The Moderating Effect of Adoption of Systematic Risk Management Procedure on The Performance of Commercial Real Estate Entrepreneurial Investments in Kenya

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Abstract

The objective of this study was to assess the moderating effect of adoption of a systematic risk management procedure on the performance of commercial real estate entrepreneurial investments in Kenya. With a sample size of 384 participants drawn from a target population of 9,320 real estate entrepreneurs, the study used a descriptive survey method with a quantitative approach. The study target population was made up of 95, 320, 884and 8,021 people obtained from Kenya Developers, Estate Agent Registration Board, SoftKenya directory and National Construction Authority respectively. The participants were chosen using a stratified random sampling technique, and online questionnaires were sent via email. The Statistical Package for Social Sciences (SPSS) version 20.0 was used to perform descriptive and inferential analyses on primary data. Although only a small percentage of respondents use systematic risk management procedures, the majority (71.3%) of entrepreneurs relies on judgment, intuition, and general real estate industry experience to manage their risks, the study found that risk management practices used by real estate entrepreneurs have a significant moderating effect on commercial real estate performance. The study recommends the government to enhance policy issues that will help in increased adoption of risk management procedure and increase knowledge on real estate entrepreneurial investments risks and management amongst real estate entrepreneurs. The policy framework should include as a prerequisite submission of a risk management plan and staff training in risk management in any commercial real estate entrepreneurial investment approval.

Keywords: Performance, Procedure, Risk Management, Entrepreneurship, Risk Factors and Commercial Real Estate

INTRODUCTION

Entrepreneurs are considered to be risk takers. Investing in commercial real estate entrepreneurial investments is opined to be risky given its complexity, lengthy development stages, being multi-disciplinary in nature, heavy financial deployment and somewhat uncertain returns.

Real estate industry contributes significantly to any country's economy. It is credited for its contribution in job creation, resource utilization, forward and backward linkages and its contribution to GDP. For instance, real estate accounted for 28% of GDP in 2010 in United State and United Kingdom (Mbugua, Otuya and Muhanji, 2020). Its contribution in India was 6.3% in 2013, 15% in China (2012), 6.82% in Nigeria (2014) and 4.8% in Kenya in 2013 (Kongela, 2013; Mutreja, Chua, & Guha, 2015; Kenya National Bureau of Statistics (KNBS), 2015).

Any form of investment deals with uncertainty; be it stocks, treasury bills, bonds, business or real estate. Haight and Singer (2005) postulate that any uncertainty translates into a risk and for the entrepreneur to realize the desired performance, irrespective of its type, every risk need to be managed. Risk varies in its probability of occurrence and its consequences from one real estate entrepreneurial investment to the next. It also changes its nature over the course of a given investment's development life cycle. Actually, every development phase of real estate entrepreneurial investment's life cycle has its own risk factors and negligence or an oversight in one phase affects other phases of the investment. Therefore, lack of information on type of risks and their nature will always lead to a higher degree of poor performance of real estate entrepreneurial investments (Maina, Mbabazize, & Kibajia, 2016).

Many entrepreneurs are attracted to investing in real estate sector due to its high profitability and its hedge against inflation attribute. Nevertheless, achieving long-term and short-term productivity is largely based on the effectiveness with which risks are handled (Mbugua et al, 2020; Koirala, 2012). Unfortunately, many real estate entrepreneurs do not consider it important to include risk management strategies in their developments, even in instances where they are aware of the consequences of not having the strategies (Gajewska and Ropel, 2011). Abazid and Harb (2018) argue that for effective and efficient risk management of real estate entrepreneurial investments, the entrepreneurs need to consider the application of systematic techniques in their management approaches and acquire risk management knowledge and experience.

The importance of management of risks in real estate entrepreneurial investments has continued to gain interest among researchers in the recent times. Researchers in Qatar, for instance, have found that entrepreneurs and other players in this sector suffer due to a lack of awareness of the approachesof mitigation and risk prevention inherent in their investments (Abazid and Harb, 2018). A study by Ayalew, Dekhili and Lafhaj (2016) revealed that real estate industry in Malaysia experienced poor performance that was associated to risk management. According to the study, 92 percent and 89 percent of real estate investment projects were unable to be completed on time, and others exceeded construction budgets by 5 – 10%, respectively.

