Influence of Operational Risk Management on the Performance of Commercial Real Estate Entrepreneurial Investments in Kenya

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Abstract	Original Research Article

This study set out to investigate the effect of operational risk management on the performance of commercial real estate entrepreneurial investments in Kenya. The study adopted a descriptive survey design having a quantitative approach. The target population was 9,320 real estate entrepreneurs comprising 884 sourced from SoftKenya directory, 95 from the Kenya Developers Association, 320 from the Estate Agent Registration Board and 8,021 from National Construction Authority having their registered offices in Nairobi, Nakuru, Kisumu and Eldoret. A sample size of 384 participants was selected using a stratified random sampling procedure. Data was collected using an online questionnaire emailed to respondents. The collected data was analysed descriptively and inferentially using frequency distribution – mean and standard deviation, Chi-square, Pearson's Correlation and multiple linear regression analysis with the aid of the Statistical Package for Social Sciences (SPSS), version 20.0. The significance of each risk factor was examined using Risk Significant Index method. From the study findings, operational risks were found to be relatively low in severity compared to technical, financial and environmental risks in the commercial real estate sector in Kenya. The level of management effort in mitigating sources of operational risk was also low. Management of operational risk coefficient attained a statistical significance, which leads to the conclusion that operational risk management affects the performance of commercial real estate entrepreneurial investments in Kenya. With more than 60% of the staff in the sector having low knowledge of risk management, bridging the skill and knowledge gap is critical for better risk management outcomes for the sector. This responsibility should be shared between the government and the real estate entrepreneurs. The government should create forums or curriculum where risk management practice and concepts are trained.
Keywords: Risk Management, Performance, operational risk, Commercial Real Estate Entrepreneurial Investments.

INTRODUCTION

Real estate development is a complex and continually evolving business sector. In Kenya, the lucrative real estate sector has rapidly expanded to become the fourth biggest contributor to the country's wealth. In particular, the real estate sector has over the years registered substantial growth in terms of its contribution to the GDP. In 2013, its contribution to sources of growth for GDP was standing at 4.8% up from 2.8% six years earlier. Real estate has, therefore, become a centre of focus for many investors, both local and foreign (Kibuyi, Ndiritu, Carcel & Gil-Alana, 2017).

Nonetheless, failure of real estate entrepreneurial investments in Kenya and the inadequacy of risk management actions within the sector is no different with respect to global reporting. In an audit report covering two and a half years of sampled counties by the National Buildings Inspectorate (NBI), some worrying findings were revealed. Out of 4,879 buildings that were inspected during that period, 650 were categorised as very dangerous, 826 as unsafe, 1,185 as fair while only 2,170 representing about 44% were found to be safe for occupation (National Building Inspectorate, 2017).

Githenya and Ngugi (2014) argue that despite the vested interest by many stakeholders in the real estate sector, real estate entrepreneurs, policymakers and regulatory bodies, real estate entrepreneurial investments do not always meet key performance goals, such as scheduled time, cost, quality or return on investment and hence beg for answers to explain this phenomenon. Similar views are held by Odimabo and Oduaza (2013) who observe that in less developed countries risk

management in real estate entrepreneurial investments is considered to be rather informal and intuitive in nature and is normally based on the skill and past experience of the entrepreneur. However, with commercial real estate entrepreneurial investments continuing to fail, effective risk and uncertainty management in this sector is likely to be of great importance towards the sustainability of the real estate entrepreneurial investment market.

This is of great interest to the policymakers. Failure of any commercial real estate entrepreneurial investment in terms of construction time overrun, budget overrun, poor quality (resulting in the collapse of buildings or costly maintenance), delayed or non-occupation after completion, and demolition (due to illegal or inadequate land acquisition procedures on allegedly public land, road reserves) results in heavy financial losses and/or expensive and protracted court cases on the side of real estate entrepreneur. On the other hand, ensuring physical safety in building development is not easy. A single structural failure can cause an entire building to collapse, often leading to injuries and deaths of the occupants or construction workers. In addition, ensuring economic safety of a building can be a daunting task, especially if no proper feasibility study, market survey or due diligence was done at the idea or design stages of the development.

Statement of the Problem

Commercial real estate entrepreneurial investments play a fundamental role in the economic growth of any nation (Mouzughi, Bryde & Al-Shaer, 2014). In view of this, the Kenya government, together with its development partners as well as commercial real estate entrepreneurs, continue to allocate huge financial resources to finance real estate development in a bid to earn from its investments. Commercial real estate entrepreneurial investments are considered successful when they meet the clients' satisfaction in terms of real estate entrepreneurial investment cost, scheduled time, economic and structural functionality, market demands, and return on investments (Hove & Banjo, 2015).

