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An Overview of Nigerian Indigenous Small Scale Contractors Performance of Risk Management in Building Production Process

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Abstract

The process of producing a cumbersome is amber same one It often involve borrowed money, purchase and transportation of materials and equipment, numerous site activities and professionals inputs ranging from designing to site supervision. Each of these parameters is risk laden, and such risks must either be avoided, transferred or mitigated. A study of twenty nine (29) indigenous contractors was carried out within Ekiti State, Nigeria to investigate and identify how far they have fared in the performance of risk management on building projects. This investigation has revealed that most of them were never aware of what is called Risk Management, while a few ones have the awareness but never practiced it, except when a contract condition compelled them to put one thing or the other in place. In view of this finding there is urgent need for extensive education and training both formal and informal in the form of workshops and conferences for contractors in Nigeria; as building production process is becoming more sophisticated.

***Keywords*:** Risk; Management; Contractors; Mitigate; Small Scale.

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1. Introduction

Ordinarily, risk portends danger or hazard; risk signifies uncertainty, possibility of an uncertain event, situation or condition occurring. It may have either a positive or negative effect on the project objectives. Some risks may pose a threat to the achievement of project objectives while some other risks may enhance achievement of objectives. Favorable risk events are called opportunities, whereas unfavorable risks are termed as threats. Factors that induce unfavorable risk situations are called hazards. Risk increases with hazards but decreases with safe guards [1]. Risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on the project objectives.

Reference [2] opines that risks includes though not limited to the following as it always depends on the nature of the project at hand: risks such as programmatic, technical, cost, schedule and sometimes supportability.

Risk is the possibility that something harmful or undesirable may happen. This could include harm, injury, or abuse to your organization's clients, volunteers, board members, employees, property, or reputation [3].

In Reference[4] also averred that, construction work is generally associated with many hazards, thus making the generality of the industry and its clients widely subjected to high degree of risk due to the nature of construction business activities, process, environment and organization.

The fact that every aspect of construction business is risk laden makes it imperative that all available resources should be pulled together to manage it, with the paramount aim of elimination or reduction to the barest minimum possible.

It is a general opinion that in Nigeria today, the indigenous small-scale construction companies/enterprises have shown little or no interest to the issue of risk management in their daily activities. Hence this work is intended to look into the activities of such contractors, in other to identify the actual level of their involvement in the management of the heavy load of risks on building production process.

2. Scope and Limitation.

The importance of risk management on building design and construction process has made it imperative to examine the involvement of small scale indigenous contractors, as they are often engaged in the construction of low level housing delivery. This research has also been limited to this category of contractors because of their obvious non- challant attitude to the issues bordering on risk management. Constraints time and finance for travelling to distant locations to collect and availability of adequate number of small scale contractors in Ekiti State of Nigeria has been the determinant of the choice of this state for case study. The level of education and general awareness of this category of contractors has also affected their response to the question posed to them of this subject matter.

3. Related Literature

3.1. The Essence of Risk Management.

Reference [5] posited that the execution of building work inevitably involved some risk of personal injury or damage to property and it was essential that such risk should be adequately covered by insurance, preferably by a joint names policy to cover all third – party liability irrespective of who was negligent. There are several sources of risk in a project. The important ones were project – specific risk, competitive risk, industry-specific risk, market risk, and international risk [6]. He further stated that managers were not merely content with measuring risk but they want to explore ways and means of mitigating risk.

It should be noted that the category of contractors being scrutinized in this work, i.e. the indigenous small scale contractors generally do not undertake projects above Twenty Million Naira [₦20,000,000.00] value and do not engage more than fifteen [15] workers at any particular instance. Hence, their level of risk involvement might not include internationally induced and sophisticated risks.

3.2. Risk and Risk Management in Construction Industry.

Reference [7] defined risk as occurrence of an undesirable result i.e. incurring a loss; the chance that an adverse event occur during a stated period of time.

Reference [4] also averred that also opined that risk in construction had been the object of attention because of time and cost overruns associated with construction projects. Furthermore risk can manifest itself from uncertainty which in turn is caused by lack of information. For example, the Quantity Surveyor often has to determine the budget price for the foundation to a new building without knowing the ground condition or the loading of the building. Hence there is an element of risk in forecasting this price, but past cost data and experience will help the Quantity Surveyor to assess that it is achievable within the budget price with some degree of certainty [8]. It is contended that the effective management of risk will reduce the requirement for contingences, making bids more profitable and customers more satisfied [9].

3.3. Contractors Perception to Risk

Contractors generally are of the opinion that the industry within which they work is associated with high risk and see risk management as being essential to their overall construction activities in order to minimize business losses, But the in Nigeria, the indigenous small-scale contractors are lacking in this aspect of risk identification and management. Most of this category of contractors engages in construction works because they have the human connection to obtaining contracts. They are not construction professionals who have acquired expertise in construction project management. This makes most of them grossly ignorant of what is called construction risk and management.