In the African continent comparable results were evident. Ayalew et al. (2016) findings demonstrated that adoption of risk management procedure among real estate entrepreneurs in Ethiopia is unsatisfactory leading to the poor performance of the real estate investments. This was no different from Rwanda real estate sector where study by Maina et al. (2016) revealed that risk occurrence was responsible for 51% of the properties that failed. Despite significant growth in terms of GDP contribution, Kenya's real estate sector has continued to perform poorly, with a growth in the proportion of unfinished and stalled real estate projects (Gitahi and Timuti, 2019). According to a National Buildings Inspectorate (NBI) audit report, just 2,170 houses, or about 44%, were deemed safe for accommodation out of 4,879 assessed over a 30 months period. Approximately, 650 were graded as very hazardous, 826 as hazardous, 1,185 as fair,

and only 2,170, or about 44%, were established to be conducive for accommodation (National Building Inspectorate, 2017).

Statement of the Problem

Investing in real estate entrepreneurial investment requires heavy capital outlay that is largely financed through debt finance (cost of which is generally high) with the entrepreneurs having great expectations on the returns. However, according to Auma (2014) and Gwaya, Masu, and Wanyona (2014), 70 percent of real estate properties in Kenya encounter time overruns of more than 50 percent, while 50 percent encounter additional price charge of more than 20 percent of the contracted amount. Structural failure has been documented in 87 cases of buildings collapsing, with a death record of one hundred and seventy people (Kabala, 2019). There has been a significant short fall in space absorption (KnightFrank, 2015) accounting for poor financial performance of the entrepreneurial investments. Mortgage defaults stood at thirty-eight billion Kenya shillings in December of 2018, while assets penalty by financial institutions was on the rise (Central Bank of Kenya, 2018).

According to Bahamid and Doh (2017), a deficiency of acceptable visibility into key risk factors, their criticality, and a failure to handle property risks in an organized manner have all been related to poor performance in commercial real estate entrepreneurial developments. They further opined that there exists limited documented information on successful implementation of risk management systems globally. Existing research in Kenya has also failed to link poor performance to risk management; particularly the moderating effect of a systematic risk management procedure. The resulting omission drives this research to fill this gap.

Objective of the Study

To assess the moderating effect of adoption of a systematic risk management procedure on the performance of commercial real estate entrepreneurial investments in Kenya.

Research hypothesis

$H_0$1: The adoption of systematic risk management procedure does not have a statistically significant moderating effect on the performance of commercial real estate entrepreneurial investments

LITERATURE REVIEW

Entrepreneurship, Risk and Risk Management

Entrepreneurs have been viewed as bearers of uncertainties and risks when making business decisions (Knight, 1921) and they invent new goods, new manufacturing methods, new markets, and novel procedures of industrial organization (Schumpeter, 1934). Hisrich and Peters (2002) defined an entrepreneur as "someone who demonstrates initiative and creative thinking, is able to organize social and economic mechanisms to turn resources and situations to practical account, and accepts risk and failure". Consequently, failure of entrepreneurial investments or business disappointments may be attributed to the entrepreneur's misjudgment and mismanagement of risk as well as changes in corporate governance requirements (Eroglu, & Picak 2011). Real estate entrepreneurship entails consolidating resources such as land, human labour, and capital in order to plan, increase, handle, and market facilities that provide services (accommodation) desired by space users (Wiegelmann, 2012).A hereditary risk occurs in the development process of real estate entrepreneurial investment, just as it does in any other type of business, from the time the idea is conceived to the management of the investment or disposal stage.

In literature, risk is defined as a function of probability and impact. The likelihood or chance that an event will occur is referred to as the probability of a risk event. A risky event's impact or consequence is expressed as a deviation from the expected or desired outcome (Mbugua, et al, 2020). Some literature interchangeably uses risk and uncertainty, although it has come to be unanimously agreed that the two differ (Nguyen, 2007). Knight F. H. (1885-1972) is often credited with introducing the difference between risk and uncertainty (Rakow, 2010). He distinguished between measurable uncertainty to denote 'risk' and unmeasurable uncertainty to mean (Mbugua et al, 2020).