Notwithstanding the Kenya government and other state corporations considering real estate a significant contributor of economic development, more than 70% of real estate entrepreneurial investments in Kenya experience time overrun of the magnitude of over 50%, while 50% of the real estate investments experience excess cost budget of a magnitude of more than 20% (Auma, 2014; Gwaya, Masu & Wanyona, 2014). In the year 2015, office space absorption levels dipped, rental levels for retail outlets stagnated while the residential accommodation uptake was low (KnightFrank, 2015). In regard to structural failure, collapsing of buildings has reached an 'alarming stage' in the past few years with several buildings structurally failing (Kioko, 2014). Between 2009 and 2014, seventeen buildings spontaneously collapsed, killing and injuring many people (Fernandez, 2014). To date, a total

of 87 cases of buildings that have collapsed and a death toll of 170 people has been recorded (Kabala, 2019). On financial performance, the commercial real estate entrepreneurial investments have been declining in the recent times with defaults on mortgage standing at 38 billion shillings by December 2018 and property forfeiture by the financial institutions being on the increase (Central Bank of Kenya, 2018).

Failure of commercial real estate entrepreneurial investments is a common phenomenon world over and Kenya is no exception (Wan, Daud, Zainol & Mumin, 2017). Much of such failure has been attributed to lack of proper risk management, lack of adequate insight on key risk factors and their criticality and failure to manage real estate entrepreneurial investment risks in a systematic way by the entrepreneurs. Proper risk management pro-actively determines the potential drawbacks of a real estate entrepreneurial investment so as to prepare mitigation strategies and risk response plans. In this case, therefore, for the performance of commercial real estate entrepreneurial investments to be realised, insight on key risk factors, their effects on performance and how they are dealt with is necessary to the entrepreneurs. Such information is lacking among real estate entrepreneurs in Kenya. Extant studies in Kenya regarding the failure of commercial real estate entrepreneurial investments have evidently missed out on attribution of such failure to risk management of commercial real estate entrepreneurial investments. This study envisages filling this gap by investigating operational risk management and its effect on the performance of commercial real estate entrepreneurial investments in Kenya.

Operational Risk Management and Real Estate Investment Performance

Upon completion of the real estate entrepreneurial investment, it must be operated and maintained in such a manner that the development can realise the anticipated revenue as well as comply with all its obligations (Fletchers & Pendleton, 2014). To ensure that the investment operates at the level required to generate the revenues forecasted and needed to repay the loans, the entrepreneur will assume management role or may, among other things engage a competent project manager, who will establish effective risk management procedures. The entrepreneur is expected to obtain optimum rents for the investment by obtaining realistic estimation on the highest possible rents considering the market rents and the comparative advantages and disadvantages of the premises. Other concerns include accounting for possible vacancies, tenants' turnover and default. Still, others will include annual operation cost such as salaries, utilities, contract services, administrative and management costs.

To manage operational risk, the real estate entrepreneur usually hires a competent real estate manager, and has clear contractual terms and conditions,

agree on one accounting standard and define clear authority and responsibility in the management contract. He or she should periodically undertake a solvency assessment of existing tenants and maintain a lease maturity evaluation. Additionally, he (entrepreneur) takes appropriate insurance policies from reputable insurance companies covering the entrepreneurial investment against various liabilities.

The financial framework is the oldest paradigm for performance evaluation. Its roots are in the areas of accounting, financial management and economics (Marie, Ibrahim & Al Nasser, 2014). The founders of financial performance measurement are considered the Dupont cousins who in early years of 20th century after creating the Dupont company, installed "best practice" of the day and devised the return on investment (ROI) measure to serve as both an indicator of efficiency and a measure of company performance (Neely, 2007). Despite there being a considerable number of key financial performance indicators, a number of scholars have argued that as much as these financial indicators have widely been used in measuring performance, they fail to sufficiently approximate the actual performance and should, therefore, be supplemented by other non-financial measures (Kaplan & Norton, 1992; Marie *et al.*, 2014).

