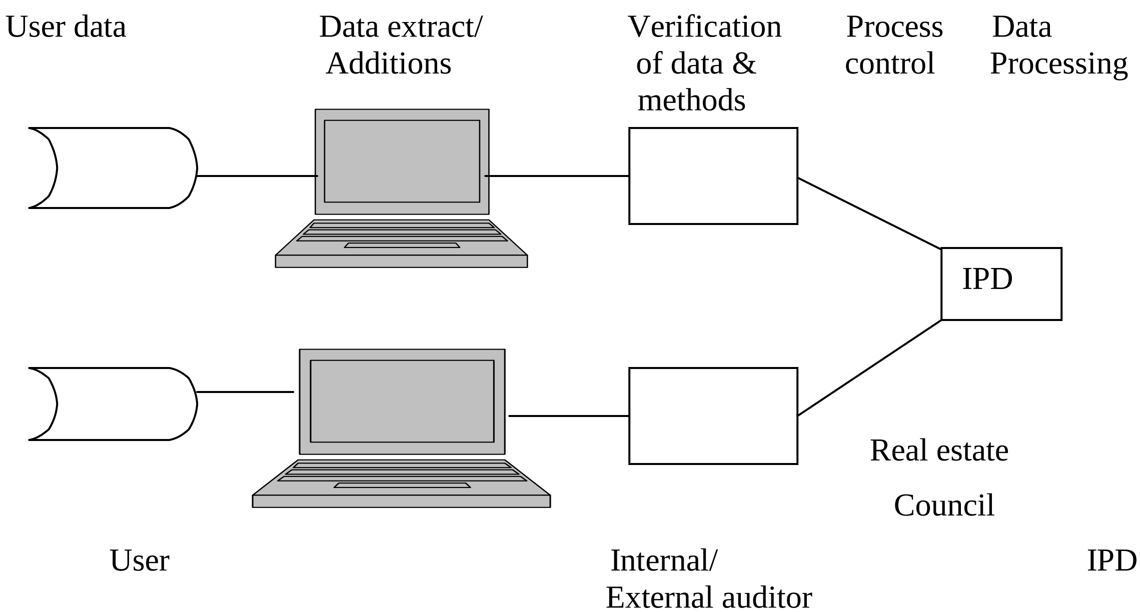
		Capital Value		Gross Passing Rent		
	Number of properties	NFL (million)	$ (million)	NFL (million)	$ (million)	
Retail	1198	7671	4037	613	323	
Office	860	11857	6240	1125	592	
Residential	2491	22409	11794	1892	996	
Others/Mixed use	99	1174	618	92	48	
All properties	4648	43111	22690	3722	1959	

Source: Hordijk et.al (1997)

With the establishment of the procedures to be used for the construction of the index, ROZ was ready for the processing of 1995 real property portfolio data. A pictograph format of information flow is shown in the next page.

(Fig 2.0)

FORMAT OF ROZ/IPD INFORMATION FLOW



Source: Hordijk et.al (1997)

C) CHALLENGES IN CREATING THE DUTCH PROPERTY INDEX

The major problem encountered in setting up the Dutch property index was the variety of methods and assumptions adopted by investors and their advisers in determining capital values.

Other problems encountered includes the following

- Infrequent valuations
- Lack of uniformity in valuation methods
- Hidden assumptions
- Few market comparables

D) CODITIONS IDENTIFIED AND REQUIRED IN CREATING THE DUTCH PROPERTY INDEX

The following are the conditions identified and required for a property index creation in Holland,

A) Data Collection and Auditing Procedures:

Data on Capital value of all annual cash flows of properties must be collectively checked for accuracy and completeness. The auditor then makes use of the fact that most of the data concerned will normally also have been checked in the auditory of the annual accounts. The auditors also establish whether the valuation guidelines have been adopted as far as possible. At the end, the auditor then prepares on auditors report in a standard format and sends it to IPD.

B) Standardization of Valuation Procedures:

It was decided that for the ROZ properties index regular annual valuations are required and that both external and internal valuation would be allowed. There are two valuation methods permitted for the purpose of the indexation; they are the conventional method and the discounted cash flow (DCF) method. These two methods are allowed for determining capital value of properties included in the index. Guidelines are provided as to which of the two methods the most appropriate in various circumstances is.

C) Segmentation of the Property Market:

For a more accurate result, the Dutch property market was segmented into:

- The office sector
- The retail sector and
- The residential sector

DUTCH PROPERTY MARKET SEGMENTATION

What differentiates the Dutch market segmentation from S.A and U.K is that the latter two did not segment there residential market whereas the Dutch market segmented their residential market.

(FIG 3.0)

RETAIL	**OFFICE**	**RESIDENTIAL**
City Centre	Main City > 10,000m2	Apartments
Town Centre	Main City < 10,000m2	Houses
Suburban Centre	Other	
Other		

Source: *Hordijk et. al, (1997: 58)*

E) BENEFITS OF PROPERTY INDEX TO THE DUTCH PROPERTY MARKET

- The index has acted as a catalyst in bringing about harmonization in the method of calculating and reporting property investment returns, including the much needed standardization of valuation practices.
- The index encourages investors to set performance targets, often related to the index.
- The index gives new insight into the performance of a portfolio.
- It is now possible to prepare a comparative report which is a confidential report prepared specifically for each participants and this is seen as the most important benefit from the establishment of the property index.

(A copy of the IPD/ROZ 2010 property index is attached after page 88 as an annexure)

2.5 THE CREATION OF SOUTH AFRICAN PROPERTY INDEX

A) THE NEED FOR A PROPERTY INDEX IN SOUTH AFRICA

There has been growing evidence that lack of data and analysis in the property sector in South Africa in the late 1980's contributed to the poor returns from commercial properties and the reduction in exposure of institutional investors to property.

In the 1970,s and 1980,s South Africa property analysis relied on information put together by the 'Rode Report' produced quarterly but most of the information gotten are from valuation firms, property economist and broking houses and the are often of poor methodologies and sometimes reflected agendas set by market participants. In 1979, the Richard Ellis Investment Property Index (REIPI) was created and for 20 years it was the only investment property index currently available in South Africa. REIPI was distinguished by being an index based upon actual valuations prepared or monitored by independent valuers. It was identified that most of the data flows of the index failed to reflect trends in the direct property market and offered no opportunities to disaggregate data to levels useful for asset management analysis, hence the need for a new property index in other to rectify the problem identified. By the middle 1990's investors in South Africa recognized that for property to compete in the investment market, market data, valuation techniques and analysis had to improve in line with what was available in the bond and equity markets, *Viruly et.al (2003).*

B) CHALLENGES IN CREATING SOUTH AFRICAN PROPERTY INDEX

The following are some of the challenges faced in creating the property index in South Africa,

Different valuation techniques

Property owners have adopted different valuation techniques in valuing there property investment. Whilst some use a simple capitalization rate, others adopted the top slice approach and others apply the discounted cash flow method. The DCF method is sometimes based on a single discount rate or multiple discount rates to take into account the risk associated with the different types of cash flow in a property.

Heterogeneity of the property market

Another problem has to do with the heterogeneity of the property market. A property always has its unique features and no two properties are the same. Properties will differ in terms of location, size, age and the type of tenants they attract. Therefore, it is recognized that it is not meaningful to compare the performance of office in one city with offices in another city. Property is not a standardized investment.

The indivisibility of the property market

The indivisibility of the South African property market is another problem. Investors generally find it difficult to diversify effectively property portfolios. Due to this, it is not possible for a property investor to achieve exactly the same portfolio composition as the portfolio on which the index is based.

The market and imperfect information

It highly debatable that there is no single market for commercial property. Properties often changes hand between buyers and sellers without the market knowing the transaction price and the condition of sale. Information in the market is therefore imperfect.

For properties held by investors, it is not usual for properties to be valued every two or three years. This situation has however improved with yearly valuations becoming the norm with certain South African institutions considering six monthly valuations.

C) CONDITIONS IDENTIFIED AND REQUIRED IN CREATING SOUTH AFRICAN PROPERTY INDEX.

In 1995 South African property investors created the S.A property Information Exchange (SAPIX) now called SAPOA. This organization would be responsible for the creation of the SAPOA/IPD Index. Initial debates amongst participants of the initiative focused on the need for property data, the willingness of players to share information and the harmonization of valuation techniques. SAPOA participants agreed that the success of a property index in South Africa will have to address the following conditions which are as follows,

i) Comparability, Accuracy and Detail, Comprehensiveness

ii) The valuation Process: - An accurate index required the harmonization of the valuation procedures used by participants. SAPOA/IPD required that valuations be undertaken annually by external valuers. The following issues must be noted.

- Valuations are base on “open market value”.
- Participants are required to have the valuations assessed by an independent registered valuer.
- By consensus of the SAPOA/IPD participants, the Discounted Cash Flow (DCF) method of valuation is the preferred method of valuation and it is recommended that it be adopted as the underlying method by all participants.
- Cognizance is also given to any capital expenditure in the investment period, which is of an extraordinary and non-recurring nature (including provision for major life cycle expenditure). The present value of these amounts is deducted from the determined market value, or these amounts are included in the normalized cash flow which is discounted.
- Participants are required to apply market-related discount rates for the purpose of determining open market values.
- The valuation document offers specific income and cost categories which valuers are asked to apply.

The important issue is that the creation of the SAPOA/IPD index has to a degree pushed the market toward the standardization of valuation techniques. But possible of greater importance is that the valuation of institutionally held properties moved from the application of the capitalization rate to the Discounted Cash Flow (DCF) technique.

iii) The willingness of participants to provide data

iv) The data collection and output

- The data collection can be summarized as follows:
- The data are collected by participating organizations in South Africa,
- Data are audited and sent to the UK for processing. This data are validated by the IPD in London.
- IPD constructs the databank and benchmarks
- Individual portfolios are compared to benchmarks
- Extensive confidential performance evaluations are done and reported to fund managers
- General market data is released to the public

v) The agreed segmentation of the South African property market. This is shown below

(FIG 4.0)

IPD MARKET SEGMENTATION- SOUTH AFRICA

RETAIL	**OFFICE**	**INDUSTRIAL**
Gauteng Regional Centres	Gauteng CBD Offices	Gauteng Industrials
Other Regional Centre’s	Other CBD Offices	Provincial Industrials
Other Shopping Centre’s	Suburban Office	Others
Other Retail	Provincial Offices	All standing investments

Source: - IPD South African Property Investors Digest (2005)

The output therefore comprises the portfolio received by participants, publications and research.

D) BENEFIT OF THE PROPERTY INDEX TO SOUTH AFRICAN PROPERTY MARKET

- The establishment of the SAPIX/IPD index has brought some benefit to the South African property market and they are as follows

- It offers an opportunity for participating funds to benchmark their property investments returns relative to a generally accepted index.
- It provides an important data base with which to undertake industry and academic research.
- The index offers the opportunity to determine sectors that have either outperformed or underperformed the market, whilst also showing where the returns have come from- namely from the yield or capital growth.
- The index is rapidly being used to determine the correlation that exist between property and other investment classes as well as the correlation that exist between different property categories.

