

# **I**NFLUENCE OF RISK MANAGEMENT STRATEGIES ON THE PERFORMANCE OF REAL ESTATE DEVELOPMENT FIRMS IN LAGOS STATE, NIGERIA

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## **ABSTRACT**

**R**eal estate development industry is highly risky but often the risks are not adequately dealt with, resulting in poor performance, which is reflected in frequent building collapse as well as cost and time overruns. This may cause disputes that can lead to costly litigation and further time and cost overruns. Additionally, insurers traditionally avoid firms with high risk portfolios and subsequently will not offer insurance covers or may charge very high premiums to compensate for the increased risk. Previous studies have found an inconclusive relationship between adoptions of risk management strategies and enhanced developers' performance. As such, the general objective of this study was to determine how risk management strategies influenced performance of real estate development firms in selected Lagos

## **Introduction:**

Despite its significant contributions to economic development, real estate development industry is highly risky and can also cripple both local and international economies if the risks are not well managed. The creation of real estate is somehow considered to be a complex task as it involves the coordination of people with different set of skills and experience to carryout interconnected and interrelated activities. The increasing phenomenon of building collapse and abandonment in Nigeria has been attributed to lack of

*State, Nigeria. The specific objectives were to determine the influence of resource risk management strategies, personnel risk management strategies, project control risk management strategies, litigation risk management strategies and insurance risk management strategies on the performance of real estate development firms. Performance was measured as a function of cost variance, time variance and quality control. Primary data were obtained from sixty-eight real estate developers in Lagos State through survey questionnaires. Descriptive and inferential statistics such as percentages, mean rating and relative importance index were used to analyze the data. The findings led to the conclusion that resource risk, personnel risk and project control risk management strategies had a significant influence on firm performance, implying that any effect on firm performance was not solely due to chance. Litigation risk management and insurance risk management strategies did not have a statistically significant effect, implying that any effect on firm performance was solely due to chance. The study recommended that, from a policy perspective, in order to further entrench risk management practices in the real estate sector, development firms need to increasingly engage in capacity building activities in risk management and project management in general. The government should also encourage activities that encourage proper risk management and risk sharing across the entire phases of real estate development.*

**Keywords:** *Real Estate Development, Risk Management Strategies, Influence, Real Estate Development Firms, Performance.*

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Efficient risk management strategies (Oladapo, 2015). These included among others, the retrogressive attitudes of parties' involved, absence of culture for the firm, low involvement of professionals, lack of standard risk management processes, lack of good plan for activities, low level of formation of capital to which efforts could be managed and existence of wide gap between academic researchers and practitioners. These were identified as the causes of poor cost, lack of time and poor quality within real estate development in Nigeria (Francis & Usen,

2016). According to Okeahialam (2012), most real estate projects in Nigeria experience cost variations and completion delay problems as a result of high negative effects of associated risks. The high negative effects of risk exposure in Nigerian real estate industry was attributed to poor risk management strategies. In the event that successful real estate projects are realized within the stipulated time and costs, those risks have to be managed if not totally eliminated.

Risk management is considered as “an activity, which integrates identification of risks, measurement of risks and the development of strategies to manage them using managerial resources” (Moorhead, Armitage & Skitmore, 2021; Gehner, 2008; Wiegelmann, 2012). It is an area of specialization that addresses the possibility of future events causing adverse effects. The basic goal of risk management is to minimize risks and their impacts to achieve the property within the scope of predicted time, projected cost, and reasonable quality. The level of adoption of risk management strategies has not been widely studied. For instance, Charles & Doreen (2018) observed that the low level of awareness of appropriate tools and techniques to effectively manage real estate development risks considering the dynamic nature of the corporate environment, participants in the real estate development were exposed to high level risk.

The overall outcome indicates that the influence of risk management strategies on real estate development firms have not received significant attention in real estate studies, calling for more awareness through empirical evidence, hence; this study.

### **Literature Review**

Odimabo (2016) studied risk management system to guide building construction projects in developing countries taking Nigeria as a case study. The study obtained primary data from 314 construction professionals through the administration of questionnaire. The findings of the study revealed 27 interrelated critical risk factors in the construction process. The study adopted structural learning of Bayesian Belief Model to develop risk management framework for identification of risks, which

affect building construction. The framework is also to assist professionals in the construction industry in managing project risks. Although, Odimabo (2016) covered a large sample of construction professional and came up with a risk management framework for effective risk management in building construction, the study did not focus real estate development as a whole, which is the concern of this study.

Okeahialam (2012) studied risk management in commercial shopping malls in Abuja from an investment perspective. The study surveyed the management and tenants/occupants of 46 commercial shopping malls in FCC phase 1 Abuja. The study found that the available risk management strategies include: risk avoidance, risk sharing, and risk response. Okeahialam (2012)'s work was only confined to the post-construction risks which only begin from the start of letting of a newly completed shopping mall through its life span. Apart from the fact that the study did not consider the risk management in the construction stage; it was also restricted to commercial real estate alone. A study that will cover all classes of real estate is essential in this aspect.

