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Assessment of Risk Factors associated with Building Projects in a Developing Country

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1.

INTRODUCTION

- ❖ Construction industry continues to occupy an important position in any nation's economy (Ademeso & Windapo, 2014).
- ❖ investment in infrastructure is one of the six key policy drivers used by government to lift long-term performance of the economy (New Zealand Now, 2012)
- ❖ *It therefore contributes to the gross development product (GDP) of any nation including Nigeria.*
- ❖ The main criteria for measuring the overall success of construction projects are time and cost among others Aiyetan et al. (2012).
- ❖ it is evident that Construction industry has been plagued by risks (Adafin, Wilkinson, & Rotimi, 2014)

Introduction cont'd....

- ❖ These risks are responsible for the deviations between **costs** and **times** of construction projects

AIM OF THE STUDY

- *This study is therefore aimed at assessing risk factors associated with building projects in Rivers State, Nigeria with a view to ascertaining the influential risk ones.*

BRIEF LITERATURE REVIEW

- ❖ *Risks are events, situations or activities that should it occur, will have impact on one or more of the project objectives e.g. Cost, time, quality etc*

- ❖ *These are classified under various groups as:*

- *financial risk,*
- *logistics risk,*
- *environmental risk and*
- *political risk among others (Adedokun, 2012).*



Symptoms of Construction risks

Some of the symptoms of risks include:

- ❖ *project abandonment,*
- ❖ *building collapse,*
- ❖ *contractors becoming insolvent,*
- ❖ *projects not delivered to time, cost and quality, etc.*



- *Tar and carr (2000) opined that construction industry has suffered poor performance as a result of the risk factors.*

- ❖ This then implies that the construction industry is not excluded when it comes to the issue of risk, (Odeyinka, 2000).

Causes of risks on construction projects cntd.....

❖ *Therefore, the causes of changes which are occasioned by risk factors are:*

- ✓ *changes in design by consultant,*
- ✓ *change of plans or scope by owner,*
- ✓ *errors and omissions in design,*
- ✓ *owner's financial problems,*
- ✓ *change in specification by owner,*
- ✓ *change of schedule by owner,*
- ✓ *change in economic conditions,*
- ✓ *ambiguous design details,*
- ✓ *contractor's lack of judgment and experience,*
- ✓ *change in government regulations,*
- ✓ *complex design and technology,*
- ✓ *lack of strategic planning,*
- ✓ *differing site conditions*

(Adedokun & Awodele, 2016; Dairo, 2015).



Errors and omissions in design,



Complex design and technology

RESEARCH METHODS

- ❖ This study adopted the *use of questionnaire survey* administered on key construction stakeholders.
- ❖ The population included **762 participants out of which 284 were sampled** as indicated in table 1.

Table 1: Total Population of the target Respondents

S/N	Respondents	Population	Sample size
1.	Clients/ representatives	51	34
2.	Construction firms/ representatives	156	61
3.	Architects	123	55
4.	Quantity Surveyors	148	60
5.	Engineers	284	74
	Total	762	284

- ❖ **Data analysis techniques** - percentile, mean item score, and analysis of variance (ANOVA)
- ❖ Out of the **284** questionnaires that were administered, **158** were returned and found suitable for the analysis thereby representing **55.63%** of the total questionnaire sent out.

Table 2: Risk factors encountered in building projects

Risk factors	Group Mean	Group Rank	F-ratio	Sig. (P-value)
Failure to complete within stipulated time	3.911	1	7.965	0.000
Hostility of the host community	3.696	2	5.323	0.000
Failure to complete within clients budget	3.639	3	4.663	0.001
Design disapprovals	3.354	4	2.414	0.051
Peculiar site conditions	3.291	5	7.800	0.000
Unexpected rises in price of labour and material	3.215	6	8.165	0.000
Claims for delays by the contractor	3.127	7	4.352	0.002
Weather condition	3.089	8	7.800	0.000
Defects in structure due to poor workmanship	3.019	9	10.262	0.000
Currency restriction and rates of exchange	3.000	10	5.141	0.001
Changes in cost arising from legislation	2.703	11	1.955	0.104
Force majeure	2.696	12	10.950	0.000
Damage to the work	2.538	13	7.331	0.000
Third party injury and property damage	2.494	14	5.398	0.000
Strike by labour force	2.462	15	2.203	0.071

Risk factors encountered in building projects



Table 2 depicts various risk factors occurring in building projects with

- ✓ *failure to complete within stipulated time* (Mean Score = 3.911) ranking 1st,
- ✓ the 2nd rated risk factor emerges as the *hostility of the host community* (Mean Score = 3.696) while
- ✓ *failure to complete within clients budget placed* 3rd with mean value of 3.639.

☐ The least ranked risk factors include:

- damage to the work (Mean Score = 2.538),
- third party injury and property damage (M S = 2.494) and
- strike by labour force (Mean Score = 2.462).

Discussion of findings

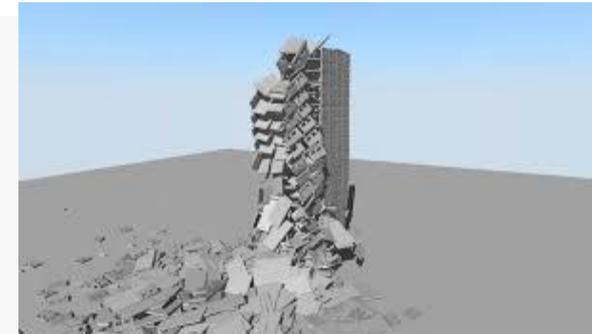
Risk factors encountered in building projects

- ❖ failure to complete within clients budget, stipulated time and hostility of the host community are at variance with Odeyinka et al. (2012)
- ❖ This is not surprising as risk factors are not only project specific but also location based (Odeyinka et al., 2012).

CONCLUSION

It is hereby concluded that;

failure to complete within stipulated time and cost coupled with the hostile nature of the host community are the risk factors impacting building projects in Rivers State.



Thanks for Listening