  (A copy of the SAPOA/IPD 2010 property index is attached after page 88 as an annexure)

2.6 THE CREATION OF THE UNITED KINGDOM PROPERTY INDEX

A) THE NEED FOR A PROPERTY INDEX IN UNITED KINGDOM

In 1988, the investment property forum formally called the investment surveyors forum came into existence. The objectives of the forum was to create a surveyor who can place property in a financial and investment context , that is to create someone who can understand investment theory and practice, finance and the workings of the capital markets and promote his/her skills and capability. The forum grew out of the widely held view that property should be treated as part of the wider investment community. It is an attempt to redress the balance of property being treated as a separate investment class, isolated from other assets.

The forum has established training courses dealing with aspects of financial markets, much of which fell outside many surveyors training. The forum provided much needed focus for professional interest which originally developed from a professional body called RIC (Royal Institute of Chartered Surveyors).

But there remains an issue which seems to have fallen outside the scope of these encouraging developments; that of investment indices. By their nature, indices are technical and must appear to some to be far removed from the traditional work of the investment surveyor, property indices are therefore often poorly understood.

Guy Morrell (1995)

B) CHALLENGES IN CREATING U.K PROPERTY INDEX

The following were the major challenges face.

i) Valuations used as proxy for prices, plus rental income.

ii) Significant parts of the market are not open to investors which lead to market segmentation e.g. central London offices and small funds.

iii) Data only publicly available on pre-defined classifications of the u.k property market.

iv) Data difficult to obtain at individual asset level and methods of calculation constrained by availability of data.

v) Availability of investors to develop, refurbish, restructure leases.

vi) Significant delays in assembling and analyzing data

vii) No involvement of professional bodies

C) CONDITIONS IDENTIFIED AND REQUIRED IN CREATING U.K PROPERTY INDEX

There are four summarized conditions required for an index to be created in U.K

i) The segmentation of the U.K property market as shown below

(Figure 5.0) **IPD Market Segmentation – UNITED KINGDOM (U.K)**

UK Market Segmentation

RETAIL- Under this we have	**INDUSTRIAL** – Under this, we have
South East	Southern Eastern
Rest of UK	Rest of UK
Shopping Centers	All industrials
Retail Warehouses	Other Property
All Retails	All Property

OFFICE – Under this we have

City

West End

Rest of South East

Rest of UK

All office,

Source: - Baum et.al (1999)

The other three conditions are explained in section 2.8

(A copy of the IPD/UK property index2010 is attached after page 88 as an annexure)

2.7 USES OF PROPERTY INDEX

Property index plays an increasingly important role for those involved in investment. The following outlines some of the uses

1) **Setting and Implementing Strategies**:

Defining the investment objectives of the fund helps to set the parameters within which strategy is formulated and implemented. Different organizations will follow different approaches to meeting their objectives. However, if performance objectives are defined by reference to achieving a certain level of return relative to a benchmark, it is not unreasonable to expect that reference must be made to that benchmark index in setting and implementing strategy.

At a simple level, strategy may be expressed in terms of taking over-or under-weight position relative to the benchmark in certain sectors or geographic areas depending on their perceived attractiveness. Other approaches can, of cause, be taken but it is likely that some reference will be made to the benchmark in determining the policy of the fund.

2) **Performance Evaluation:**

The use of an appropriate benchmark index within the fund's investment objectives Provides the basis for evaluating historic performance. This involves quantifying a fund's Investment return, comparing it with a benchmark return and the fund's objectives, and Identifying the reasons behind relative performance. *Morrell (1995)*

Property performance can now be subjected to analysis, which in turn can provide the basis for investment policy changes aimed at improving returns.

The process of identifying investment objectives, setting and implementing strategies, and evaluating historic performance are therefore closely interlinked.

In line with other markets, there is likely to be a greater move towards performance – related fee payments so that a property fund manager's reward is linked, at least in part, to the fund's performance relative to the agreed performance objectives. If widely adopted, this is likely to be an important breakthrough from the traditional basis on which property fund managers are paid.

Clearly, indices play a critical role in the process of linking a fund manager's reward to investment performance.

Other uses of property indices are as follows :

It helps in bringing harmonization in the method of calculating and reporting of property investment returns and the standardization of valuation practices. This has made the property market more transparent.

The index is also motivating investors to set performance targets often related to the index.

Indices fulfill a critical role in investment research generally in being able to understand better the functioning of an investment market. In addition to forecasting, indices are valuable in many areas such as identifying the responsiveness of different asset classes to unanticipated changes in the economy, a better understanding of the source and dimensions of risk and so on.

2.8 THE CLIENTELE FOR PROPERTY INDEX

The clients of property index could be grouped into those who contribute data i.e. property companies, pension schemes, life funds and banks, and those who use the data i.e. chartered surveyors, property analyst and other research organizations.

2.9 MAJOR CONDITIONS IDENTIFIED FROM THE COUNTRIES EXAMINED

There were some salient issues that were identified and addressed from the examination of those countries that use a commercial property index. They are issues relating to the choice of segmentation, the issue of data collection and auditing procedure, the issue of acceptable valuation methodology and the reporting frequency of the index.

2.9.1 THE CHOICE OF SEGMENTATION

For practical purpose, several consideration bear upon the choice of segmentation, and they are statistical, practical and conversion, *Baum et.al (1999: 3)*

Statistically, each segment should contain a sufficient number of properties for the average return to be reasonably robust, that is, each segment should ideally only reflect systematic risk. The optimum segmentation of the market is that which statistically explains the most variance in individual property returns. Practically, segment should cover property categories or areas for which market information and supporting sources on demographics and economic factors are readily used to support analysis and forecasting.

Lastly, by convention segments will be most acceptable to investors where they follow the generally accepted ways of dividing and analyzing the market.

According to *Hordijk et. al,(1997: 58)*, for a detailed segmentation of an index, the following information's must be provided and they are

a) Property description

Hear consideration is given to address of property, property number, use, property type, tenure, construction date, sales and purchase details

b) Areas

This deals with information pertaining to the vacant floor areas of the property and also noting the state of development of the property and also noting the ownership share of the interest held in the property.

c) Valuations

Data of gross and net open market values are noted, method of valuation, valuation inputs such as discount rates and yields are recorded, the name of valuer, managing agent and also auditors are taken into consideration.

d) Rents

Rent passing on properties, market rental values and vacant estimated values are recorded for both the whole property and by sector.

e) Expenditure

All capital and receipt expenses are recorded, purchase and sales details, development costs and other refurbishment expenditures, structural improvements and lease restructuring expenses and finally

f) Operating costs

A detailed analysis of all non-recoverable revenue costs and receipts is obtained. The twelve types of operating costs which fall into five main categories of fixed, management, maintenance, letting and other costs are deducted from the rental income to determine net receivable income for each property.

The market segmentations used in IPD's U.K, Holland and South Africa's performance analysis services have been displayed previously.

2.9.2 THE CHOICE OF VALUATION METHOD

IPD adopted the discounted cash flow (DCF) method of valuation for all IPD index creation. For this reasons, we take a closer look at the discounted cash flow DCF valuation method.

The DCF method makes a forecast of the flows for the calculation period and estimates an exit value at the end of the same period. The calculation period vary from 5 to 10 years, depending on e.g. the length of the lease contracts. The DCF analysis estimates a property present value in the same way investment analysis for other assets does; based on expected future cash flows. At first sight the refinement of the DCF model gives the impression that accurate outputs will be given. The major problem with this model is the role that expectations play. Future expectations always lead to uncertainty, as no one can predict the future. The assessed value, therefore, can be completely over or underestimated, giving an incomplete picture of the liquidity of the asset during the assessed year.

It is important that basic inputs be as much complete and correct as possible so that an accurate analysis of the relevance of the information given can be made. The input of a correct annual return and its development is a primary condition for the establishment of a functional calculation of income value. Data on rental income and costs or, alternatively, on cash inflows and outflows are needed, depending on the calculation model used. A considerable amount of more complex property and market related variables is required, such as information on lease contract conditions or production results, on operational and maintenance costs, on mortgage and tax conditions and so on.

The DCF analysis can also be used to achieve two other purposes which are:

a) Estimation of present value of an income property

b) Extract a discount rate from a comparable sale

When estimating the market value using the DCF method, it is important to input current data related to the subject property. This process allows input values to diverge from market influenced conditions and, therefore a realistic market adjustment can be done during calculation period.

In this section, we will take a look at the different valuation methods applied by the Dutch, South Africa and the United Kingdom that uses the appraisal based indices.

The Netherlands and their Valuation Methodology: - There are five known valuation methods that can be identified that valuers use if due consideration of the market value is carried out. Each method is used as a basis for different purpose, they are

Comparative method

Income method (DCF)

Cost method

Profit method and

Residual method

The comparative method, which includes the rental capitalization technique and the discounted cash flow methods, are the most frequently used approach, while the other methods are applied less often. *(ROZ/ IPD, 2002)*

Both the comparative method and the discounted cash flow method are allowed for determining capital values of properties included in the index. Guidelines are provided as to which of the two methods is the most appropriate in various circumstances. For example where there is a lack of market evidence or where major renovations to a property are scheduled, the DCF method is the appropriate choice.

South Africa and their Valuation Methodology

By consensus of the SAPIX/IPD participants, the Discounted Cash Flow (DCF) method of valuation is the preferred method of valuation and it is recommended that it be adopted as the underlying method by all participants. In carrying out the valuation, cognizance is given to any capital expenditure in the investment period, which is of an extraordinary and non-recurring nature (including provision for major life cycle expenditure). The present value of these amounts is deducted from the determined market value, or these amounts are included in the normalized cash flow which is discounted. Also participants are required to apply market related discount rates for the purpose of determining open market value. Finally, participants are required to have the valuations assessed by an independent registered valuer.

The United Kingdom and their Valuation Methodology: - There are five methods of valuation used in the U.K, they are

a. Income or investment method
b. Comparison method
c. Residual or development method
d. Profit method (for properties normally bought and sold)
e. Contractor's cost method (for properties not normally bought or sold)

In the U.K the income capitalization approach is the preferred Market approach for income properties, given good market evidence for rents and sales prices. Income divided by yield (cap rate) produces an estimation of market value.

$$MV = \frac{NOI}{CR}$$

Where MV = Market value

NOI = Net operating Income

CR = Capitalization Rate

In this formula above, the yield or the all risks yield rate is the capitalization rate derived from the analysis of sales of comparables. The valuer uses market experience to adjust the all risk yield for difference between market evidence and the subject property,

Rosane-Garcia et al, (2004)

In the U.K, valuers are reluctant to use the DCF method of valuation because they are not thought to reflect market behaviour and also valuers are more reluctant to use DCF analysis linked to future forecasts of rental income, as evidence from the last 10 years showed how volatile the rental market can be over the critical first 10 years of the holding period. For this reason the DCF "is not used as a method of valuation but primarily as a tool of analysis". *Rosane-Garcia et al, (2004)* The IPD/UK collects valuation figures of individual buildings in complete portfolios directly from investors. All valuations are carried out in accordance with RICS valuation guidelines on an annual basis *IPD/UK (2002).*

2.9.3 DATA COLLECTION AND AUDITING PROCEDURE

Hear data on capital value of properties are gotten from valuation and these figures are checked thoroughly by external auditors before these data are sent to IPD.