In general, entrepreneurs face a variety of risks and are thus validly classified in literature based on how coherent to the system of the organization or sector they are (Gajewska, & Ropel, 2011; Koirala, 2012). Entrepreneurial risks are classified into four categories by Fredrick, O'Connor, and Kuratko (2016): financial risk, career risk, family and social risk, and psychic risk. Boateng, Chen, Ogunlana, and Kediashi et al., (2012), on the other hand, have classified risk in real estate entrepreneurial investments as Technical, Financial/economic, Market, Environmental, Political/Legal, and Property Operational risks. By categorizing risks into clusters, we can have a broader spectrum and inclusiveness, which helps us manage risks more effectively. The latter classification was used in this study.

Risk management is validly viewed and described in literature (Wiegelmann, 2012), indicating different definitions and the number of phases of the process. Nguyen (2007) defines risk management to be a process of identifying, assessing, treating and implementing actions to reduce risk and enable real estate entrepreneurs/developers to strike a balance between losses and opportunities. The fundamental principle for identifying and managing risks in a project is the risk management process. It is a management tool that identifies sources of risk and uncertainty, assesses the impact of those risks and uncertainties, and develops suitable management responses. (Uher) (2003).

Similarly, there are many variations of the risk management process available in the literature; two stage process (Chapman and Ward, 2003); a four-stage process (Ennouri, 2013); McCormack and Sheen, 2013); a six stage process (Garvey, 2001). This study nevertheless adopts the core traditional six-stage risk management process having the objective setting, risk identification, risk assessment, risk prioritization, risk response and risk monitoring while appreciating the development phases in the life cycle of the entrepreneurial investments.

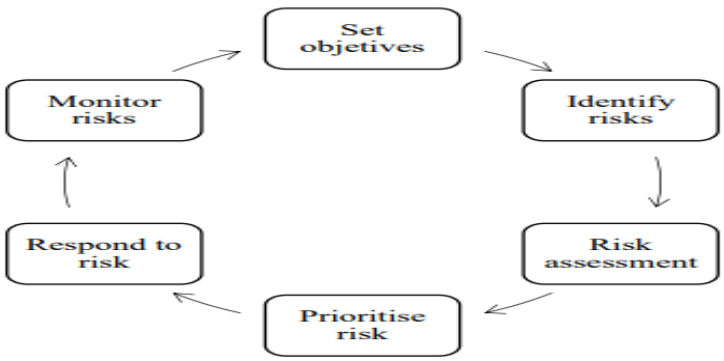

Figure 1: Risk management process (Van der Waal, &Versluis, 2017)

Systematic risk management is implemented by creating a clear risk management plan, executing the plan as designed, and then ensuring that the plan is delivering on the objectives that have been set - in this case, the objectives for implementing risk management (Jaber, 2014). Viewed differently, it is a systematic description of how risk management should be carried out. When a risk is identified, it is first evaluated to determine the likelihood of occurrence, the degree of effect on the schedule, scope, cost, quality, and client satisfaction, and then prioritized. This systematic approach to risk management makes risk explicit; they are formally described and make them easier to manage. Once the approach is adopted, it supports in the decision – making and informs the entrepreneur instinctive judgement. According to Godfrey (1996), systematic risk management helps in identifying, assessing, ranking the risks, and hence making the risks explicit. It also helps in focusing the major risks in the project, as well as making informed decisions on the provision for adversity, for instance, mitigation measures. Mills (2001) confirms that systematic risk management allows the early detection of risks.

This enables the entrepreneur to optimally allocate the scarce resources so as to achieve utmost effect. A lack of clarity or acceptance of risk is a risk in and of itself, and it tends to magnify the overall cost of risk.

Moderating role of adoption of risk management procedure

A moderating variable is one that can strengthen, weaken, negate, or otherwise change the relationship between independent and dependent variables. It may also alter the course of this relationship (Cooper, & Schindler, 2006).