A general assumption is at times made that if a real estate entrepreneurial investment is completed on time, within the agreed budget and set quality (the iron triangle), the entrepreneurial investment is deemed successful. However, evidence suggests that this is not always the case since there are some real estate entrepreneurial investments that meet all the three targets, yet considered failure. For instance, a real estate entrepreneurial investment that although it meets all the criteria, and yet has a very low commercial success may not necessarily be considered a success. Being of the same views, Rashvand and Majid (2013) argue that success criteria cannot be limited to meeting just the three traditional criteria. They further posit that satisfaction is a subjective and critical measurement for the stakeholders' performance. Doyle (1995) contends that the most suitable measures of performance are customer satisfaction and customer loyalty and asserts that customers who are satisfied with the value being provided purchase the product repeatedly (for instance take up additional space or buy more units in the case of real estate).

On the other hand, the primary role served by the financial performance measurement lies within the province of the finance function and is concerned with the effective and efficient use of financial resources. This is key since the finance function serves a boundary role, it is an intermediary between the internal operations of an organisation and the key external stakeholders who provide the necessary financial resources to keep the organisation viable. Neely (2007) further argues that

performance is a multi-dimensional construct, and any single index may not provide a comprehensive understanding of the performance relationship relative to the constructs of interest. Subsequently to capture performance of commercial real estate entrepreneurial investments throughout their development lifecycle – during land acquisition, construction and post-construction – this study adopted four performance criteria, namely time, cost and return on investment and clients' satisfaction.

Cost Performance
The cost of a real estate entrepreneurial investment is one of its most important criteria in measuring its success and is of great concern to those who are involved in the real estate industry. Ali and Rahmat (2010) indicate that cost variance is the most common technique used to measure design performance. It is not only confined to the tender sum but the overall cost that a real estate investment incurs from inception to completion, which includes any cost that arises from variations, modification during the construction period and the cost arising from the legal claims, such as litigation and arbitration. According to Memon *et al.*, (2012), cost overrun can be considered as the difference between the actual cost of a real estate investment and its cost limit. It occurs when the resultant cost target of an investment exceeds its costs limit – where cost limit of a real estate investment refers to the maximum expenditure that an entrepreneur is prepared to incur on a completed real estate entrepreneurial investment while cost target refers to the expected expenditure for each element of an investment project. It can be measured in terms of unit cost, percentage of net variation over final cost (Ali & Rahmat, 2010). In this study, cost overrun was calculated by the variance between the actual and the budgeted cost of the real estate entrepreneurial investment.

Time Performance
It is very important for real estate entrepreneurial investments to be completed on time. Akinsiku and Akinsulive (2012) view delay as a pervasive phenomenon in real estate investment delivery with many real estate investments unable to meet their timelines. According to them, it is the most common, costly and risky problem encountered in commercial real estate development with a debilitating effect on the parties to a contract. When it occurs, it creates an adversarial relationship, distrust, litigation, cashflow problems, abandonment of entrepreneurial investment and the general feeling of apprehension towards each other. The clients, users, stakeholders and the general public who usually look at the success of a real estate entrepreneurial investment from the macro view, have their first criterion for its success to be the completion time (Ali & Rahmat, 2010).

Memon *et al.,* (2012) define delay as the time overrun either beyond the completion date specified in the contract or beyond the date that the parties agreed

upon for delivery of the completed investment project. They further state that it occurs when the progress of a contract falls behind its scheduled programme. According to Ali and Rahmat (2010), construction time can be regarded as the elapsed period from the commencement of site works to the completion and handover of a building to the client and is usually specified before the commencement of construction. They further observe that the time can be deduced from the entrepreneur's brief or derived by the construction planner from available information on the investment.

Clients' Satisfaction Performance

Satisfaction is regarded as a function of comparison between an individual's perception of an outcome and its expectations for that outcome (Ali & Rahmat, 2010). According to Soetanto and Proverbs (2004), satisfaction is regarded as an internal frame of mind, tied only to mental interpretations of performance levels. That is to say, the performance assessors (for instance, a client) will have their own psychological interpretations of the performance of the project. The basic notion behind customer satisfaction is that customers have expectations about the products and services they buy and are more or less satisfied depending on how well the consumption experience meets or exceeds those expectations (Neely, 2007). Hague and Hague (2016) are of the view that the product and its features, functions, reliability, sales activity and customer support are the most important topics required to meet or exceed the satisfaction of the customers. Satisfied customers usually rebound and buy more. Besides buying more, they also work as a network to reach other potential customers by sharing experiences. They further found that service quality, product quality and values for money have a direct positive impact on customer satisfaction.