2.9.4 WILLINGNESS OF PROPERTY INVESTORS TO PARTICIPATE IN PROPERTY INDEX CREATION

For a property index to be created successfully, property investors must be willing to participate in the index creation by the regular supply of valuation data of their properties being valued. This is evident with the Dutch property market, South African market and the U.K market all supply there valuation data to IPD. The data supplied form the bedrock of the property index to be constructed.

Having reviewed property index globally from these three countries, for a property index to be created, the following conditions must be in place:

An effective data collecting and auditing procedure

A standardized valuation procedure

A proper segmentation of the property market and lastly

The willingness by the participants to create the index must be present.

The conditions listed above are summarized in table 2.1 in the next page

2.1 TABLE SHOWING THE CONDITIONS REQUIRED FOR A PROPERTY INDEX CREATION			
CONDITIONS REQUIRED FOR A PROPERTY INDEX CREATION	**COUNTRIES**		
	SOUTH AFRICA	**HOLLAND**	**UNITED KINGDOM**
1. SEGMENTATION OF THE PROPERTY MARKET	YES	YES	YES
2. AVAILABILITY OF STANDARDISED VALUATION DATA	YES	YES	YES
3. DATA COLLECTION AND AUDITING PROCEDURE	YES	YES	YES
4. WILLINGNESS OF INVESTORS TO PARTICIPATE IN THE PROPERTY INDEX CREATION	YES	YES	YES

2.10 THE NIGERIAN PROPERTY MARKET

Nigeria is a country which is regarded as the largest black populated country in Africa. It is divided into four geographical zones, namely the Northern part, Southern part, Eastern part and the Western part, for each part of the country, there are some particular geographical zones that property investors likes to invest, for example the Northern part- Abuja ,Kaduna, Southern part- Port Harcourt, Western part-Lagos and Ibadan .

The Nigeria real estate industry accommodates both activities of the developer; those that carry out construction on a large scale, individuals constructing their private houses and estate managers ,who manage and sell these properties. The industry has been of great interest and importance to both internal and external stake holders as the demand for housing in Nigeria is unequal in Africa because of the high level of population. Also there is a real window of opportunity for international investors and also with existence of oil production and export which is proving to be a profitable enterprise at present realizing some$22bn in exports and offsetting any potential oil production loss brought about by disruptions in the oil-producing region, *Schneider (2001).*

As the most urbanized country in the sub-Saharan Africa according to the 1991 census, about 36% of the Nigerian population lived in urban centers, while this figure rose to 43.5% in 2000.This high rate of migration to urban areas however has not been met with equal developments in all areas including housing resulting in creation of slumps even in the cities. In order to improve the housing problem in Nigeria, the current administration has been considering legislative reforms in order to encourage mortgage financing, securitization for further increment in housing productivity in the country. Due to the fact that the Nigerian government can't provide the much needed accommodation for all the population, high level private sector participation is therefore required to make housing affordable to the Nigerian populace.

2.10.1 INSTITUTIONAL ARRANGEMENT OF NIGERIAN PROPERTY MARKET

The Nigerian property market is dominated by five categories of property investors. They are

a) **Those listed on the Nigerian stock exchange market**. At the moment there is only one property development listed on the stock market and it's called UACN property Development Company also called UPDC.

   UPDC was incorporated as a public liability company quoted on the Nigerian stock exchange on 6th October 1997, with UAC of Nigeria Plc holding 46% and other 21,000 shareholders holding the remaining 54%.

   The company holds substantial portfolio of residential and commercial properties and other fixed assets spread across Nigeria, currently valued at N26.9billion with a turnover of N4.4billion as at 2005.

   The company has currently 95% of its properties around the Ikoyi/ Lekki/ Lagos Island axis of Lagos state, while 2% of its properties are in Abuja, another 2% in Port Harcourt, and the remaining 1% spread across the country.

b) **Those that have registered private company involved in property development**

   Nigerian property developers usually prefers carrying out developments in residential as compared to commercial properties because the residential property market as been found to be more profitable , and easier to dispose of as compared to commercial and industrial properties.

The sole aim of this type of developers are solely profit making and they are spread across the country. Among these developers are HFP Engineering, S.O.E Properties, Grant Properties, Cornerstone Construction Company Ltd, Stallion Property & development Co.Ltd, Cityscape International Limited, Adkan Services Nigeria Ltd e.t.c. All these developers have there development around Lagos, Abuja and Port Harcourt.

c) **Those property development company owned by the state or federal government.**

In order to provide affordable housing for the citizens of the country, the Federal government created the Federal Housing Authority (FHA) which is responsible for the delivery of these housing units. Although most of the FHA projects are situated in Lagos and Abuja, the federal governments have projects covering virtually all the states of the federation.

On the other hand, Lagos State established the Lagos State Development and Property Corporation (LSDPC) .This corporation was set up by the LSDPC Act 1 of 1972 and it's meant to perform the following functions

i. To acquire, develop, hold, manage, sell, lease or let any property within the state.
ii. To establish a Home-Ownership saving scheme in respect of any housing estate or building owned, constructed and managed by the corporation.

LSDPC has successfully completed many estates in the past, but its major objective of providing affordable housing has not been met because most of its structures are priced competitively and are still out of reach of the masses. The corporation has been able to develop approximately 531 units of flats since 2003 all within Lagos State.

d) Property Financing Institutions

After banks consolidation exercise instructed by central bank of Nigeria in 2005, financial resources of banks increased and the real estate witnessed a boost in the supply of funds, both for the development of properties and the provision of mortgage facilities for buyers. However, the mortgage facilities currently provided do not exceed 15years, which is still nit enough for the low and middle class earners.

The following banks have been active in the market:

- Afri-Bank Plc
- Skye Bank Plc
- Wema Bank Plc
- Union Homes Mortgage and Loans
- First Bank of Nigeria Plc
- Sterling Bank Plc.
- Intercontinental Bank Plc.
- Zenith Bank Plc.

e) Property Management and Valuation Firms

These are majorly companies involved with the management, sales/letting of completed developments and also the valuation of these properties in order to determine the values of these properties for different purposes. Among these players are

- Diya Fatimilehin & Co
- Knight Frank Nigeria
- Jide Taiwo & Co
- Dosu Fatokun & Co
- Ora Egbunike & Co
- Akin Olawore & Co
- Ubosi + Eleh & Co

The list of these companies is growing by the day and all these companies usually adopt an aggressive marketing tactics in order to get there clients. All the registered property management and valuations firms in the country are regulated by the body called Nigerian Institution of Estate Surveyors and Valuers (NIESV).

2.10.2 REAL ESTATE FINANCING METHODS AVAILABLE IN NIGERIA

With the shortage of fund that still plagues the Nigerian property market, the most popular method of securing finance in the country which is still very expensive and mostly controlled by banks is mortgage financing

A mortgage is a type of loan used to purchase property and the property, in turn, is used as a lien for the loan amount. There are several types of mortgage available amongst which includes fixed rate mortgage, balloon mortgage and adjusted rate mortgage (ARM).

The main benefit of mortgage financing is that it makes home ownership affordable and convenient.

There are different source of mortgage financing in Nigeria namely

a) The National Housing Fund(NHF)
b) Building societies /Cooperatives
c) Mortgage products of banks
d) Primary mortgage institutions (PMI)

Another way of providing finance which is not yet fully recognized is called securitization of mortgage portfolio. This is a method widely used in advanced countries. It involves selling of securities backed by pool of mortgages, which are no longer on the balance sheet of the lending institution. An example of these securities is the Mortgage back securities (MBS).MBS are special bonds in which interest and principal sums received from pooled mortgage loans are passed through to bond holders. It is the securitization of existing mortgage as the underlying mortgage loans are repaid by the borrower, while the investors receive payments of interest and principal on a scheduled basis.

Currently in Nigerian capital market, there is no MBS available but there are indications that this security will soon be introduced into the market .There are some development in this regards as the federal mortgage bank of Nigeria (FMBN) , plan to float its N100 billion Federal Government guaranteed Mortgage-Back Bond is nearing completion.

Another good financing method for real estate investment is called Real Estate Investment Trust (REIT). A REIT is a corporation or trust that uses the pooled capital of many investors to purchase and manage income property (equity REIT) or mortgage loan (mortgage REIT).

Recently, a guideline has been released by the Nigerian Security and Exchange Commission for the operation of REITs in Nigeria, in recognition of its importance as a good vehicle of growth in the housing sector. An increase in the use of REIT is expected to be seen in the short term.

2.10.3 PROPERTY INVESTORS CHOICE LOCATIONS IN NIGERIA

Due to the uniqueness of the Nigerian property market, the market has constantly been witnessing lots of discrepancy with lots of issues most especially with price changes of properties either within a state or from one state to the other. The issue of affordability with respect to price plays a huge role in property ownership within the country. Some of the factors responsible for these price differentials are e.g. good road network, the outlook of the environment, the availability of basic amenities, and proximity to the centre of business e.t.c.

With reference to price appreciation over the last 3years, we take a look at some choice location of investors in the Nigerian property market.

LAGOS

This is the largest commercial centre that also accommodates industrial activities within the country. The presence of these activities has impacted positively on the real estate market over the years. Some areas in Lagos are classified as prime neighborhoods, while others are regarded as slums. The perception of the area determines the price of the property in that area. Table 2.3 in the next page shows the price appreciation of properties in Lagos prime locations.

Table 2.3 Table showing price appreciation of properties in Lagos prime area

Price Appreciation of Properties in Lagos Prime Areas	Level of Appreciation in %
Apapa	5%
Ikeja GRA	20%
Lekki/Epe Expressway	10%
Ikoyi	5%
Victoria Island	35%
Lekki Phase 1	65%

Source:Agusto, 2007

With the growth of mortgage facilities, rural-urban migration e.t.c it’s expected that the real estate market in Lagos to grow both in the medium and the long term.

ABUJA

Abuja place a role as the seat of the central government of the country and because of this, the real estate market has benefited immensely from this.

Real estate industry in Abuja is also booming because of investor's perception of the city's potential and immense growth potential. One other factor responsible for this growth is the level of demand for property that outplays the supply, hence resulting in the persistent rise in the price of properties in Abuja till today. Table 2.4 below shows the price appreciation of properties in Abuja prime areas.

Table 2.4 Table showing price appreciation of properties in Abuja prime area	
Price Appreciation of Properties in Abuja Prime Areas	**% Level of Appreciation**
Gariki	25%
Maitama	30%
Asokoro	45%
Source:Agusto, 2007	

The Abuja property market is expected to grow further, and investors are strongly advised to acquire proper authorization from federal capital development authority

(FCDA) before construction commences. With reference to a study carried out by *Olaleye et.al (2004)* of the Nigerian property market with reference to age of institutional property companies/investors and numbers of properties owned by property investors and the portfolio values, the following result were obtained and presented in table 2.5 in the next page

Table 2.5 Age of the institutional property companies / investors		
Age(years)	Response frequency	Percentage of Response %
1-5	1	8.3
6-10	5	41.7
11-15	5	41.7
16-20	-	-
21 and above	12	8.3
Total	12	100

From the above table, it is shown that 8.3, 41.7, 41.7 and 8.3 percent of the companies were aged between one and five years, six to ten years, 11 to 15 years and 21 years and above respectively. This indicates that greater percentage (83%) of the companies sampled was aged between six and 15 years. With the outcome, one may conclude that institutional real estate companies in Nigeria were young ages. This result points to the fact that the idea of institutional real estate investment is recent in Nigeria and that the property market might be expected to be an emerging market.

