Problem of Investment Analysis Occasioned by the Uncertainty of Factor Elements in Imo State, Nigeria

Abstract

Traditional investment analysis needs to more carefully explore irreversible's implications: timing choice, probabilistic method and uncertainty. The investment analysis procedures have their associated shortcomings in managing uncertainty factors. Property investment in Nigeria is related to several political, economic, environmental and social factors, leading to uncertainty. Property investment is an emerging market in Imo State; at the same time, contemporary, traditional, probabilistic appraisal systems are only adopted in investment studies. Further study of the Uncertainty factor is the need of the hour to overcome the problems in investment analysis. Hence, this review highlighted some important and pertinent issues in investment analysis covering uncertainty factors and recommends further empirical studies.

Keywords: Property Investment, Real Estate Investment, Uncertainty, Risk, Investment Analysis

Introduction

An investor's commitment of funds, capital or money for a specific period in anticipating returns in future or some series or stream of revenue that would reward the investors for their risk, time and uncertainty on their capital invested is called investment (Reilly & Brown, 2011). Property investment involves acquiring or disposing of properties and assets like land and improvements to these properties. Ng et al. (2017) stated that investment in the real estate sector is now a

common investment opportunity globally due to its unique features, which is the common supposition that returns on investment for real estate businesses appreciate in terms, even during downtime economic conditions.

While investment in estate and properties is fixed in space and time and also involves the utilisation of substantial outlay of funds or capital, its capacity to give investors the anticipated and expected outcome is dependent on the price of money or fund, which uncertainty affects the supposed expectation (Ayodele and Olaleye, 2018). Property development could be considered an entrepreneurial activity that involves certain uncertainties and risks. Deciding on capital investment basidial investment depends on capital budget theories due to risk elements, contingency factors, hazards and uncertainty (Kaczmarek, 2015; Singh et al., 2012; Zhang et al., 2011). In this current social, geo-political, and economic uncertainty in the world, strategic monetary management is based on the process of alterations, which requires re-examining the basic presumption in adequate market hypothesis (Kengtharan, 2017), which would cut across conventional boundaries of monetary management. Increased instability in unpredictable alteration will create more unhealthy competition than we have experienced in business (Kengtharan, 2017). Therefore, efficient management of fluctuations and uncertainties are crucial and usually complex issues in analysing decisions for capital investment (Kengatharan, 2017).

Uncertainty and instabilities that influence valuation are different from one county to another, from one local area to another due to differences in the level of development in their market and legal systems (Beckerf, 2016). The issues of instability are globally recognised in assessment practice because it is currently being carried out, which encourage the researcher to examine the problem and present solution that could be obtained from this work, like the property market in

Germany and practical technique for resolving issues of instability and uncertainty when there are inadequate comparable transaction conditions by transforming risk to risk rewards, the outcome reveals that because of limitation in data for ascertaining idiosyncratic risk reward for estate asset is not possible yet due to strategies in this study to capture all potential risk rewards connected to ineffectiveness in the market (David et al., 2006). Kucharskastusiak (2013) in Poland presents a method for research concerning valuation instability in the advanced markets to encourage researchers in Poland to involve in global discussions and deceptively recognised in assessment practice since flux is integral to the valuation process. Nigerian researchers such as Aluko et al. (2004) worked on issues of uncertainty and instability in valuation processes and how estate investor valuers could resolve such problems in their valuation records, while others such as Ayodele and Olayele (2018) researched on means to managing instability, Aliyu (2017) worked on incorrectness and Ogunbo, (2004) worked on demand for correct and suitable data for valuation. Their results showed a substantial level of instability which needed to be ideal for making a decision concerning property investment, unavailability of competent valuation agents, and poor compliance with valuation guidelines in methods and quality of valuation reports.

This study assesses the level to which instability elements affect investment analysis in making investment decisions. Considering the effect of instability, information level problem and other complex issues on budget exercise give one perception that there is no substantial correct method, and it is essential to have multiple techniques (Kaczmarek, 2015). Uncertainty indicators and their effect on making decisions concerning investment differ across different nations due to the nature of culture, investment programs, politics, monetary programs, tax system regulation and legal background of the country. Therefore, the research question for their

study is “What are uncertainty factors that influence investment analysis and decision in emerging property investment in Imo State?”