In commercial real estate entrepreneurial investments, customer satisfaction has been considered as a dimension of quality and as an important factor indicating the success of the investment. It could be determined by the extent to which a physical facility (product) and a construction process (service) meet and/or exceeds a customer's expectations (Karna & Veli-Matti, 2009). This expectation should be in conformance to specifications (the entrepreneurial investment must produce what it said it would produce) and fitness for use (the product or service produced must satisfy real needs). In his study, Karna (2004, as cited in Rahman & Alzubi, 2015) found that the need for real estate entrepreneurs to improve performance related mostly to quality assurance, handover procedures and materials. The author found that low satisfaction could be found in items related to quality assurance and handing over.

Chan and Chan (2004), in their study, combined traditional "hard" measures and softer subjective measures. They determined quality, functionality, the end-user's satisfaction, the client's satisfaction, the design team's satisfaction and the constructions teams' satisfaction as subjective measures in contrast to objective measures such as construction time, unit cost and net present value. According to Karna and Veli-Matti (2009), the importance of customer satisfaction and orientation has grown in real estate industry in the recent times due to the tightened competition and more demand from customers as a response to industry's poor performance. In principle, Sibiya, Aigbavboa and Thwala (2014) postulate that the clients' success factor includes the following: on schedule; on budget; function for the intended use (satisfy users and customers); end result as envisioned; quality (workmanship, products); aesthetically pleasing; return on investment (responsiveness to the audience); the building must be marketable (image and financial), and aggravation in producing a building.

Return on Investment

After the completion of the commercial real estate entrepreneurial investment, it is important to measure it with different parameters by which it will be possible to ascertain its performance. Return on investment (ROI) indicates cumulative return in terms of value which has been generated as revenue through the investment. A commercial real estate entrepreneurial investment can be considered to be successful if the rate of investment (returns) exceeds the value of investments. Stated differently, ROI is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments (Botchkarev & Andru, 2011). There are, however, many other definitions in the literature of ROI; such definitions reflect the fact that approaches to ROI and even ROI concepts vary from company to company and from practitioner to practitioner. Despite the diversity of the definitions, the primary notion is the same: ROI is a fraction, the numerator of which is "net gain" (returns, profit, benefit) earned as a result of the entrepreneurial investment (activity, systems, operations), while the denominator is the cost (investment) spent to achieve the result (Botchkarev & Andru, 2011). To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or a ration. The formula is (Botchkarev & Andru, 2011):

$$ROI = \frac{\text{Gain from investment} - \text{cost of investment}}{\text{Cost of investment}}$$

The main attributes of the traditional ROI that are notable that are the traditional ROI is calculated in retrospective and that accounting records, for instance, official financial documents or accounting systems, are used as sources of cost and return data (Botchkarev & Andru, 2011). Accordingly, in the current study, data on net rental income, sale value and development cost of the properties was gathered to facilitate this computation.

MATERIALS AND METHODS

The objective of the study was to investigate the effect of operational risk management on the performance of commercial real estate entrepreneurial investments. To obtain this kind of data that display existing relationships, one would require an objective approach to data collection by use of questionnaires which is envisaged by descriptive survey design. Therefore, the study adopted a descriptive survey research design. The research area for this study was four major cities/towns in Kenya, which were purposefully selected due to their significance in commercial real estate entrepreneurial development in the country. These cities/towns are Nairobi, Kisumu, Nakuru and Eldoret. Secondly, most established commercial real estate entrepreneurial investors have their main offices in these cities/towns and their operations cut across the other counties.

The target population for this study was all the real estate entrepreneurs in Kenya whereas the study population is all the real estate entrepreneurs operating in the four major town/cities of Kenya, namely Nairobi, Nakuru, Kisumu and Eldoret. Since there is no one official list of 'registered' real estate entrepreneurs in the country and in order to obtain viable participation and meaningful results, four sources were used to formulate the sampling frame for this study. The sources are; Kenya property directory SoftKenya (2018); Kenya Property Developers Association (KPDA, 2018), Estate Agent Registration Board (estateagentsboard.or.ke) and Register of Contractors by National Construction Authority (GOK, 2016). The membership list of KPDA is comprised of construction firms, property developers' category, law firms, financial institution and industrial suppliers. For the purposes of this study, the companies under the categories of construction firms, property developers and real estate were considered. Similarly, those categorised as Property and Real estate developers and Real estate companies in Kenya by the Kenya property directory of SoftKenya and registered estate agents sanctioned to practice by the Estate Agents Registration Board (EARB) in 2017 were considered for participation. From the National Construction Authority (NCA), registered contractors of building work category for the year 2016/2017 were considered. To obtain the sampling frame for this study, a list of all real estate entrepreneurs from each source and whose registered address appeared under any of the four towns/cities under study was generated. From this exercise, a total of 9,320 firms/companies was arrived at. This included 884 from SoftKenya directory, 95 from KPDA, 320 from Estate Agent Registration Board and 8,021 registered building works contractors from NCA. To determine the sample size for this study Yamane (1967) formula was used. Therefore, from the population of 9,320, a sample size of 384 was obtained. A stratified proportionate random sampling technique was adopted for the study.