From the table 2.6 below, its revealed that as at 2004, at least 58.3 percent of the companies owned between one and 15 properties. Only 8.3 percent had in their portfolios between 16 and 30 properties. Similarly, 16.7 percent had between 31 and 45 properties in their portfolios and indeed another 8.3 percent had properties up to between 106 and 120 in number.

Table 2.6 Numbers of properties owned by property investors and the portfolios' value

Number of Properties	Response Frequency	Percentage of Response	Portfolio worth (capital value)	Response Frequency	% of Response
1-15	7	58.3	< N 100m	2	16.7
16-30	1	8.3	N101-N500m	5	41.7
31-40	2	16.7	N1.0b-N3.0b	1	8.3
106-120	1	8.3	N2.0b-3.0b	1	8.3
Missing	1	8,3	N3.0b-N4.0b	1	8.3
Total	12	100	>N8.0b	1	8.3
			Missing	12	8.3

Source: Olaleye, 2004

Thus, it can be deduced from this result that most property investors or companies in the Nigerian property market had just between one and 15 properties in their portfolios but this result is expected to have changed, taken into consideration the rate at which property investment is changing hands in the country currently. The table also revealed that greater percentage (58.3 percent) of the sampled investors had their portfolio value worth a maximum of N500million (Naira) as at 2004. This is just about $3.7million at the then exchange rate of about N135 to $1, but currently at the new exchange rate of about N112 to $1, it’s about $4.5million. Thus this shows that investors in Nigeria are small time institutional investors especially when compared to their counterparts in the US who had, within one property class alone, properties worth $100m. These results might be as a result of the young nature of the companies in terms of age and most especially the problem of accessibility to large capital fund for long term investment in Nigeria. It should be noted that only one or two of the property investors in Nigeria have access to funds through the capital market while others were relying on direct funding from loans and equity funds.

2.10.4 MAJOR FACTORS AFFECTING THE NIGERIAN PROPERTY MARKET

Major factors to be considered are:

- Inflation and exchange rate stability
- Difficulty in finance acquisition
- Inadequacy of property developers and lack of specialized services
- Absence of tools to harmonize available data for assessing property performance
- Bureaucratic mortgage policy used by financial institutions
- Cultural factors – including the nature of community that exist that brings difficulty in land acquisition (residential market)

2.10.5 SUMMARY

The Nigerian property market has had a lot of transformation over the last past years and it's believed that this level of development is expected to grow in the medium and long term.

In Lagos it's expected that the current preference choice for development e.g. Lekki/V/I to continue and also in Abuja and its surroundings. It's also believed that the reform going on in the financial sector will impact the property market and the economy positively.

As the Nigerian property market grows and as it attracts more private investors, it is expected that it will help reduce the backlog of demand that the Nigerian government could not cater for over time, and this will help boost the business of real estate in the country and in turn attract more investors into the property market. It is also worthy of note to state that there is a huge market for investor willing to invest in the Nigerian property market in the retail and industrial market.

Finally, having identified the conditions for the creation of a property index and the examination of the Nigerian property market as an emerging property market, it is of importance to have a tool which will help bring about harmonization and transparency in the market. To this end, the analysis of questionnaires in chapter four and the summary of findings in the final chapter will help determine whether or not the Nigerian property market have the required conditions in place for a property index creation.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

We have in the last chapter carried out a literature review on the study. In this chapter, we examine the nature of the research at hand, the study population which our data will be collected from, the method of sampling technique that was adopted, the choice of data collection instrument and the method of data analysis and mode of presentation.

There are three categories of research. These are Survey research, Experimental research and Ex post facto research.

a. **Survey Research: -** This has to do with the collection of data from the population for intensive study and analysis. Most of the time the researcher finds out that he can't possibly study all the items in the population. Hence, the survey researcher selects a sample from or a subset of the population using some techniques of sampling which will be looked at later.

The survey researcher is interested in some characteristics of the population but he uses a carefully selected sample from the population for intensive study of the characteristics of the population.

Method of survey Research: - The following are the methods of survey research

i. Mail Questionnaire: - It's self administered from the start-point of the respondent. It is often called interviewing by mail because it contains carefully worded questions and instructions for the respondent who may not have the opportunity of seeing and asking for clarifications from the interviewer.

ii. Personal Interview: - This is a survey method of research involving a person seeking the information called the interviewer and another giving the information called the respondent. Personal interview uses questionnaire which is completed by the interviewer himself. The interviewer often goes beyond what is contained in the interview schedule to ask questions for clarifications in order to enrich the response.

iii. Observation: - Used where the researcher can gather his data only by watching and recording information. It includes monitoring behavioral and non-behavioral activities and conditions of sample subjects. Behavioral observation is used in non-verbal analysis ,linguistic analysis ,spatial analysis (i.e. how we relate physically to others),while Non-behavioral observation is used in recording physical processes and conditions such as watching the weather to see if it rained, was bright or cloudy.

iv. Telephone Survey: - This method of survey research uses only telephones to gather information from respondent. It's effective when all respondent can be reached by telephone.

b. **Experimentation: -** It explores whether relationships exist among some identifiable variables and what the nature of these relationships is .In experimentation, the key word is control.

There are three categories of experimentation in behavioral science,

i. Laboratory experiment: - This is a research where all the independent variables which can influence the dependent variable (but for the purpose of the study are considered irrelevant) are controlled. This controlled is achieved by minimizing their effects on the dependent variable.

ii. Field experiment: - It's a laboratory experiment which is performed life on sites. Most field experiment operates with less control than laboratory experiment. Field experiment is more common in behavioral science research than laboratory experiment because they are closer to reality than laboratory experiment.

iii. Field studies: - In this studies, though the existence of variables is fully recognized there is however, no attempt to manipulate them. Field studies are more interested in observing and recording how some variables behave than in manipulating them. The focus here is in discovering the relationship and interactions among the variables that are of interest to the researcher.

There are two types of field studies, which are

- Exploratory field study, which seeks what is, rather than what should

- Hypothesis testing field study, which predicts what, should be from what is.

c. **Ex Post Facto research: -** It's a research that is undertaken after the event have taken place and the data are already in existence. This is therefore a systematic empirical study in which the researcher does not in any way control or manipulate independent variable because the situation for the study already exist or has already taken place, but the researcher can indeed create a situation that will generate the requisite data for analysis. This is a research that is more inclined to data gathering than to variable manipulation.

Based on this type of research and in other to answer the question in chapter one, the Survey research which has to do with the Administration of questionnaire blended with Some personal interviews will be used to collect the data needed.

3.2 STUDY POPULATION

A population is the totality, summation or aggregate of all cases, which have a set of well defined characteristics, or which conform to some designated set of specification. The study population of this research work focuses on five categories of real estate investors spread across the two geographical locations chosen and a total of 40 questionnaires were distributed among the different categories of investors listed below. The study population sampled is considered to be the best because this is where the core of property investors are found in the country. They are as follows

1. PUBLIC OWNED PROPERTY COMPANY

UACN property Development Company also called UPDC

2. PRIVATE OWNED PROPERTY DEVELOPMENT COMPANIES

Cornerstone Construction Company Ltd, Stallion Property & development Co.Ltd, S.O.E Properties, Grant Properties, HFP Engineering

3. STATE GOVERNMENT OWNED PROPERTY COMPANIES

Lagos State Development and Property Corporation (LSDPC), Wema board estate,

4. PROPERTY FINANCING INSTITUTION

Afri-Bank Estate, Union Homes Mortgage and Loans.

5. PROPERTY MANAGEMENT AND VALUATION FIRMS

Diya Fatimilehin & Co Ogo Ozegbe & Co

Knight Frank Nigeria Odudu Odudu & Co

Jide Taiwo & Co

Dosu Fatokun & Co

Ora Egbunike & Co

Akin Olawore & Co

Ubosi + Eleh & Co

Shola Badmus & Co

Bode Adediji &Co

Fola Oyekan & Co

RCO & Co

Ismail & Partners

Biodun Olapade & Co

Sinbo Onitiri & Co

Adeniji Adele & co

3.3 METHOD OF SAMPLING

There are two general methods of selecting samples from a population and these are the probabilistic selection method and the non-probabilistic selection method. The probabilistic selection methods include random, systematic, stratified and the cluster sampling which will all be looked at serially while the non-probabilistic sampling method includes accidental sampling, quota sampling and judgment sampling.

a) Probabilistic Sampling Method: - These are the sampling methods in which the sample items are chosen randomly, i.e. where every item in the population is given equal chance of being included in the sample. Under this, the following sampling methods exist.

3.3.1 Random Sampling

Random sampling uses the principle of randomization which is a procedure of giving every subject in a population an equal chance of appearing in the selection. It is mostly used in homogenous population where the population is well defined and a sample exists.

The limitation inherent in this method is that it can only be used in a finite population where all the items or subjects in the population can be numbered and listed serially.

3.3.2 Systematic Sampling

This involves the selection of the subject or item from serially listed population subjects or units, where n is any number usually determined by dividing the population by the required sample size, the population is given by N i.e. K=N/n

3.3.3 Stratified Sampling

Stratified sampling procedure is an applied random sampling method, *Asika, (1991).* In this method, the population is grouped into some definite characteristics. These groups are called strata. From these strata, the sample is chosen by applying random selection techniques on each stratum. In choosing a particular number of items from the various strata, the researcher must ensure that the number must be proportional to the stratum's share of the total population. This sampling procedure is superior to the simple random sampling and the systematic sampling method because it uses extra methods of representativeness by first identifying some characteristics that are being researched and then using these characteristics as a basis for further random sampling of the entire population.

3.3.4 Cluster Sampling

This method is used when a researcher recognizes that some populations are distributed in clusters and the researcher wants to use the cluster as a basis for selection. This method of sampling is used mainly in geographically distributed population.

Like stratified sampling, cluster sampling makes use of random sampling to select the sample subjects from each cluster. Thus, it is as effective as stratified sampling method.

b) Non-Probabilistic Sampling Method: - This type of sampling does not guarantee randomness. Randomness may however occur by chance but it does not really matter whether randomness exists or not in non-probability sampling process because the population elements are not deliberately given equal chance of being selected. It is only used where probability sampling technique is not feasible. There are three types of non-probabilistic sampling method, 3.3.5) Accidental Sampling: - This method is restricted for use in situations where the researcher is interested in having a smattering idea of a phenomenon of interest and where the researcher is operating with little or no budget. It has a possibility of leading to unreliable results.

3.3.6) Quota Sampling: - This is a non-probability sampling method whose application gives a semblance of representative-ness. Thus quota sampling is to non-probability sampling what stratified sampling is to probability sampling because both of them select sample subject to conform to some control measures dictated by some inherent characteristics of the population of interest.

3.3.7) Judgment Sampling: - When choosing some sample elements the researcher may be guided by what he considers typical cases which are most likely to provide him with the requisite data or information .When a researcher chooses his sample under this condition he is said to be involved in judgment sampling.