Literature Review

Uncertainty and Its Classification

Uncertainty is the disparity between the data information within the accessible means of the valuation agents or users presently and information or data needed by valuation agents or users for better decision-making (Verbeeten, 2006). Currently and according to Al-Harthy, (2010). uncertainty means a situation or condition with numerous possible outcomes, while the r*isk* is the chances or propensity of loss or gain relating to a particular outcome

Several categories of uncertainty related to investments are available in the literature. Several scholars see uncertainties from different viewpoints. Therefore, the classifying concept of uncertainty varies. Townsend (1969) stated that it is grouped or classified as uncertainty in business and projects. It was later perceived in the 1980s as uncertainty in the market and the firms; Seidler & Carmichael (1981) grouped it as dynamic and static instability (Fanning, 1983). However, this concept was perceived in the 1990s as calculated, operational and monetary uncertainties by Vojta (1992), General, company-based and industry-based uncertainties by Miller (1992), indirect and direct uncertainties according to Pringle and Cannoly (1993), business and monetary uncertainties by Baril et al. (1996) as well as endogenous and exogenous uncertainties by Folta et al. (1998). Further, this concept was grouped in the 2000s as market, company and industry-specific uncertainties by Bulan et al. (2005) and input, monetary, social and market uncertainties by Verbeeten (2006).

Saunder et al. (2015) stated that some sources of uncertainty and instability are grouped into five viewpoints: environmental, individual, complex, information and temporal perspectives.

i. *Environmental perspective:* this viewpoint comprises factors like turbulence in the environment, institutional value, decision-making procedures, threats from competitors, external industry and risks in the market. Instability from the monetary environment comprises market information, risks from the market, fluctuation of economic factors and incomplete information (Saunders et al., 2015).
ii. *Individual Perspective:* The instability or uncertainties of the individual comprises factors such as the internal understanding condition of the individual, the uncertainty that exists in the mind and conscience of people and differences in perception of people due to their psychological pattern and perception of uncertainty.
iii. *Complexity Perspective:* This dimension emphasises factors like technology, process, diversity of business owners, and some projects' inherently complex nature.
iv. *Information Perspective:* uncertainty, in this case, is concerned with the information perspective, which arises from incomplete and incorrect information, poor knowledge, incomplete knowledge of cause and effect, and not having the capacity or ability to obtain accurate estimates.
v. *Temporal Perspective:* The source involves the stage in the project life pattern, project tempo and level of turbulence.

Management of Uncertainty in Property Investment

Several researchers have examined the handling of uncertainties as concerned with general decisions regarding investment and, in particular, estate development in upcoming markets. The issue of uncertainty management could be carried out in several ways, but these are widely

grouped into three sets or groups. They comprise conventional, probabilistic and contemporary assessment techniques.

Traditional Appraisal Techniques

Although there are several tools for evaluating the valuation of conventional investment in investment assessment processes, traditional methods can be widely classified into discounting and non-discounting assessment techniques. Non-discounting investment assessment technique comprises cash flow, rate of return and payback period. The discounted techniques involve Net Profit Value (NPV), Internal Rate of Return (IRR), and Profitability Index (PI), among others. These are equally considered factors applicable when conducting the Discount Cash Flow method and are mainly used to ascertain the future glow of cash and usually serve as a baseline for evaluating the value of investment (Chance & Peterson, 2002).

Carmichael et al. (2011) noticed that when using conventional models to assess irreversible investments like estate business, it is crucial to consider the strategic usefulness of investors' flexibility in changing their decisions after commencing the project and that investment funds are regarded as being held passively. Thus, their model's needed help to resolve the issue of uncertainty in adequate property investment assessment.

Probabilistic Appraisal Techniques

Probabilistic methods are a specific departure from the standard and conventional techniques used in investment assessment. These methods, however, provide little evaluation for different available options from investors; they afford a particular form of understating of possibilities and pathways for making optimum decisions concerning investment. Probabilistic methods comprise techniques like sensitivity assessment, simulation assessment and decision trees assessment. However, these probabilistic-based methods do not consider the inherent chances needed to

modify the outlay of investment (Brealey et al., 2012). While simulation and sensitivity assessment can be utilised to assess the opportunities available by expressing results from these decisions, they do not present optimum guidance concerning the possible course of action that assures the investor's optimum returns. Therefore, while sensitivity assessment allows them to assess the impact of alteration in estimated value, simulation assessment of the projects provides room for multi-factor modification. Both techniques enable specific alterations in these factors and do not wholly and entirely capture the condition involved in this investment, according to Chance & Peterson (2002). Based on the consideration of the decision tree, not minding that they provide a mapping of other options, the use of one discount rate cancel all possible real factor that rates changes over the investment of the entire project (Chance & Peterson, 2002).