To collect data, a questionnaire was used. The research instruments were first edited by checking each question to ensure that each has been answered and that there is no missing data. The data was then coded before entering into the computer and analysing it using the Statistical Package for Social Sciences (SPSS, version 20.0). The data was analysed using both descriptive and inferential statistics. The descriptive statistics was used to describe the characteristics of the respondents and the variables of the study. This involved computation of frequency distribution, mean, standard deviation and chi-square analysis. For the descriptive analysis, percentages, mean scores and frequencies were used. To assess the relative significance among risks, previous literature study suggests establishing a significant risk index by calculating a significance score for each risk (Gupta, Sharma & Trivedi, 2016). Two attributes for each risk are considered; likelihood level of the risk occurrence denoted by α and the degree of impact denoted by β. For calculating the significance score, multiply the probability of occurrence (α) by the degree of impact (β) (Gupta *et al.*, 2016; Jayasudha, Ridivelli & Surjith, 2014). Pearson's Correlation test was performed to investigate the existence of an association between the variables in the study while linear regression analysis was used in estimating how well the independent variable predicted the dependent variable.

RESULTS AND DISCUSSION

Prevalence and Severity of Operational Risk Factors

Six risk factors were identified from literature to define operational risk category: (i) Decline in value of real estate entrepreneurial investment, (ii) Incompetence of management firm/team, (iii) Extended vacancies/ sold out after completion, (iv) Fall short of expected income from the entrepreneurial investment, (v) Unexpected termination of the contract and (vi) Pilfering – stealing by the employees. Low occupancy rate and uptake after completion was the highest-ranked operational risk in prevalence and closely followed by a reduction in expected income from the commercial real estate entrepreneurial investments. When the respondents were asked to rate the risk factors on the severity, the ranking was interchanged with the fall of expected income topping the list. Expected income is a function of occupancy rate or sold out units. Failure to attract adequate clientele to take up available units or spaces in developed entrepreneurial investments more often than not leads to lower incomes which eventually affect the mortgage repayment and/or financial performance of the investment. A possible explanation of the above interchange will, therefore, be that an entrepreneur will be 'more' worried over the shortfall if and when the discrepancy negates his or her financial obligations or repayments. A summary of the prevalence and severity of operational risk factors are provided in Table 1 and Table 2 respectively.

Table 1: Prevalence of operational Risk Factors

Operational Factors	VR F(%)	R F(%)	S F(%)	F F(%)	VF F(%)	%MS	Chi sq	P-v
Decline in value of real estate property	109 (33.6)	113 (34.9)	58 (17.9)	44 (13.6)	0 (0.0)	42.2	45.8	.000
Incompetence of property management firm/team	22 (6.8)	86 (26.5)	159 (49.1)	57 (17.6)	0 (0.0)	55.4	125	.000
Extended vacancies/sold out after completion	4 (1.2)	23 (7.1)	71 (21.9)	146 (45.1)	80 (24.7)	77.0	189	.000
Fall short of expected income from the project	6 (1.9)	32 (9.9)	62 (19.1)	143 (44.1)	81 (25)	76.2	168.5	.000
Unexpected termination of the project	0 (0.0)	32 (9.9)	90 (27.8)	189 (58.3)	13 (4.0)	71.2	231.7	.000
Pilferage – stealing by the employees	20 (6.2)	72 (22.2)	120 (37.0)	98 (30.2)	14 (4.3)	60.8	135.6	.000
Note: Prevalence scale: 1= Very rare (VR) 2 = Rare (R) 3 = Sometimes(S) 4 = Frequently (F) 5 = Very frequently (VF); %MS: Percentage mean score Chi sq = ***								

Source: Author (2019)