For this study, stratified sampling technique was adopted. The study area which is Lagos and Abuja is stratified into six commercial nodes each around which economic activities take place. For Lagos, the strata are Ikeja, Apapa, Ikoyi/Victoria Island/lekki , Festac/Ojo, Surulere and Lagos Island, while Abuja territory is made up of Abuja, Abaji, Gwagwalada, Kuje, Bwari and Kwali. With the division of this geographical location into different nodes, it becomes easier to apply stratified sampling technique. It makes the research work easier and the coverage of the study for data collection is more effective.

Based on this stratification, the researcher sampled a total of forty questionnaires (40), thirty for Lagos and ten (10) for Abuja and it is representative of the study population.

3.4 METHODS OF DATA COLLECTIONS

The methods of data collection for this study include personal interview, direct observation, and telephone survey and questionnaire administration.

3.4.1 PERSONAL INTERVIEW

Involves the process where interviewers contact members of the sample or population personally to ask questions. The interview may be formal in which a set of questions are asked and answers are recorded in a standardized form, or informal in which case the interviewer is at liberty to vary the order of questions and be free in his approach.

3.4.2 DIRECT OBSERVATION

Are used in research situation whereby the researcher is directly observing or studying the nature, phenomena/behaviors' of the sample in their natural setting.

3.4.3 TELEPHONE SURVEY

This involves the gathering of information's from the respondents through the use of telephone calls.

3.4.4 QUESTIONNAIRE SURVEY

A questionnaire consist of a set of questions designed to gather information for analysis , the result of which are used to answer the research questions or used for the test of relevant hypothesis. Questionnaires come in handy to help the researcher reach his numerous respondents and gather their responses. The researcher adopted the use of self administered questionnaires. This would help in the convenient collection of response from respondent in relation to the questions asked for proper analysis. It is convenient, it minimizes cost, it covers wider areas and its more result oriented.

3.5 METHOD OF DATA ANALYSIS AND PRESENTATION

The method of analysis varies in relation to the research subject variables. The researcher adopted the qualitative descriptive analysis method i.e. mean and also the use of tables for better precision and convenience of interpretation. The presentation of data would be done through the use of bar graph. This methods were adopted because they are easy to use and ads in quick decision making.

3.6 SUMMARY

This chapter has dealt with the methodology of the research subject in relation to the objectives and aim of the research. Such issues like data source, study population method of sampling, data collection instrument and method of data analysis and presentation were examined.

CHAPTER FOUR

4.0 DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

Before the analysis of the data gotten, there is need to cast a glance back to the objectives of this research report which includes the following

1. To identify the conditions in place for the creation of property index in other countries like south Africa, Holland and United Kingdom.
2. To review literatures on the benefits of property index to the users property industry.
3. To benchmark the conditions identified and required for a property index creation in South Africa, Holland and United Kingdom with the state of the Nigerian property market.

The first two objectives stated above have been discussed in details in chapter two of this research report while the last objective will be dealt with in details in this chapter.

This chapter analyses the data obtained by means of self-administered questionnaire in December 2008 from public owned property company, private property development companies, property management and valuation firms State Government owned Property Company and property financing institution (banks) from Lagos and Abuja both in Nigeria which were our scope of study.

Thirty questionnaires were distributed in Lagos and twenty-one questionnaires were retrieved while ten questionnaires were distributed in Abuja territory and seven were retrieved back.

In order to benchmark the conditions identified and required for a property index creation Which includes the following?

- Segmentation of the property market
- Availability of standardized valuation data
- Data collection and auditing procedure
- Willingness of investors to participate in the property index creation,

With the current state of the Nigerian property market, a questionnaire was designed. The administration and analysis of these questionnaires will help to shed more light on the state of the Nigerian property market.

4.2 QUESTIONNAIRE CONTENT

In order to accept or reject the hypothesis that the Nigerian property market does not have the conditions in place for the creation of a property index, a questionnaire was designed and it was administered to the five different categories of property investors in the Nigerian property market.

With referral to the conditions needed for a property index creation, the questionnaire administered tried to ascertain whether the Nigerian property market have this same conditions in place or not.

The findings from the administered questionnaire after analysis will help to determine whether to accept or to reject the hypothesis stated earlier that ‘the Nigerian property market does not have the conditions in place for the creation of a property index’.

A sample of this questionnaire used is evident in page 70 as an annexure

4.3 ANALYSIS OF DATA

4.3.1 RESPONSE RATE ACCORDING TO SCOPE OF STUDY

A total of forty questionnaires were distributed: thirty in Lagos and ten in Abuja. The table below shows the response rate and the percentage level of response.

Table 4.1 Table showing the response rate according to the scope of study

Scope of study	No of Questionnaires Distributed	No of Questionnaires Retrieved	% Level of Response
Lagos state	30	21	70%
Abuja	10	7	70%

Source: Field Survey (December, 2008)

The total percentage level of response from the table is above average and can be regarded as a good representative of the entire population under study.

4.3.2 ANALYSIS OF PROPERTY COMPANIES INVOLVED IN THE QUESTIONNARE SURVEY

For the purpose of this study, five categories of companies participated in the questionnaire administration both in Lagos and Abuja and the breakdown is shown in table below

Table 4.2 Table showing Property companies involved in the Questionnaire survey

Type of Company	**Lagos State**	**Abuja Territory**	
Public owned Property Company	1	--	
Private Property Development Companies	3	2	
Property Management and Valuation firms	12	5	
State Government owned Property company	2	--	
Property Financing institution(banks)	3	--	
TOTAL	21	7	
Source: Field Survey (December,2008)			

4.3.3 ANALYSIS OF COMPANIES PROPERTY PROFOLIO

Different companies surveyed have different varieties of properties within their portfolio and the analysis of this is shown in Table 4.3 in the list of tables as an annexure which combines companies in both Lagos and Abuja together.

From that table, It is noted that majority of investors' surveyed have no stake in the retail property market. The retail market has just started in the country recently and there is a lot of room for growth for all investors in the market.

From table 4.3, the average availability of companies' property portfolio by combining Lagos and Abuja Territory together are as follows:

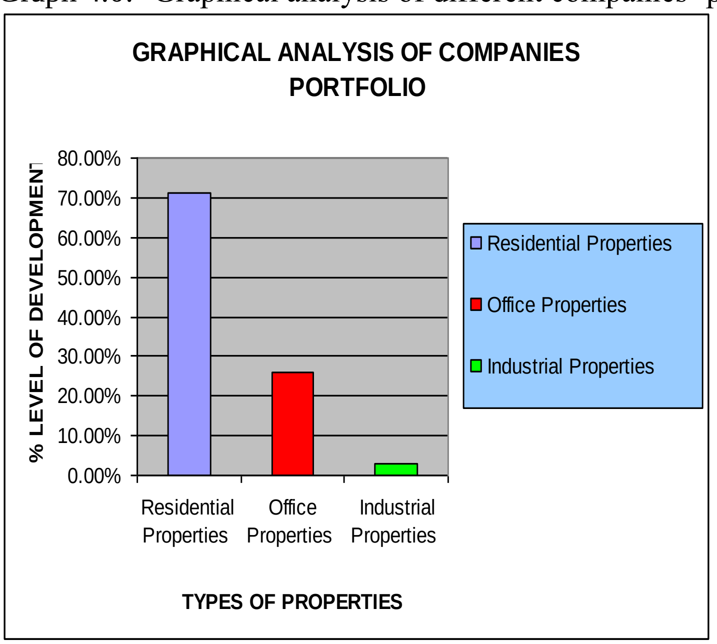
Table 4.3 Table showing company's property portfolio expressed as a percentage for both Lagos and Abuja together				
Type of Company	**Residential**	**Office**	**Retail**	Industry
Public owned Property Company	75%	25%	---	---
Private Property Development Companies	80%	20%	---	---
Property Management and Valuation firms	61.8%	31.8%	---	6.4%
State Government owned Property company	42.5%	49%	---	8.5%
Property Financing institution(banks)	96.2%	3.8%	---	---
TOTAL	355.5%	129.6%	---	14.9%
Source: Field Survey (December, 2008)				

An average percentage of the above table is given below

- Residential Properties 355.5/5= 71.1%
- Office Properties 129.6/5 = 25.9%
- Industrial Properties 14.9/5 = 2.9%

This analysis is presented graphically below 4.0.

Graph 4.0:- Graphical analysis of different companies' property portfolio



Source:- Field survey, December

4.3.4 ANALYSIS OF GEOGRAPHICAL SPREAD OF COMPANIES PROPERTY PORTFOLIO.

Different companies have their choice location for investment and this section looks at the spread of their properties across the country and it's presented in a table below.

Table 4.4:- Showing the geographical spread of companies Property Portfolio within the country

COMPANY TYPE	GEOGRAPHICAL SPREAD
Public owned Property Company	70% of these properties are in Lagos, 25% are in Abuja and 5% are in other states e.g Port-Harcourt and Ibadan.
Private Property Development Companies	95% of these properties are in Lagos and 4% are in Abuja and 1% in other states.
Property Management and Valuation firms	55% of these properties are in Lagos, 30% are in Abuja and 15% are spread across other states in Nigeria.
State Government owned Property company	98% of there properties are in Lagos and the surrounding western states like oyo state, ondo state, osun state and 2% stake in properties in Abuja.
Property Financing institution(banks)	70% of there properties are in Lagos, 15% in Abuja and the remaining 15% around port-Harcourt.

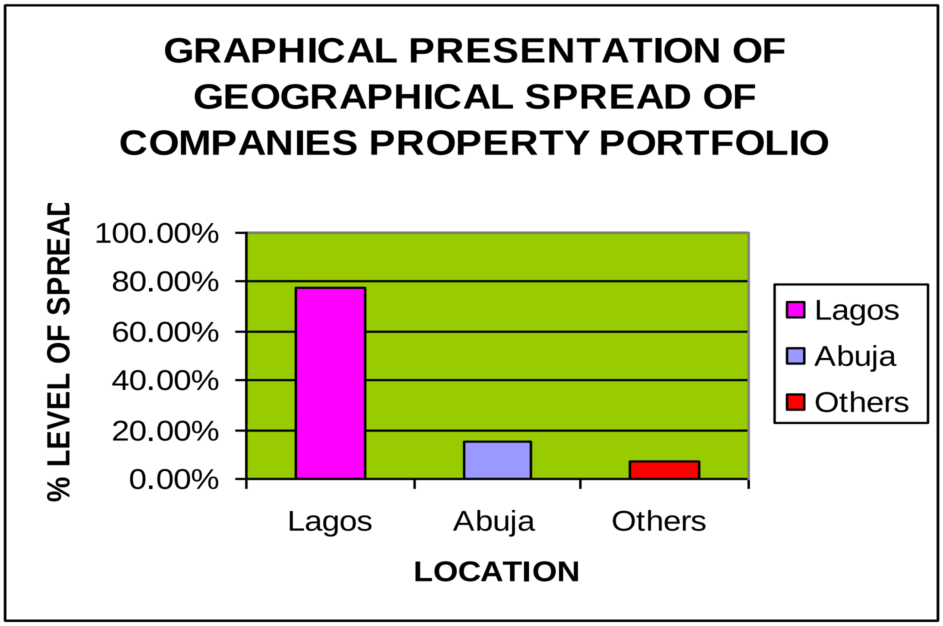
Source :- Field survey, December 2008

An average percentage of the above table is given below

- Lagos = 388/5 =77.6%
- Abuja = 76/5 = 15.2%
- Others = 36/5 = 7%

This information is also graphically presented in the next page.