Contemporary Appraisal Techniques

Several modern techniques are already presented in the literature to handle uncertainty in estate-related investment. In what seems like a descriptive viewpoint, The study by Ward and Chapman (2003) suggested the importance of using holistic techniques in managing uncertainty and instability in projects. This technique takes into consideration the analysis of the design of the project, base plans, nature of stakeholders of the project and investment goals. However, because these techniques do not have a quantitative assessment, their acceptance in handling instability and uncertainty in estate investment assessment could best be supported with other modern quantitative techniques.

The research by Blackpool et al. (2005) and Reyman (2008) supposed that using scrum-based bases. The scrum-based procedure designed by Schwaber and Sutherland (2002) is an incremental base employed in project management. Whereas the scrum procedure was first developed for handling product development procedures, it has been engaged in other areas like

management of project management software, team maintenance software and recent project program management (Lina & Dan, 2012).

The problem of Investment Analysis Occasioned by the Uncertainty in Emerging Property Investment in Imo State

In Nigeria, property and estate investments are commonly subjected to unforeseeable and unforecastable futures, which encompass uncertainties and several forms of risks that affect anticipated and predicted returns levels, which must compensate for risks undertaken by investors (Nnamani, 2017). Risks involved n real estate investment arise from different factors that comprise social, economic, political, technological and environmental. The erratic and unstable rate of exchange; high and irregular interest rate; inflation that influences rental revenue and capital, and socio-political uncertainties like militancy, kidnapping and insurgency, have triggered the failure of estate investment and monetary distresses (Nnamani, 2017). Some projects on real estate investment are abandoned due to completion issues; some hardly break even or provide neither reasonable revenue nor fair return for investors. Some borrowers of funds lost their capital because of the inability to repay loans from borrowed firms for estate investment projects, and the investment is foreseen by the involved lender (Nnamani, 2017).

One main issue faced by estate investors, particularly in Nigeria, is concerned issues of making a sound and informed decision concerning their investment arising from numerous options of investment available for investors to make their choice (Oyewole, 2014) and recently, scholars on the performance of property investment, whether indirect or direct, have become crucial, particularly now that measures for the performance of estate investment have gained more preference globally with Nigeria inclusive (Agava et al., 2022). Uncertainty arises from poor information, and knowledge concerning all information that could be employed in evaluating

input factors is specific, leading to value or revenue uncertainty (Yakubu et al., 2022). All these could be corrected with several techniques for analysing investment instead of taking one defined and producing simple point value; however, most of these investment analysis tools have some inherent problems associated with several uncertainty factors.

Considering these issues concerning uncertainty in investing in estate and property, Yakubu et al. (2022) stated that "inadequate data, instability in the market, inadequate skill in analysing data, errors in measurement and adjustment, an inadequate technique for business valuation and date extrapolation are the primary and possible source of property business uncertainty Ayedun et al. (2012) worked on inaccuracy and variation in valuation in Lagos estate investment, and their results failed to consider market data, to competency in valuer, adhering to regulation and standard of valuation used valuation methods and valuation report quality. Most resident estate valuations are based on mortgage borrowing; thus, current research done by Dugeri (2017) evaluated the standard practice among specialised value agencies by examining the degree of awareness of global valuation guidelines available in Nigeria for value agencies. They concluded that the unguided issue of compelled sale value in advising for a mortgage loan could create uncertainty and instability in the bank loan system. Aliyu (2017) examined those factors and variables that influence mortgage valuation of the resident estate market in Kaduna areas, and they concluded that poor rental evidence and neglecting suitable and adequate procedures for obtaining opinions for valuing these factors are not accurate in resident mortgage valuation.

Globally, the profit nature of any investment in any nation depends on macroeconomic indicators prevalent in that country which concerns with the behaviour and attribute of their entire economy or economic methods rather than individual behaviour, individual firms or markets that are considered as the primary indicator of their microeconomics features (Awa et al., 2019). As these

macroeconomic indicators influence the preference for investment, it becomes clear that these indicators also influence property investment returns. Pettinger (2017) noted that interest rates, monetary development, expectations, technological development, fund and capital availability from financial firms, and other factors like depreciation, inflation, and state programs influence investment decisions.