Table 2: Severity of operational Risk Factors

Operational Factors	NS F(%)	LS F(%)	MS F(%)	S F(%)	VS F(%)	%MS	Chi sq	P-v
Decline in value of real estate property	30 (9.3)	60 (18.5)	71 (21.9)	101 (31.2)	62 (19.1)	66.4	39.9	.000
Incompetence of property management firm/team	24 (7.4)	25 (7.7)	115 (35.5)	103 (31.8)	57 (17.6)	68.8	112.5	.000
Extended vacancies/sold out after completion	8 (2.5)	35 (10.8)	37 (11.4)	86 (26.5)	158 (48.8)	81.6	216.4	.000
Fall short of expected income from the project	10 (3.1)	23 (7.1)	48 (14.8)	85 (26.2)	158 (48.8)	82.0	218.0	.000
Unexpected termination of the project	20 (6.2)	19 (5.9)	74 (22.8)	140 (43.2)	71 (21.9)	73.8	152.5	.000
Pilferage – stealing by the employees	20 (6.2)	95 (29.3)	93 (28.7)	84 (25.9)	32 (9.9)	60.8	79.6	.000
Note: Severity scale: 1 = Not severe (NS) 2 = Less severe (LS) 3 = moderately severe (MS) 4 = Severe (S) 5 = Very severe (VS); %MS: Percentage mean score Chi sq = ***								

Source: Author (2019)

With most real estate entrepreneurial investments operating on a contractual framework, any termination of such contracts negatively either compromises property management or interferes with the expected cash flows of the investment. Over the years, continued appreciation in the value of real estate entrepreneurial investments largely driven by land prices strongly supports a lower ranking of decline in property value as a potential operation risk in the sector. Unlike in the other categories where prevalence and severity order were generally maintained after computation of the risk indices, the order largely differed in the operational risk category. Extended vacancies (voids) and low uptake after completion was said to be the riskiest post-construction risk factor with a mean score of 0.652 and a

standard deviation of 0.264. This is closely followed by a related indicator of deficiency of expected income (rental or sale) from the entrepreneurial investment having a mean score of 0.579 and a standard deviation of 0.239, as shown in Table 3. These findings agreed with the Cytonn's Kenya real estate sector retail report of 2018 on vacancy rates in retail properties. According to the report, there has been an oversupply of 2.0 million square feet, 0.3 million, 0.2 million square feet and 0.1 million square feet of rental mall space in Nairobi, Eldoret, Kisumu, and Nakuru respectively (Cytonn, 2018). Similar observations are evident in other real estate themes such as office, residential and mixed-use developments (MUD).

Table 3: Risk Index – Operational Risk

Operational risk factors (indicators)	Mean	SD	Rank
Decline in value of real estate entrepreneurial investment	0.291	0.194	6
Incompetence of management firm/team	0.396	0.195	5
Extended vacancies/sold out after completion	0.652	0.264	1

Operational risk factors (indicators)	Mean	SD	Rank
Fall short of expected income from the project	0.579	0.239	2
Unexpected termination of the contract	0.44	0.197	4
Pilferage - stealing by the employees	0.508	0.235	3

Source: Author (2019)

Operational Risk Management

Operational risk management is intended to minimise on any expose that is likely to slow or halt the execution of a real estate entrepreneurial investment or inhibit the ability of the entrepreneurial investment to attain full usability. The commonly used risk management strategies identified by the real estate sectors are as presented in Table 4.

Table 4: Operational Risk Management

Operational risk management strategies	1 F(%)	2 F(%)	3 F(%)	4 F(%)	5 F(%)	% Mean	Chi Sq	p-v
The company periodically undertakes solvency assessment of existing tenants	4 (1.2)	123 (38.0)	26 (8.0)	97 (29.9)	74 (22.8)	67.0	149.8	.000
The company consistently maintains a lease maturity evaluation	1 (0.3)	93 (28.7)	12 (3.7)	130 (40.1)	88 (27.2)	73.2	191.9	.000
The company hires competent property management teams	0 (0.0)	46 (14.2)	8 (2.5)	209 (64.5)	61 (18.8)	77.6	288.0	.000
The company has a training programme for its employees on property management	8 (2.5)	172 (53.1)	16 (4.9)	97 (29.9)	31 (9.6)	58.2	297	.000
The company has a security plan to detect and prevent criminal activities such as vandalism and theft	9 (2.8)	62 (19.1)	6 (1.9)	192 (59.3)	55 (17.0)	73.8	352.7	.000
1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree Chi sq = ***								

Source: Author (2019)

To manage operational risks, majority of the respondents noted that engagement of a competent real estate management team was the most commonly used strategy scoring a percentage means score of 77.6% while most of the entrepreneurs did not utilise training of their employees on risk management programmes as an operational risk management strategy scoring the least mean score of 58.2%.