Graph 4.1:- Graphical analysis of geographical spread of companies' property portfolio



Source: Field survey, 2008

From the above calculation, table and graphical presentation, majority of investors have their investment in Lagos, followed by Abuja and other areas follow like Port Harcourt, Kaduna Ibadan .This confirms the reason why Lagos and Abuja were Chosen as the focal point of research.

4.3.5. PERFROMANCE MEASUREMENT WITH OTHER ASSET CLASSES

As an act of benchmarking, performance measurement is done to determine whether the type of investment an investor is holding on to is beneficial when compared with other asset class. To this end we looked at whether all our study population do measure their property performance with other asset classes and analyzed in the next page.

Table 4.5:- Table showing performance measurement with other asset classes	
TYPE OF COMPANY	**BENCHMARKING OF PROPERTY PORTFOLIO WITH OTHER ASSET CLASSES AND TOOLS USED**
Public owned Property Company	It does benchmark and they apply the use of share value/TB
Private Property Development Companies	Out of the 5 companies sampled, only 2 carryout benchmarking. The first apply the use of ROCE (Return on capital employed) and the other apply in-house data base, while the remaining 3 don't benchmark at all.
Property Management and Valuation firms	Out of the 17 companies sampled, only 3 carryout benchmarking and the 3 companies apply the use of ROCE and the remaining 13 don't benchmark at all.
State Government owned Property company	None of the 2 companies sampled do carryout benchmarking of their property portfolio with other asset classes.
Property Financing institution(banks)	None of them benchmark their property portfolio with other asset classes.
Source:- Field survey, December 2008	

From table 4.5, it could be deduced that on average most of the players do not benchmark because it's not a regular practice in the Nigerian property market.

4.3.6 SEGMENTATION OF THE NIGERIAN PROPERTY MARKET

With referral to how the Dutch, U.K and the South African property market was segmented, we take a look at whether there exist a proper segmentation of the Nigerian property market which will aid in the creation a property index.

From the literature review of the Nigerian property market, there is no indication of any segmentation of the Nigerian property market; justification of this is seen from the respondents of the questionnaire which is analyzed in table 4.6 in the next page.

Table 4.6:- Table showing the response of companies to the awareness of the segmentation of the Nigerian Property market	
TYPES OF COMPANY	**AWARENESS OF THE SEGMENTATION OF THE NIGERIAN PROPERTY MARKET**
Public owned Property Company	Not aware of the segmentation of the Nigerian property market 100% non awareness
Private Property Development Companies	Non of them are aware of such segmentation 100% non awareness
Property Management and Valuation firms	Non of them are aware of such segmentation 100% non awareness
State Government owned Property company	Non of them are aware of such segmentation 100% non awareness
Property Financing institution(banks)	Non of them are aware of such segmentation 100% non awareness
Source:- Field survey, December 2008	

From table 4.6 above, it can be concluded that the Nigerian Property market has not undergone any segmentation before or at the moment.

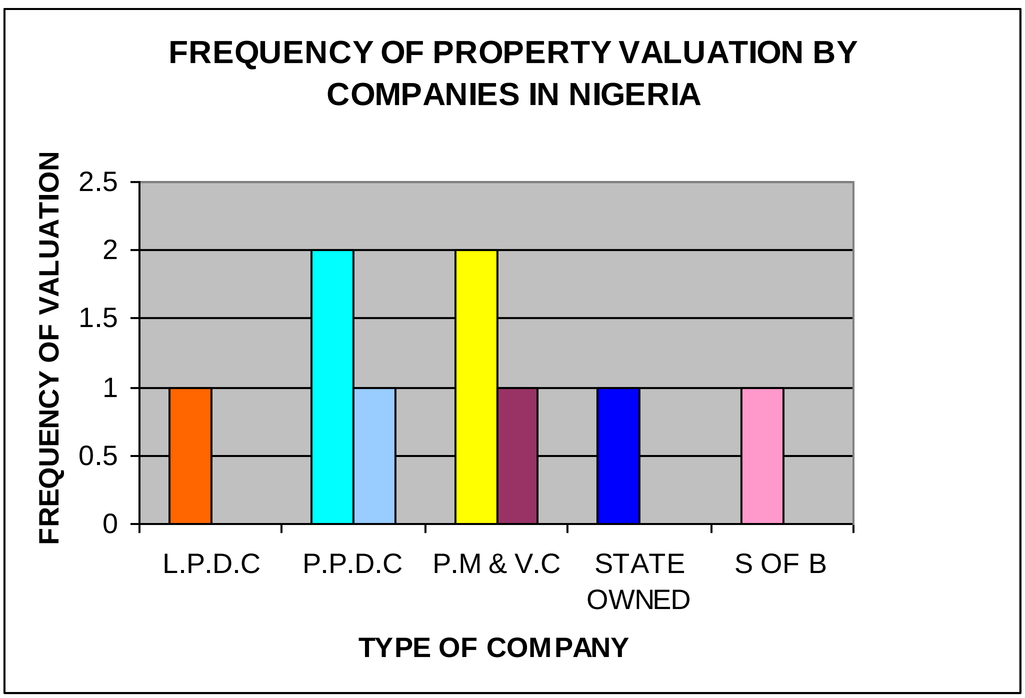
4.3.7 VALUATION OF PROPERTY PORTFOLIO AND THE FREQUENCY OF VALUATION.

Since the use of valuation data is the bedrock of property index, we now take a look at whether all these companies carry out valuation and the frequency with which this valuation takes place. This information is analyzed with a table and presentation is done graphically in the next page.

Table 4.7:- Table showing response of companies to property valuation and the frequency of valuation.	
TYPE OF COMPANY	RESPONSE OF COMPANIES TO PROPERTY VALUATION AND THE FREQUENCY OF PROPERTY VALUATION
Public owned Property Company	They carryout valuation once every year
Private Property Development Companies	They carry out valuation once every year and once in two years.
Property Management and Valuation firms	Based on instruction from the property owners. Valuation is done once every two years by some and once a year by others.
State Government owned Property company	They carryout valuation once every year.
Property Financing institution(banks)	They carryout valuation once every year.

Source:-Field survey, December 2008

Graph 4.2:- Graph showing the frequency of property valuation by companies



Source:- Field survey 2008

From table 4.7 and graph 4.2 above, it could be seen that property valuation by all respondents takes place either once a year or once in two years.

4.3.8 METHOD OF VALUATION USED BY PROPERTY COMPANIES

There are different valuation methods that can be used to carryout property valuation. The purpose of valuation determines the method to be used for the valuation. To this end we look at the valuation methods used by companies to carryout there valuation which is tabulated in table 4.8 below

Table 4.8:-Table showing valuation methods used by companies.

TYPE OF COMPANY	VALUATION METHOD USED
Public owned Property Company	Comparism method, Investment method, Insurance method of valuation.
Private Property Development Companies	Investment method of valuation
Property Management and Valuation firms	The purpose of the valuation determines the method to be used by the firms. Mostly used methods are the investment method, comparism method and the insurance method of valuation.
State Government owned Property company	One of the companies uses the investment method and the other company contracts the valuation work out to private valuation firms.
Property Financing institution(banks)	They use the comparism method of valuation.

Source: - Field survey, December 2008

From the table above, it's seen that there is no stable method of valuation. The purpose of valuation determines the method that will be used.

4.3.9 STANDARDISED VALUATION PROCEDURE

In respect of standardized valuation procedure, what is expected is whether the assumptions and inputs used for all valuations are done the same and whether there are records for them. This is done in order for the producers of the index to be able to carryout checks as to how consistently properties are being valued. The analyses of questionnaire with respect to standardized valuation procedure applicable to companies sampled in the Nigerian property market are presented in table 4.9 in the next page.

Table 4.9 Table showing availability of standardized valuation data by companies	
TYPE OF COMPANY	**AVAILABILITY OF STANDERDISED VALUATION PROCEDURE**
Public owned Property Company	From the information supplied, all assumptions and inputs are the same and there are records for them.
Private Property Development Companies	From the information supplied, only 3 companies have all their assumption and input to be the same and they have records for them, but the remaining 2 is in the negative(assumption and inputs not the same and no record available)
Property Management and Valuation firms	The purpose of the valuation determines the method to be used by the firms. For all the 17 sampled, there assumptions and input are different from each other but they have records for all valuations done.
State Government owned Property company	From the two sampled companies, there assumptions and inputs are different but they do have records for all valuations done.
Property Financing institution(banks)	Their assumptions and inputs are different but they do have records for all valuations done.
Source: - Field survey, December 2008	

Percentage wise, this implies that

1) Listed property development company = $\frac{1 \times 100}{1}$ = 100% Availability of standardized valuation procedure

2) Private property development company = $\frac{3 \times 100}{5}$ = 60% Availability of standardized valuation procedure

3) Private property management & Valuation firms = $\frac{17 \times 100}{17}$ = 100% Availability of standardized valuation Procedure but their Assumptions differ.

4) State owned property development company = $\frac{2 \times 100}{2}$ = 100% Availability of standardized valuation Procedure but their Assumptions differ.

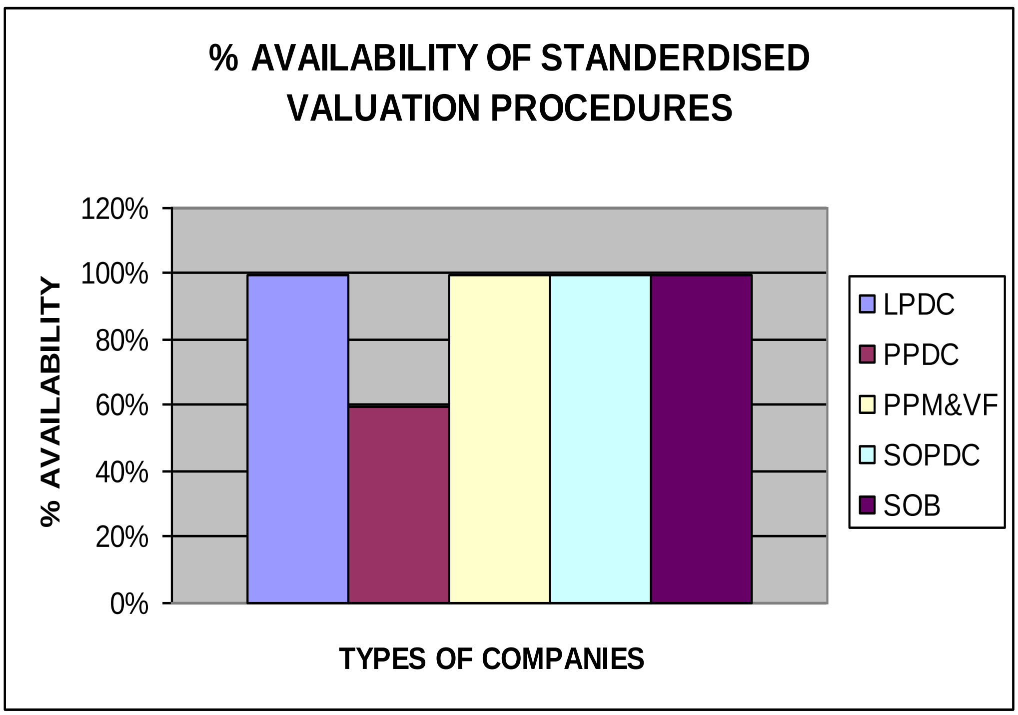
5) Subsidiaries of Banks = $\frac{3 \times 100}{3}$ = 100% Availability of standardized valuation procedures.