The concepts and ideas surrounding uncertainty have been addressed in the project management domain (Meyer et al., 2002), and it is not considered a relatively recent concept (Ekung & Onwusonye, 2015). Also, the connections between uncertainty, instability and investment presented novel research conditions; it has yet to have better prediction capability. Globally, investment analyses are used in handling uncertainty and instability in investment and making a decision concerning their investment; however, this instability and uncertainty present conditions that use analysis challenges. The conventional assessment methods have inadequately emphasised implications of connections between uncertainties, irreversibility and choice of timing in decisions regarding investment (Ayodele & Olaleye, 2018). Considering these probabilistic assessment methods, Sayce et al. (2006) supposed that whereas sensitivity assessment formed an essential condition in processes of risk assessment, it is not considered a risk assessment method. They also stated that "the erroneous perspective among several persons concerning the estate investment sector is that the conventional sensitivity analysis and utilisation of table is a detailed and substantial technique for risk analysis as concerned estate investment. One fundamental problem associated with scenario analysis is that it lacks evidence of data from the market on which it chooses the probabilities; therefore, even when these scenarios are painstakingly designed and executed, it is still based on particular and erroneous assessment data (Nnamani, 2017).

The research by Yeo and Qui (2003) makes an argument for the importance of using real options as means for handling uncertainty and instability estate investment. In corroboration to this viewpoint, this research by Săcui and Dumitru (2012) opined that because of the issues and shortcomings associated with conventional models as concern handling uncertainties within the property investment which arise from dynamic and unstable business environments, actual options techniques have become common in selecting, valuing and managing investments under unstable conditions. Other researchers like Throupe et al. (2012) and Morano et al. (2014) aligned this viewpoint on the efficiency of real techniques to handle instability in estate investment. Table 1 summarises some issues relating to investment analysis arising from the impact of instability in addressing these issues.

Table 1: Problem Associated with Investment Analysis Due to the Influence of Uncertainty

Investment Analysis	**Methods**	**Benefits**	**Associated Problem**
Traditional Appraisal Methods	1. non-discounting (Payback period, Accounting rate of return, maximum cash exposure) 2. Discounting (NPV, IRR)	1. Useful in appraising safe assets 2. Simplicity in calculation and decision rules 3. Makes use of fewer data inputs	1. Does not adequately explore the implications of the relationship between irreversibility, uncertainty and timing choice. 2. Don't consider the importance of flexibility of investors after commencing the project 3. Invested fund is considered a passive fund 4. Poor consistency in average Cost for capital and discounted rate
Probabilistic Assessment techniques	1. Sensitivity Assessment 2. Simulation Assessment 3. Decision Tree Assessment.	1. Afford knowledge of possible options and pathways	1. Do not recognise inherent opportunity in modifying the outlay of investment 2. Do not provide optimum guidance that concerns the course of action which assure optimum returns 3. Using a single discount rate

Contemporary Assessment technique	1. Scrum-based framework 2. Stochastic Program 3. Real Options Assessment.	1. Provide capacity to initiate flexibility in invested projects, particularly in unbalanced markets. 2. Explores the connection among and timing choice of the investor	1. Tendencies to miscalculate and misinterpret assessment technique 2. Susceptible to risk in the model 3. inability to meet some set assumptions like normality and random presumptions, 4. It may be discouraged in markets with insufficient data for the model input.

Adapted from: Ayodele and Olaleye (2018)

Conclusion and Recommendations

The study explores various challenges associated with investment analysis occasioned by the uncertainty in the emerging market of property investment in Imo state. Investment in the estate is determined by forces of supply and demand, which enforces the importance or need to assess cash flows in a project to ascertain the profitability of the project. However, assessment estimates are influenced by different uncertainties that could come from issues domicile in the project, space market or integration of internal and external factors. These factors could hinder the swift realisation of the profit capabilities in the investment, thus, necessitating the essence of accounting for these factors of uncertainty. Hence, the profit-making ability depends on effectively handling project instabilities and uncertainties.

Investment in estate and property is among the most challenging investment option in businesses. Unfortunately, the business sector has a poor reputation for handling issues of uncertainty, leading to failure of their investment and others performing below normal expectations or not functioning. The fluctuating situation in estate investment, like the change in security for revenue flow, increased the complex and volatile nature of the project and increased the knowledge and interest of investors, making the market very risky and unstable. These issues concerning the

business environment give suitable incentives and importance to value agents to consider the essence of uncertainty when analysing estate investment.

The review identified limited studies on uncertainty and its management in the emerging property investment markets in the Imo state. It, therefore, recommended that further empirical studies be conducted to establish the common uncertainty factors in the emerging market and associated investment analysis adopted in overcoming the issues related to uncertainty factors.

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