Ondara (2017) examined the effect of risk management strategies on construction firm performance in Kenya. The study utilized questionnaire survey to investigate the effect of the managerial strategies of risk on firm performance. The study established that personnel, resource, and project control strategies had statistically significant influence on firm performance. The study did not assess the impact of risk factor on project objectives in each phase of development apart from being focused on construction project and from different country. Thus, it is necessary to replicate it in Nigeria and elsewhere.

## Materials and Method

The study area was Lagos State, it was chosen as the research area because it is the centre of commercial and economic activities in Nigeria. This thereby makes the development of real estate to be relatively higher than any other parts of the country. The study employed field survey using well-structured questionnaires administration on real estate developers in

Lagos State, Nigeria through random sampling. The respondents were asked to select their options on the influence of risk management strategies on real estate development firms' performance on a five-point Likert scale. A total of 101 questionnaires were administered and 68 questionnaires were retrieved and found useful for the study and this represents a response rate of 67.3 percent. Data obtained from the survey were analyzed with the use of simple percentages and mean ratings.

### Data Analysis and Discussion

This section is structured into two sections. The first section examined the profiles of the real estate developers. The second section contained the influence of risk management strategies on real estate development firms' performance.

### Profiles of Real Estate Developers

From Table 1, the background characteristics of the respondents revealed that they are largely experienced in real estate development as 61.81% of them have above 15 years experience, educated (86.76% possessed HND/B.sc. certificate and above) certified professionals (all respondents are registered members of their respective professional bodies) and 91.18% of the respondents are key members of the top management board, who make real estate development decisions in their respective firms.

**Table 1: Profiles of Real Estate Development Firms**

Parameters	Response Frequency	Percentage of Response
Year of Experience		
1-5	1	1.47
6-10	11	16.18
11-15	14	20.59
16-20	23	33.87
21+	19	27.94
<b>Total</b>	<b>68</b>	<b>100</b>

Academic Qualification		
<b>OND</b>	9	13.24
<b>HND/B.sc.</b>	36	52.94
<b>Masters</b>	17	25.00
<b>Ph.D.</b>	6	8.82
<b>Total</b>	68	100
Professional Background		
<b>Architect</b>	12	17.65
<b>Builder</b>	18	26.47
<b>Engineer</b>	22	32.35
<b>Estate Surveyor</b>	16	23.53
<b>Total</b>	68	100
Position in the Firm		
<b>Lower Management Level</b>	6	8.82
<b>Middle Management Level</b>	18	26.47
<b>Top Management Level</b>	44	64.71
<b>Total</b>	68	100
Developer Categories		
<b>Trader Developer</b>	32	47.06
<b>Investor Developer</b>	23	33.82
<b>Service Developer</b>	13	19.12
<b>Total</b>	68	100

Source: Field Survey, 2021.

### **Influence of Risk Management Strategies on Firms' Performance**

This section presented the results of the analysis carried out to examine how risk management strategies influenced firms' performance with respect to time variance, cost variance and quality control. The results of analysis with respect to time variance are presented in Table 2. Table 3

presented the results in respect of cost variance while Table 4 presented the results with respect to quality control.

The scale of rating were Strongly Agree = 5, Agree = 4, Slightly Agree = 3, Disagree = 2, Strongly Disagree = 1.

Most of the respondents (49.6%) agreed that adoption of risk management strategies reduced information delay (49.6%) as indicated in Table 2. Also, about 37% of the respondents indicated that project management was improved with continuous adoption of risk management strategies. It was also observed from the mean scores, which represents the level of agreement and disagreement with the corresponding statements that reduced level of disputes (41.7%) and funding problems (35.0%) were strongly believed by the benefits of regular implementation of risk management strategies.

From Table 3, it can be observed that high percentage (71%) of the respondents disagreed with inaccurate costing are being reduced by the application of risk management strategies. However, they were observed to agree that adoption of risk management strategies improved cost estimation (66.3%) and reduced price escalation (63.7%). Since the mean impacts of adopting the strategies on cost variance are closed to 3.00, the observed measures reflected disagreement-agreement of the respondents with the corresponding statements.