Real estate entrepreneurs ensure that the investments under their care operate smoothly, maintain their appearance, and either preserve or increase in value. A well-managed real estate entrepreneurial investment will, therefore, guarantee the functional property soundness and enable it to achieve the expected income yield. To achieve this, most entrepreneurs of commercial real estate opt for subcontracting management services to competent service providers. This move explains the reason of them not being keen to train their very own. Although subcontracting may have its challenges such as cash remittance, it, however, helps the entrepreneur to transfer risk associated with operation management to a third party. It also remains a better option due to high employee turnover after attaining their training as well as human resource legal challenges.

Performance of Real Estate Entrepreneurial Investments

According to Mbugua, Harris and Holt (1999), performance indicators specify the measurable evidence necessary to prove that a planned effort has achieved the desired result. To assess the performance of commercial real estate entrepreneurial investments, ten statements seeking to obtained respondents' views on how their commercial real estate investments were performing were used. The statements were drawn from the performance indicators, namely time, cost, client satisfaction and financial return. The summary of their responses was as indicated in Table 5.

Table 5: Performance of Commercial Real Estate Entrepreneurial Investments

Performance	1 F(%)	2 F(%)	3 F(%)	4 F(%)	5 F(%)	% Mean	Chi Sq	p-v
Our company always executes projects within the scheduled time	1 (0.3)	77 (23.8)	2 (0.6)	210 (64.8)	34 (10.5)	72.2	465.9	.000
Our company always executes projects within budgeted estimates	0 (0)	75 (23.1)	5 (1.5)	218 (67.3)	26 (8.0)	72.0	340.8	.000
Our company hardly receives negative feedback from our clients on functionality performance of the property	4 (1.2)	43 (13.3)	21 (6.5)	139 (42.9)	117 (36.1)	79.8	221.0	.000
The number of disputes between the company and the client on the objectives of the projects are very few	4 (1.2)	32 (9.9)	1 (0.3)	161 (49.7)	126 (38.9)	83.0	337.1	.000

Performance	1 F(%)	2 F(%)	3 F(%)	4 F(%)	5 F(%)	% Mean	Chi Sq	p-v
We generate new clients in our company on a regular basis	8 (2.5)	58 (17.9)	6 (1.9)	200 (61.7)	52 (16.0)	74.2	388.4	.000
A good percentage of our projects meet customer expectations (quality)	0 (0.0)	36 (11.1)	1 (0.3)	185 (57.1)	102 (31.5)	81.8	242.9	.000
We rarely have tax suits, unpaid tax claims or other government litigations against our investments	4 (1.2)	65 (20.1)	1 (0.3)	159 (49.1)	95 (29.3)	77.0	270.8	.000
Our company always executes projects to the level of satisfaction of our client	0 (0.0)	46 (14.2)	5 (1.5)	199 (61.4)	74 (22.8)	78.6	258.9	.000
It takes unexpectedly long to have all units let out	40 (12.3)	143 (44.1)	16 (4.9)	110 (34%)	15 (4.6)	54.8	210.4	.000
The average return on investment of our properties is mostly above 7%	30 (9.1)	70 (21.3)	19 (5.8)	140 (42.7)	65 (19.8)	68.6	138.7	.000
1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree Chi sq = ***								

Source: Author (2019)

From the descriptive analysis, most of the entrepreneurs effectively manage their relationship with their clients and satisfy them by way of minimising possible disputes with the clients, meeting customers' quality expectation and being compliant to government institutions on behalf of the client. As a result, a good number of respondents (74.2%) generated new clients on a regular basis. The entrepreneurs were moderately doing well in performance based on a financial indicator, where 62.5% of the respondents have their investments yielding a return to investment of over 7%. This finding was confirmed and supported by a relatively high computed ROI of 10.2%. According to Cytonn (2019), the required rate of return varies depending on the property theme with the good rental yield for residential being 5.0% to 7.0% and commercial real estate (office, retail and industrial) being 9.0% to 12.0%.

Over 70% of the respondents indicated that they execute their projects within the scheduled time and within the budgeted estimates. These findings contradicted those of Auma (2014) who posited that more than 70% of construction projects in Kenya experience time overrun of the magnitude of over 50%, while 50% of the projects experience excess cost budget of a magnitude of more than 20%. When the same question was asked differently, it was evidenced that only 53.3% of the respondents completed their projects a time within or less than the scheduled time of completion. Indeed, the majority of the respondents (35.2%) delayed completion by between 5-20% of the completion time. On account of cost, it was similarly noted that only 40.1% reported to have at an average completed their projects within the budget allocation with the majority once again (50.3%), having a cost overrun of 5-20% of the budgeted cost.