4 out of the 5 companies are having 100% availability. This gives

$\frac{4 \times 100}{5}$ = 80% availability of standardized valuation procedure within the market.

This analysis is shown in graph 4.3 below.

Graph 4.3:- Graph showing the % availability of standardized valuation procedure



Source: Field Survey, December, 2008

4.3.10 DATA COLLECTION AND AUDITING PROCEDURE

Here, IPD expects that all valuation data must be verified by external auditors for accuracy and completeness. A survey was done to see whether our study population uses external auditors to do verification of their valuation data for accuracy and completeness. This is shown in table 4.10 in the next page.

Table 4.10 Table showing data collection and auditing procedure of companies by external Auditors	
TYPE OF COMPANY	DATA COLLECTION AND AUDITING PROCEDURE
Public owned Property Company	The company's data is audited by external auditors once the valuation takes place
Private Property Development Companies	None of the 5 companies data is audited by external auditors
Property Management and Valuation firms	None of the 17 companies' valuation data is audited by external auditors.
State Government owned Property company	None of the 2 companies' valuation data is audited by external auditors. Auditing of the data is done in house
Property Financing institution(banks)	The valuation data produced are from external valuers that are contracted to do valuation for the banks and the data are audited by external auditors.
Source: - Field survey, December 2008	

By looking at the percentage, it implies that

Listed property Development Company has 100% auditing

Private property development companies has 0% auditing

Private property management and valuation firms has 0% auditing

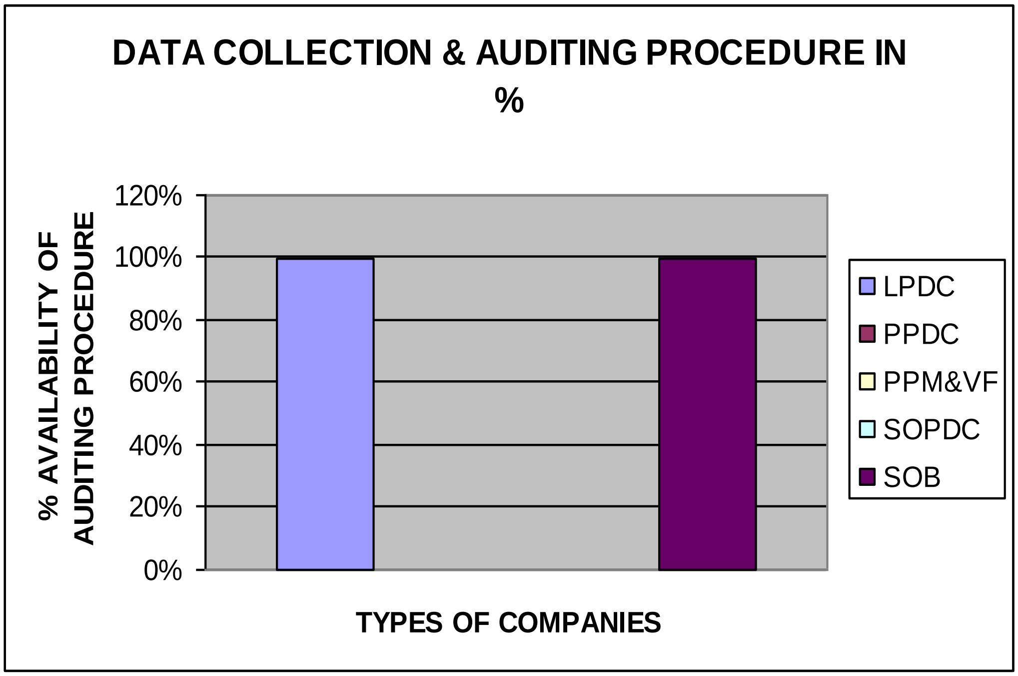
State owned property Development Company has 0% auditing

Subsidiaries of bank have 100% auditing taking place.

2 out of the 5 companies sampled have 100% data collection and auditing procedure. This gives $\frac{2 \times 100}{5}$ = 40% availability of data collection and auditing procedure within the Nigerian property market.

This percentage analysis above is produced graphically in graph 4.4 in the next page.

Graph 4.4:- Graph showing % availability of data collection & auditing procedure



Field survey, December 2008

From the graph above, it's evident that only two out of the five categories companies have evidence of good data collection and auditing procedure.

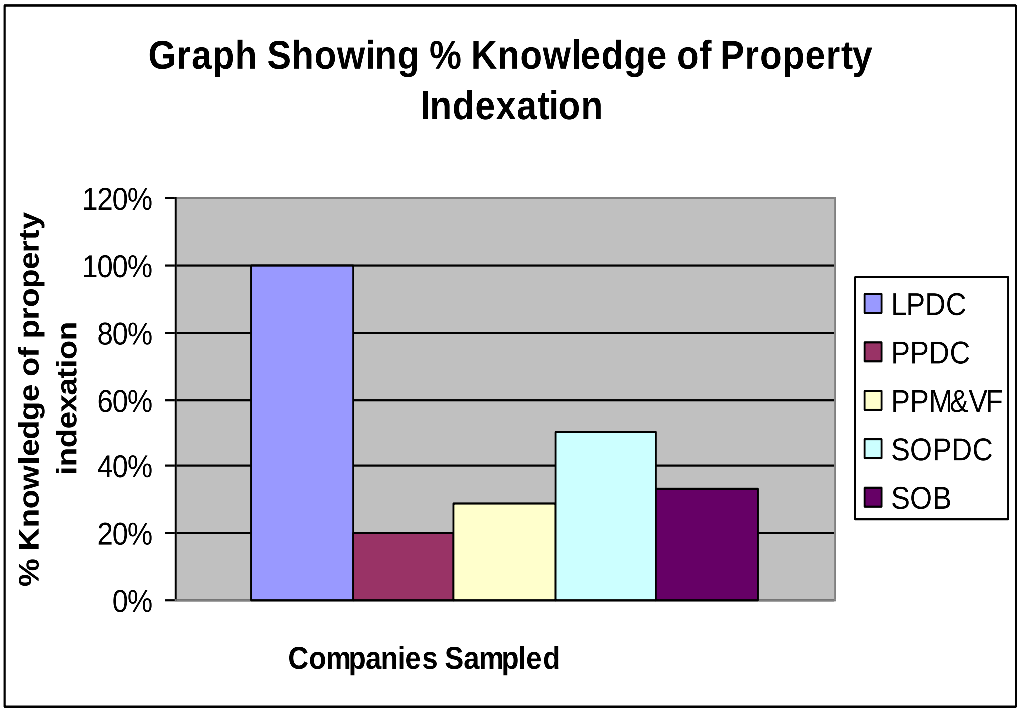
4.3.11 KNOWLEDGE OF PROPERTY INDEX

For there to be a successful creation and use of a property index, property investors must be familiar with how it works and its benefits. To this end, we looked at how well property investors are knowledgeable about property index. This information is analyzed with percentage and presented graphically in the next page.

From the analysis, it was discovered that

a) Public owned Property company have 100% knowledge of property index
b) Private property development company have 20% knowledge of property index
c) Property management and valuation firms have 29% knowledge of property index
d) State Government owned property companies have 50% knowledge of property index
e) Property financing institution (banks) has 33% knowledge of property index.

Graph 4.5:- Graph showing % knowledge of property index



Source: Field survey, December 2008

4.3.12 WILLINGNESS OF INVESTORS TO PARTICIPATE IN PROPERTY INDEX CREATION

From the data collected, 9 of the respondents are willing to participate in the property index creation, 16 are not willing because they do not know about property index and its benefit, while the remaining 3 are indifferent about it.

This means $\frac{9 \times 100}{28}$ = 32% of the investors are willing to participate in the property index creations.

$\frac{16 \times 100}{28}$ = 57% of the investors are not willing to participate in the property index creation and finally

$\frac{3 \times 100}{28}$ = 11% of the investors are indifferent about the property index creations.

4.4 SUMMARY

This chapter has adhered to the methodology it proposed to use in analyzing the data collected which are the use of tables, percentage, mean and bar graphs. This analysis will help to form the basis for the final chapter that deals with the summary of findings and conclusion.

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.0 SUMMARY OF FINDINGS

From the beginning of this research, our aim was to identify the conditions needed for the creation of a commercial property index by taking a look at what conditions are in place in other countries before the property index could be created. Conditions required for a property index to be created in countries like Holland, United Kingdom and South Africa where the index is being used were reviewed.

From the countries reviewed, for a property index to be created in their countries, the conditions for the index creation were identified in chapter two and they were presented in a matrix format and this is recalled into this current chapter and used to compare with our analyzed data of chapter 4 which will help us form the basis of our conclusion

The analysis of this matrix is presented in table 5.1 and graph 5.1 in pages 88 and 89 as an annexure in this report summarizes the outcome of this research work.

From that table and graph displayed in the annexure, it can be seen that Nigerian property market does not have the conditions needed for a property index creation.

5.1 RECOMMENDATIONS

In order to address the above findings, the following are the researcher's recommendations

a) **The organization of the initiatives**: - This is basically the starting phase of the creation of the index. At this stage heavy demand needs to be made in terms of commitment and efforts required. Those behind the initiatives have to establish the widest possible level of support within the Nigerian property market in terms of awareness creation and benefit of property index. Enthusiasm has to be created at the highest level for all property stakeholders as the unconditional support at that level is required to make an effective start to the introduction of a property index. This required support can only be obtained following frequent and intensive face to face meeting with property stakeholders, institutional investor's e.t.c and this meeting will involve outline of setting up the index and the stakeholder's commitment to support the project both financially and other wise.

b) Valuation: - Due to the impact of valuation on investment returns and the wide variety of practices encountered, the establishment of a uniform valuation procedure becomes a key issue.

With the support of property stakeholders, institutional investors and also property valuers, enormous effort needs to be made to ensure that valuations for property index are prepared on a consistent basis with due standardized checks.

c) **The contribution of Investment Property Databank (IPD)**:- In developing the index, the extensive experience of IPD will be needed. Lengthy discussion needs to take place between the stakeholders and IPD regarding areas like valuation methodology, allocation of operating costs between owners and tenant's e.t.c. By relying on IPD'S proven methodology and data processing capability will allow initiators of the index creation achieve the widest possible support and success for the initiative.

5.2 CONCLUSION

To conclude therefore, one must cast a glance at the picture which is depicted from the tables and graph from the summary of findings and as such going by the finding from the Nigerian property market and in comparism to conditions that must be in place for a property index to work effectively, we will accept the hypothesis and conclude that the Nigerian property market does not have the condition in place for the creation of a commercial property index.

It is the hope of the researcher that this work has shed light on the current situation of the Nigerian property market with reference to conditions needed for the creation of a property index. The researcher is of the view that, if the current problems faced by the Nigerian property market are addressed e.g. lack of transparency in the property market, absence of a well structured and segmented property market, unwilling property investors because of the little awareness about property index and its benefits, the creation and usage of a property index would be a success in Nigeria.