**Table 2: Influence of Risk Management Strategies on Time Variance**

Time measures	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree	Mean
- Adoption of risk management usually reduce information and time-delay	0.0	1.3	15.4	49.6	33.7	4.16
- Application of risk management strategies	0.0	7.8	26.3	30.9	35.0	3.93



reduces funding problems						
- Ensuring continual risk management improves timely delivery	0.0	13.5	17.7	37.0	31.8	3.87
- Adoption of risk management strategies reduces lengthy disputes	0.9	27.1	11.6	18.7	41.7	3.73
Overall						3.92

Note: Figures are in Percentages

Source: Field Data Analysis, 2021

**Table 3: Influence of Risk Management Strategies on Cost Variance**

Cost Measures	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree	Mean
- Adoption of the strategies reduced price escalation	3.4	16.2	16.7	41.6	22.1	3.63
- Adoption of risk management strategies minimized inaccurate costing	7.4	13.6	14.7	9.2	5.1	1.91
- Application of appropriate risk management strategies reduced contractors/suppliers defaults	33.8	24.5	16.2	14.5	11.0	2.44
- Adoption of risk management strategies enhanced improved cost estimation	6.1	11.4	16.2	24.0	42.3	3.85
Overall						2.96

Note: Figures are in Percentages

Source: Field Data Analysis, 2021



**Table 4: Influence of Risk Management Strategies on Quality Control**

Quality	Strongly Disagree	Disagree	Slightly Agree	Agree	Strongly Agree	Mean
- Adoption of the strategies increased stakeholders' confidence on the product.	3.1	9.7	10.7	66.8	9.7	3.70
- Usage of risk management strategies assists in the reduction of design errors and variations	2.8	5.2	15.1	63.5	13.4	3.80
- Adoption of risk management strategies enhances constructions safety	2.8	3.4	12.7	61.0	20.1	3.92
- Application of the strategies increased the suitability of purpose of the development	0.0	0.0	9.3	72.4	18.3	4.09
Overall						<b>3.88</b>

Note: Figures are in Percentages

Source: Field Data Analysis, 2021

In Table 4, it is indicated that all the values of the means clustered around 4.00, indicating agreement of most of the respondents with various statements.

**Table 5: Goodness of Fit Test**

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.875(a)	.766	.759	.21359

a. Predictors: (constant), resource, personnel, project control, litigation and insurance risk management strategies

Source: Author's Data Analysis, 2021.

To establish the nature of the association between the risk management strategies and firms' performance, goodness fit of test was carried out with multiple regression analysis. From Table 5, the R-Square of 0.766 indicated that the model explained about 76.6 percent of the variation in the performance of real estate firms in terms of project time and project cost. This implied that the adopted strategies in the study area accounted for over 76 percent impact on the performance of real estate development firms. Since R-Square was 0.766 (76.6%) and close to 100 percent, this confirmed that the model was good and suitable to explain the cause-effect relationship among risk management strategies and firms' performance. Other factors, which may have impacted real estate firms' performance in real estate development phases, were not factored into this study.

Table 6 presented the analysis of the nature of the relationship that exists among the strategies and firms' performance using coefficient of regression model. The findings from the analysis as seen in the table revealed that 'resource strategies', 'personnel strategies' and 'project control strategies' were statistically significant at 0.05. However, 'litigation strategies' and 'insurance strategies' were found to be insignificant at 0.05. This implied that both strategies contributed only insignificant value to the overall model. The absolute value of the coefficient was used to rank how each variable explains firms' performance variance. The value measured the strength of the relationship. From Table 6, project control risk management strategies were observed to explain explaining the variation in performance of firms as indicated by a coefficient of 0.235. This was followed by resource risk management strategies and personnel risk management strategies with standardized coefficients of -0.080 and 0.068 respectively.

From the regression results in Table 6 below, by substituting the un-standardized coefficient of each of the risk management strategies, the final form of the multiple linear regression equation appears as:

$$FP = 2.651 - 0.080_{RERMS} + 0.068_{PRMS} + 0.235_{PCRMS} + 0.031_{LRMS} + 0.011_{IRMS}$$

The model indicates that all the risk management strategies except resource strategies have positive linear relationship with firm performance. The interpretation of this is that, increasing or decreasing each of the risk management strategies by a unit value, will result to an increase or decrease of the beta coefficient of each risk management strategy. The constant value 2.651 is the intercept and represents the firm performance value when each risk management strategy is equal to zero in the model.

**Table 6: Coefficient of the Regression Model**

	Un-Standardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	T	Sig.
<b>(Constant)</b>	2.651	.257		10.315	.000
<b>Resource Strategies</b>	-.080	.047	-.246	-1.702	.003
<b>Personnel Strategies</b>	.068	.071	.162	.956	.004
<b>Project Control Strategies</b>	.235	.067	.475	3.507	.004
<b>Litigation Strategies</b>	.031	.070	.115	.442	.426
<b>Insurance Strategies</b>	.011	.676	.146	.162	.253

a. Dependent Variable: Firm Performance in terms of Project Schedule and Cost

Source: Author's Data Analysis, 2021

### Conclusion

The study findings indicted that risk management strategies had significant impact on project schedule (mean = 3.92,  $p = 0.000$ ), and project (mean = 2.96,  $p = 0.000$ ) and quality control (mean = 3.88,  $p = 0.000$ ). In terms of firm performance, resource strategies, personnel strategies and

project control strategies had statistically significant impact on firm performance, while litigation and insurance risk management strategies had no statistically significant impact on firm's performance.

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