A systematic approach to managing real estate entrepreneurial investment risks entails establishing the context in which the management will take place; identification, analyzing, responding and monitoring of all the risks that pose a threat to the performance of the investment. A study by Bahamid and Doh (2017) revealed that risk management approach by real estate entrepreneurs, generally attempts to avoid or shifts risks, which result in risk management practices being reactive and informal. According to Uher and Toakey (1999), a lack of knowledge and skill base, as a result of a lack of commitment to training and professional development, has hampered widespread adoption of risk management procedures. A further investigation of the level of adoption of a systematic risk management procedure among real estate entrepreneurs in Malaysia by Goh and Abdul-Rahman (2013) revealed that only 17.78% employed a formal risk management process in their practice.

Subsequent to foregoing literature, the current study hypothesizes that the effectiveness of the risk management strategies on the performance of commercial real estate entrepreneurial investments is dependenton the extent the entrepreneur will adopt risk management procedures.

Performance of real estate entrepreneurial investments

As noted by Seabrooke, Kent, & How (2004), measuring the performance of real estate investments is not an easy undertaking, given its complexity and many stakeholders. Consequently, there has been no single set of criteria that is totally comprehensive when it comes to defining the success or performance of real estate properties. In literature, however, performance of real estate has been appraised using a range of criteria such as time, cost, quality, client satisfaction, client change, business performance, health and safety (Enshassi et al., 2009). Others include the return on the asset (Hammes, & Chen, 2005) and the internal rate of return - IRR (Fisher, &

Goetzmann, 2005). This study, on the other hand, used four performance criteria: time, cost, return on investment, and client satisfaction.

Theoretical Framework

The study was guided by Enterprise Risk Management (ERM) Theory, which is a management theory that advocates for the holistic measurement and management of all significant risks confronting a given entity rather than the measurement of each risk separately (Mwangi, & Kwasira, 2016). The enterprise risk management framework emphasizes the active involvement of senior company executives and participation of all employees in the risk management process of identifying, analysing and responding to a wide range of company risks (Hallowell, 2013). The theory contends that organizations can improve their risk management capacity by having formal policies that define their risk appetite and tolerance, strategic goals and systematic risk management process (Mwangi, & Kwasira, 2016). As a consequence, business risk management assists management in assessing the probability and effect of significant incidents, as well as designing responses to either mitigate or handle the entity's impact if they do occur (Protiviti, 2006). Emphasizing on its applicability, Protiviti (2006) postulates that to any organization that faces risks, takes the risk and responds to risks, ERM will help the real estate entrepreneurs understand the nature of risks and aid in developing a differentiated skill in selecting the best bet for the organization. With the ERM theory advocating for greater understanding of all potential risks in a project, creation of risk awareness, prioritization of risks to enhance the optimal allocation of resources, and eventually maturing the organization in their risk management capabilities, the theory helps in explaining the objectives of this study.

METHODOLOGY

Yamane (1967) sample size formula was used to determine the sample size where a sample size of 384 participants was drawn from a target population of 9,320 real estate entrepreneurs. The study used a descriptive survey method with a quantitative approach. Table 1 indicates the target population of the study.

Table 1: Target population and sample size

S/No.	Organizations	Target Population	Sample size
1.	Kenya Developers Association (KPDA, 2018)	95	4
2.	National Construction Authority (GOK, 2016)	8,021	330
3.	SoftKenya directory (SoftKenya, 2018),	884	37
4.	Estate Agent Registration Board (estateagentsboard.or.ke)	320	13
	Total	**9,320**	**384**

The participants were chosen using a stratified random sampling technique, and online questionnaires were sent via email. Internal accuracy was checked and achieved with a Cronbach's coefficient alpha of above 0.7 for the items in the questionnaire. With the use of the Statistical Package for Social Sciences (SPSS), version 20.0, descriptive and inferential analyses were used to evaluate primary data.

RESULTS AND DISCUSSION

Demographic Information

Descriptive and inferential analyses were used to investigate the moderating effect of systemic risk management on the performance of commercial real estate entrepreneurial investments in Kenya. A total of 324 questionnaires (324%) were returned, reflecting an 84 percent response rate. The majority of the respondents, slightly more than 42%, were between the ages of 31 and 40. Undergraduate had the highest level of education with almost half (47.8%) respondents. Those with a postgraduate degree were the least likely to respond, accounting for just 20.7 percent of all responses.