REFERENCES

Aart Hordijk, Annemarie Huele, Frits Seyffert, Fer Dijkstra (1997) *Property benchmarking, THE EXPERIENCE OF ESTABLISHING THE DUTCH PROPRTY INDEX*, Stichting Fundatie Bachiene Amsterdam Pp 103

Andrew Baum, Tony Key, George Matysiak, Joakim Franson (1999) *Attribution Analysis of Property Portfolio*, ERES Conference, Athens, June 1999

Appraisal Institute (2001), *the appraisal of real estate* .Illinois: Appraisal Institute, 12th Edition

Asika.M (1991), *Research Methodology in the behavioral Science, Longman* Nigeria

Corlet. D (1990), *Property management part 1, volume 1,* published by Technicon S. A Florida

David Isaac, (1998), *Property Investment,* Macmillan press Ltd, London. Pp83

David Geltner and Norma G. Miller (2001), *Commercial Real Estate Analysis and Investment*, South – western publication, a division of Thompson Learning. Pp83

Fraser W.D (1984), *Principle of property investment and pricing*, Macmillan Publishers Ltd, London.

Hotels M and Mac Greg or B.D (2000), *Property Investment: principle and practice of portfolio management*, Harlow: Pearson

KIT Index (2002) Result for year 2002 www.kit.fi/pdf/kiinteistoindeksi 2002.pdf

McNair, C.J and Leibfried, K.H.J (1992) *Benchmarking: A Tool for continuous Improvement*, Oliver Wright, Essex Junction, VT

Michael Thorn croft (1976), *Principles to Estate Management*, the Estate Gazette, London.

SAPIX (2005), *South African Property Investors Digest*, Publication sponsored by Old Mutual properties, Johannesburg, South Africa.

Stephen E.Hargitay and Shi- Ming Yu (1993), *Property Investment Decision, A Quantitative Approach*, published by E&FN spon an imprint of Chapman and Hall, London. Pp201

Stapleton T (1981), *Estate Management Practice*, Pitman press Ltd, London.

The IPD Index Guide (January 2007)

The IPD/UK Index Guide (2002)

The IPD / DIX (2002) DIX German Property Index

Umeh, J.A (1997), *Feasibility and Viability Appraisal*, Onibonoje publisher Ibadan.

William J. Poorvu and Jeffery L.Cruiksh (1999), *The Real Estate Game, the intelligent guide to decision making and investment*, the free press publisher, Ne

JOURNAL

Aart C. Hordijk and James C. Condit (1997) *Will investors standardize appraisal practices in the European Union? The ROZ/ IPD Netherlands index experience*, Journal of Property Valuation & Investment .Vol 15 No 5.1997 pp497-496

Agusto & Co .Limited (2007) *INDUSTRY REPORT: REAL ESTATE*

A.Olaleye, B.T Aluko and C.A Ajayi (2007) *Factors influencing the choice of property portfolio diversification evaluation techniques in Nigeria*, Journal of Property Investment & Finance Vol.25 No 1,2007.PP 23-42

Brunette (1991), *Techniques and challenges in developing property indices,* paper Presented at the fourth world valuation congress, London and Amsterdam

Dean Elmuti and Yunus Kathawala (1997) *An overview of benchmarking process: a tool for continuous improvement and competitive advantage*, Benchmarking for Quality management & Technology Vol.4 No.4, 1997, pp229-243.

David Geltner and David C. Ling (2007) *Indices for investment Benchmarking and Return Performance*, International Real estate review, Vol. 10 .1: pp 93- 118

Guy Morrell (1995) *Property Indices: a coming of age?* Journal of Property Valuation & Investment, Vol. 13 No.3, 1995 PP 8-21

Gerald R.Brown and George A. Matysiak (1995) *Using commercial property indices for measuring portfolio performance*, Journal of Property Finance Vol.6 No.3, 1995, pp27-38

Jeffery D Fisher (2000) *U.S commercial real estate indices: the NCREIF property index*, Journal of real estate finance

Jeffery.D.Fisher (2002) *Real time valuation*, Journal of Property Investment & Finance Vol.20 No 3. 2002 PP 213-221

Marc Schneider (2001) *Nigerian property market: overview and opportunities*, Eprop Publication

Guy Morrell (1991), *Property Performance Analysis and Performance Indices, A review.* Journal of Property Research Vol. 8 pp 29 – 57

Rosane Hungria- Garcia, Hans Lind and Björn Karlsson (2004), *Property yields as tools for valuation and analysis*, Sponsored by Real Estate Academy Stockholm

Stephen Sciemone, Isabella Cardon and Roger Schneider (2005) *Real Estate Indirect Investments: Opportunities and Risks*, Special report by Fitch Ratings Asset Management pp.5

Viruly. F and Garun S (2003), '*The South Africa SAPIX/IPD Property Index- A tool for Asset Management and Research*'. Paper presented at the 4th International conference on Real Estate in Africa, Nairobi, Kenya.

www.bpir.com/performance measurement
www.finance.mapsofworld.com/investment
www.sec.gov/answers/i

ANNEXTURES

QUESTIONNNAIRE

TOPIC: IDENTIFICATION OF CONDITIONS REQUIRED FOR THE CREATION OF A PROPERTY INDEX IN NIGERIA

1. Name of company…………………………………

2. Location of company………………………………

3. Nature of company (listed, private, Government, bank or property management Company) ……………………………………………………..

4. Nature of properties available in companies' portfolio

   Please rank in order of %

   a) RESIDENTIAL PROPERTIES
   b) COMMERCIAL PROPERTIES e.g. Office / Retail
   c) INDUSTRIAL PROPERTIES

5. Are these properties geographically spread across the country **YES NO** ?

6. Does performance measurement takes with other asset classes e.g. stocks? **YES NO**

7. If yes, what measurement tool is being used? ....

8. Is your company aware of the segmentation of the Nigerian property market? **YES NO**

9. If yes, what is the market segmented into? ....

………………………………………………………………………………………

10. Does your company carry out property valuation on all your assets? **YES NO**

11. If yes, are these valuation procedures standardized? **YES NO**

12. How often does this valuation take place?..

13. Are these valuation data audited regularly by external valuers? **YES NO**

14. Are you or your company aware of Property Index? **YES NO**

15. If yes for how long……………………..

16. Will your company be willing to provide IPD with your valuation data for the creation of a Property Index? **YES NO**

THANK YOU

LIST OF COMPANIES SAMPLED

1. PUBLIC OWNED PROPERTY COMPANY

UACN property Development Company also called UPDC

2. PRIVATE OWNED PROPERTY DEVELOPMENT COMPANIES

Cornerstone Construction Company Ltd, Stallion Property & development Co.Ltd, , S.O.E Properties, Grant Properties, HFP Engineering

3. STATE GOVERNMENT OWNED PROPERTY COMPANIES

Lagos State Development and Property Corporation (LSDPC), Wema board estate,

4. PROPERTY FINANCING INSTITUTION

Afri-Bank Estate

Union Homes Mortgage and Loans

Zenith Bank Plc and Intercontinental Properties

5 PROPERTY MANAGEMENT AND VALUATION FIRMS

Diya Fatimilehin & Co

Ogo Ozegbe & Co

Knight Frank Nigeria

Odudu Odudu & Co

Jide Taiwo & Co

Dosu Fatokun & Co

Ora Egbunike & Co

Akin Olawore & Co

Ubosi + Eleh & Co

Shola Badmus & Co

Bode Adediji &Co

Fola Oyekan & Co

RCO & Co

Ismail & Partners

Biodun Olapade & Co

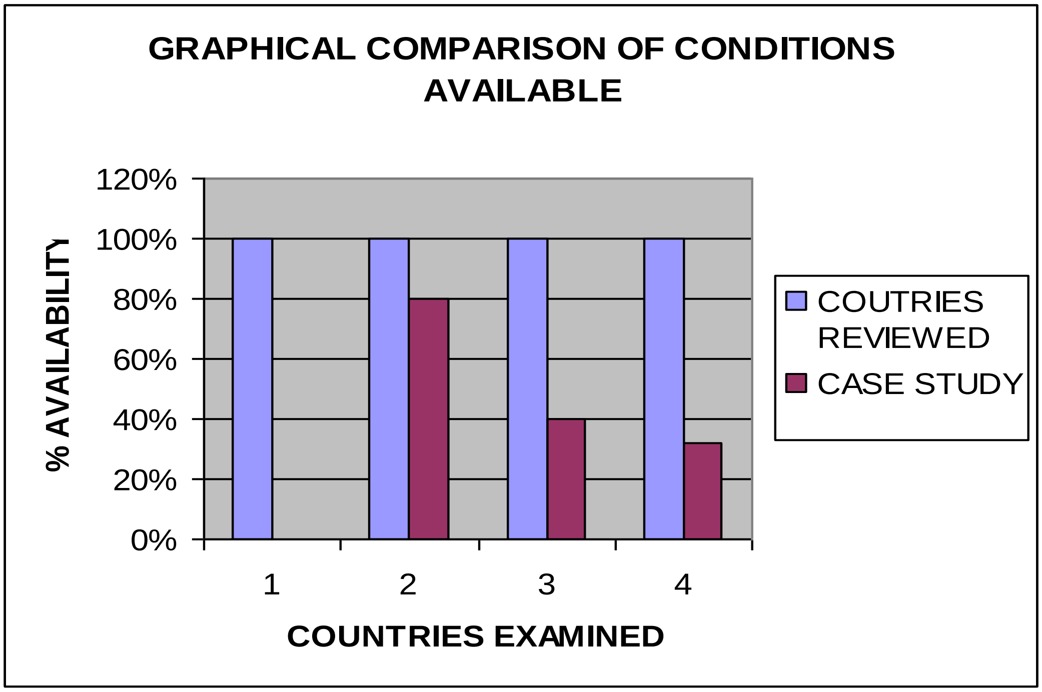
Sinbo Onitiri & Co

Adeniji Adele & co

Table 5.1 IDENTIFIED CONDITIONS FOR CREATING PROPERTY INDEX IN OTHER COUNTRIES & ITS COMPARISON WITH THE CURRENT CONDITION OF THE NIGERIAN PROPERTY MARKET

CONDITIONS REQUIRED FOR A PROPERTY INDEX CREATION	**COUNTRIES REVIEWED**			CASE STUDY
	SOUTH AFRICA	**HOLLAND**	**UNITED KINGDOM**	**NIGERIAN PROPERTY MARKET**
1) SEGMENTATION OF THE PROPERTY MARKET	100% YES	100% YES	100% YES	0% THE MARKET IS NOT YET SEGMENTED
2) AVAILABILITY OF STANDERDISED VALUATION DATA	100% YES	100% YES	100% YES	80% AVAILABILITY OF STANDERDISED VALUATION DATA
3) DATA COLLECTION AND AUDITING PROCEDURE	100% YES	100% YES	100% YES	40% AVAILABILITY OF DATA COLLECTION AND AUDITING PROCEDURE.
4) WILLINGNES TO PARTICIPATE IN THE PROPERTY INDEX CREATION	100% YES	100% YES	100% YES	32% OF THE PARTICIPANT ARE WILLING TO PARTICIPATE IN THE INDEX CREATION

Graph 5.1:- Graph showing comparison of conditions available



Source: - Field survey, 2008