The current findings are, however, an indication of strong performance and reflect the growth that continues to be witnessed in the sector despite the myriad of challenges surrounding it. In 2016 and 2017, the sector contributed 8.8% and 7.4% to the countries' gross domestic product, suppressing traditional sector such as Agriculture and manufacturing (Kenya National Bureau of Statistics [KNBS], 2017). In 2018, it performed more than other investment portfolios such as Treasury bill and bonds (Cytonn, 2018). Broadly, the findings also point good client management practices. This is evident through the high rating on their ability to minimise disputes, deliver client satisfaction and strong positive feedback from clients.

Factor Analysis for Operational Risk Management

Five items intended for measuring operational risk management met the sampling adequacy requirement (KMO = 0.739, Chi-Square = 574.044, p <0.05, df = 10) loading on two components explaining a total of 75.47% of total variances of the scale variations.

Table 6: Operational Risk Management Factor Analysis Results

Operational risk management scale items	Component	
	1	2
The company periodically undertakes solvency assessment of existing tenants	.552	.615
The company consistently maintains a lease maturity evaluation	.834	.351
The company hires competent management teams	.887	-.038
The company has a training programme for its employees on real estate management	.466	.699
The company has a security plan to detect and prevent criminal activities such as vandalism and theft	-.067	.880
(KMO = 0.739, χ^2 = 574.044.23, p < 0.05, df = 10); Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalisation.		
a. Rotation converged in 3 iterations.		

Source: Author (2019)

All the five items loaded on two components with the first item' The Company periodically undertakes solvency assessment of existing tenants' loading on both. The second 'The company consistently maintains a lease maturity evaluation" and the third item 'The company hires competent management teams' loaded on the first component that was labelled tenancy related risk. The other two items, 'The company has a training programme for its employees on real estate management' and 'The company has a security plan to detect and prevent criminal activities such as vandalism and theft', loaded on the second component that was employee-related risks. With all the items factor score exceeding the cut-off score of 0.5, they were all retained as operating risk indicators.

Hypotheses Testing

The study hypothesized that management of operational risk does not have a statistically significant effect on the performance of commercial real estate entrepreneurial investments. The findings revealed a positive correlation of r (323) = 0.497, p < .05 and a regression coefficient of (β = .112, t(323) = 2.261, p < .05). This indicates that a unit increase in operational risk management score leads to an 11.2% improvement in the performance of commercial real estate entrepreneurial investments in Kenya *Ceteris Paribus*. With a coefficient's t-test *p*-values of less than 0.05, the null hypothesis was rejected, leading to the conclusion that operational risk management significantly affects the performance of commercial real estate entrepreneurial investments in Kenya.

The current finding agrees with findings in the literature, for instance, Mutunga (2012) in his study of the choice of the property management approach for commercial high-rise buildings in Nairobi found that the expertise, knowledge, strategy to control cost, reduced employee turnover and customer satisfaction were critical in achieving expected returns. Gitonga (2016) noted that the main impediment to better returns from real estate entrepreneurial investments includes late rent payment, poor marketing and financial constraints, destruction of property by tenants, tribalism, negative attitude toward management firms, insecurity and high operating costs, bulk of which are operational risk drivers. Consequently, if they are well managed, high return on investment will be realised.

CONCLUSION AND RECOMMENDATIONS

The operational risk was found to be relatively low in severity compared to technical, financial and environmental risks in the commercial real estate sector in Kenya. The level of management effort in mitigating sources of operational risk was also low. Management of operational risk coefficient attained a statistical significance, which leads to the conclusion that operational risk management affects the performance of commercial real estate entrepreneurial investments in Kenya. With more than 60% of the staff in the sector having low knowledge of risk management, bridging the skill and knowledge gap is critical for better risk management outcomes for the sector. This responsibility should be shared between the government and the entrepreneurs. The government should create forums or curriculum where risk management practice and concepts are trained. The professional bodies in the real estate sector and learning institutions could be engaged in rolling out these programmes targeting all stakeholders/players in this sector. On the other hand, having trained personnel in risk management matters is of great importance. Whereas, the result findings indicate that most real estate entrepreneurs prefer outsourcing management services to train their own staff, empowering staff has multiple effect and entrepreneurs should, therefore, be encouraged to take advantage once the management forums are established.

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