A significant number of respondents (49.3%) have less than ten years of experience in the industry. The study also discovered that over 70% of respondents used informal risk management methods including judgment, intuition, and experience to handle their risk, which was due to the fact that over 60% of entrepreneurs had little knowledge of risk management procedures.

Risk Management Procedures

Handling risk in the real estate entrepreneurial investments involves a procedure that arises from the overall risk management strategy adopted. The frequency to which the respondents employed such strategies was as shown in Table 1.

Table 2: Risk Management Procedures

Risk management procedure	1	2	3	4	5	%Mean	Chi sq	p-v
Risk identification	51 (15.74%)	91 (28.09%)	102 (31.48%)	55 (16.98 %)	25 (7.72%)	58.2 %	85.6	.000
Risk assessment/ analysis	12 (3.7%)	73 (22.53%)	106 (32.72%)	91 (28.09 %)	42 (12.96%)	54.6 %	60.8	.000
Risk response	22 (6.79%)	53 (16.36%)	95 (29.32%)	110 (33.95 %)	44 (13.58%)	64.8 %	88.9	.000
Risk control	33 (10.19%)	40 (12.35%)	108 (33.33%)	99 (30.56 %)	44 (13.58%)	66.2 %	82.7	.000
Risk monitoring	77 (23.77%)	54 (16.67%)	78 (24.07%)	70 (21.6%)	45 (13.89%)	65%	78.6	.000
Risk Management Plan	51 (15.74%)	91 (28.09%)	102 (31.48%)	55 (16.98 %)	25 (7.72%)	57%	13.2	.000

*1. Never 2. Occasionally 3. Frequently 4. Very frequently 5. Always Chi sq = ****

As seen in Table 2, the deployment of most of the risk procedures was relatively low, just above average. Risk control, risk monitoring and risk response were the three most frequently used risk management procedures whereas risk assessment and analysis were notably the least ranked (54.6%) followed by risk identification (58.2%) procedures adopted by the real estate entrepreneurs. Risks identified and assessed are risks halfway managed, and failure to integrate them at an early-stage lead to firefighting rather than a proactive approach. Unfortunately, similar situation is evident amongst other African nations. For instance, Kalunga and Kuotcha (2010) and Boadua, Fianko and Chileshe (2015) found that most real estate entrepreneurs in Malawi and Ghana respectively have a low level of execution of the numerous essential steps in the project risk management procedure.

Approach to Dealing with real estate entrepreneurial investment risks

Despite the existence of formalised risk management approaches, risk management practices differ among different firms. Table 3 summarises the approaches cited by the respondents.

Table 3: Approach to Dealing with real estate entrepreneurial investment risk

Approach	Frequency	Percent %
By experience	95	29.3
By Judgment	113	34.9
By intuition	23	7.1
By risk management procedures	93	28.7
Total	**324**	**100.0**

The majority of respondents (64.2 percent) stated that they use judgment and experience as a way of dealing with property risks while those basing their decisions on intuition were 7% of the respondents indicating that over 70% of the respondents use informal means in managing their risks. That using risk management procedure accounted for only 28.7% of the respondents

Inferential Results

The main focus of this research was to see if the implementation of a formal risk management procedure by real estate entrepreneurs had a moderating impact on the performance of real estate entrepreneurial investments. To perform this task, regression analysis as shown in Table 4 was undertaken to test the hypothesis.

Table 4: Model summary

Model	R	R square	Adjusted R square	Standard error of estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.684[a]	.468	.458	.49191	.468	46.400	6	317	.000
2	.708[b]	.501	.490	.47683	.034	21.373	1	316	.000

a. Predictors: (Constant), CERMG, CMRMG, CFRMG, ORMGT, CPRMG, CTRMG

b. Predictors: (Constant), CERMG, CMRMG, CFRMG, ORMGT, CPRMG, CTRMG, CRISK_MP

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.366	6	11.228	46.400	.000[b]
	Residual	76.706	317	.242		
	Total	144.072	323			
2	Regression	72.225	7	10.318	45.381	.000[c]
	Residual	71.847	316	.227		
	Total	144.072	323			

a. Dependent Variable: PERFORMANCE

b. Predictors: (Constant), CERMG, CMRMG, CFRMG, ORMGT, CPRMG, CTRMG

c. Predictors: (Constant), CERMG, CMRMG, CFRMG, ORMGT, CPRMG, CTRMG, CRISK_MP

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.790	.176		21.537	.000
	ORMGT	.112	.050	.137	2.261	.024
	CTRMG	.121	.060	.138	2.034	.043
	CFRMG	.349	.049	.394	7.175	.000
	CMRMG	.033	.032	.051	1.054	.293
	CPRMG	.045	.059	.051	.759	.448
	CERMG	.142	.047	.183	3.041	.003
2	(Constant)	3.947	.174		22.694	.000
	ORMGT	.068	.049	.082	1.374	.170
	CTRMG	.122	.058	.139	2.117	.035
	CFRMG	.276	.050	.312	5.558	.000
	CMRMG	.046	.031	.070	1.502	.134
	CPRMG	.008	.059	.009	.139	.890
	CERMG	.094	.047	.120	2.014	.045
	CRISK_MP	.141	.030	.216	4.623	.000

a. Dependent Variable: PERFORMANCE

Before the interaction, the predictor variables accounted for 46.8% of the overall variance in the output of commercial real estate entrepreneurial investments, as shown in Tables 4 and 5.The relationship between risk management and competence of commercial real estate entrepreneurial investments accounted for an additional substantial 3.4 percent of the variance after the moderator variable was introduced, resulting in a total variance of 50.1 percent. The null hypothesis was rejected with F (7, 316) = 45.381, p 0.05, resulting in the conclusion that using a systemic risk management procedure has a major moderating impact on the output of commercial real estate entrepreneurial investments in Kenya.

Looking at the coefficients (Table 6), adoption of systematic risk management procedure has a significant moderating effect between technical risk management (TRM), financial risk management (FRM) and environmental risk management (ERM) and performance of commercial real estate entrepreneurial investments. To put it another way, technical risk management, financial risk management, and environmental risk management all have an impact on results, but the strength of that impact is determined by whether or not the real estate entrepreneur follows the risk management protocol. However, the interaction undermined the influence of operational risk management on results to the point that the partnership was no longer important.

The current findings are in agreement with scholars in literature who have found that risk management significantly moderated the relationship between real estate planning and other management activities and success in the real estate businesses (Urbański, Haque& Oino, 2019; Adeleke et al., 2015).

CONCLUSION AND RECOMMENDATIONS

Conclusion

Management of risks can be viewed in two broad aspects; qualitative and quantitative. Risk management procedures generally enable entrepreneurs to manage the risks quantitatively. In this case, therefore, if risks are not quantitatively managed, then they are qualitatively managed. Over 70% of the respondents indicated they use qualitative

approaches; experience, judgment and intuition, to managed risks in their investments (Table 3). This confirms the relative low deployment of all risk management procedures, as shown in Table 2. On account of interaction, despite this low procedure adoption, regression analysis indicated that risk management procedure has a moderating effect on the performance. The strength of the relationship between the management of various risks and performance of the entrepreneurial investment depended on whether the real estate entrepreneur was adopting the risk management procedure in a systematic way or not. Those entrepreneurs who adopted the procedures had the management of respective risks yield higher performance.

Despite it being accorded minimal attention in the management of entrepreneurial investment risks by the entrepreneurs, those efforts, however, significantly affected the performance, leading to the conclusion that adoption of systematic risk management procedures by real estate entrepreneurs significantly affects the performance of commercial real estate entrepreneurial investments in Kenya. This is a signal to real estate entrepreneurs, Government and other stakeholders that any additional efforts towards the realisation of adoption of risk management procedures by the real estate entrepreneurs, will result in great performance improvement.

Recommendation

The study recommends that a policy to promote systematic risk management will be a strong foundation to build risk management approaches that address the unique risks in the commercial real estate sector. To further inculcate the need for risk management procedure amongst real estate entrepreneurs, the government should as a prerequisite have real estate entrepreneurs submit a comprehensive risk management plan for their proposed investments before any approval is done. This may require the introduction of an annual risk management compliance certificate from every commercial real estate entrepreneur.

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