3.4. Risks Faced by Contractors and Clients.

Reference [10] characterized risks as follows:

- Performance, Scope, Quality or Technological Risk: - The tendency of the project being unable to perform as intended after completion.
- Environment, safety and Health Risk: - This includes the risks that the project may have a detrimental effect on the environment or that hidden hazards may be uncovered during project execution.
- Schedule Risk:- This is the risk of time overrun on the project i.e. the project taking longer time than scheduled.
- Cost Risk: - This is the risk of cost overrun i.e. the project costing more than budgeted.
- Incremental Risk: - This includes risks that are not themselves significant but that can accumulate to constitute a major risk.
- Catastrophic Risk: - These are risks that are individually major threats to the project performance.

Risk factors and risk events are consolidated to form the risk checklist, which varies from project to project and agency to agency. These are listed below [1].

- Project scope risks.
- Design and specification risks.
- Quality risks.
- Time overrun risks.
- Cost overrun risks.
- Leadership risks.
- Organizational risk.
- Physical resources mobilization and utilization risks.
- Technology risks.
- Contractual risks .
- Force majeure and ecological risks.
- Political, WTO, legal and social risks.
- Financial and economic risks.
- Safety, health and environment risks.
- Funding failure risks.
- Communication and network failure risks.

3.5. Developing a Risks Management Strategy.

Risk Management is the term for the procedures that an organization follows to protect itself, its staff, its clients and its volunteers. Practicing a sound risk management is more than just looking out for potential problems, buying insurance and avoiding law suits. It is an ongoing process [3]. These writers further opined that 'risk is inevitable and is a part of life for all organization.

Risk can be managed in one of two principal ways [11]:

- by analyzing each identified risk situation and taking specific measures that are adapted to each one, with the broad participation of the management in risk management, or
- by using more general analysis to establish security goals and guidelines in order to globally reduce risk without managing it through direct and personalized means and likely with less management participation.

3.6. ISO Guide 73- Phases of Risk Management.

- **R**isk Analysis: [Risk Identification and Estimation].
- Risk Evaluation.
- Risk Treatment: [Risk Avoidance, Optimization, Transfer and Retention.
- Risk Acceptance.
- Risk Communication.
- Sources: Reference [11].

Having determined what risks exist for a project and assessed their importance, there is need to choose a strategy for dealing with each risk if and when it comes into play. One or more of the following approaches is available to deal with the risk we desire to manage.

- ***Avoidance****:* Act to eliminate the risk factors that give rise to the risk. An example is deciding not to use a new, untested procedure or materials that you have conceiv ed may not produce the desired project results.
- ***Transfer***: Pay someone else to assume some or all of the effect of the risk. An insurance policy is a typical example.

Mitigation: Either reduces the likelihood that a risk occurs, or minimizes the negative consequence if it does occur.

4. Research Survey

The need to manage risks in construction is relevant to all professionals and groups (client, design team, contractors e.t.c in the construction industries which is concerned with cost, time and quality and with roles played by the quantity surveyor in the mitigation and management of the risks identified [12]. The contractor, especially the indigenous small scale enterprise is the target of this research work. A total of fifty [50] local contractors in Ekiti State was targeted as sample for this research. Twenty nine [29] representing 58% of the sample responded.

4.2. *Analysis of Data Collected and Results*

The statistics package for social scientists (SPSS) version 10 was used for the data analysis. The percentile analysis method was adopted.

Table 1: Ability of Contractors to Identify Risks

S/N	Types of Risks Identified	Numbers of Contractors Identified	Non-identified	Stage of Identification
1.	Project Scope Risks	10	19	Pre-contract
2.	Design and Specification Risks	16	13	Pre/Post contract
3.	Quality Risks	14	15	Post-contract
4.	Time Overrun Risks	12	17	Post-contract
5.	Cost Overrun Risks	12	17	Pre/Post contract
6.	Leadership Risks	14	15	Post contract
7.	Organizational Risks	8	21	Pre/Post contract
8.	Physical Resources Mobilization and Utilization Risks	9	20	Post contract
9.	Technology Risks	5	24	Pre/Post contract
10.	Contractual Risks	6	23	Pre/Post contract
11.	Force Majeur and Ecological Risks	13	16	Post contract
12.	Political, WTO, Legal and Social Risks	12	17	Post contract
13.	Financial and Economic Risks	16	13	Pre/Post contract
14.	Safety, Health and Environmental Risks	18	11	Post contract
15.	Funding Failure Risks	20	9	Post contract
16.	Communication and Network Failure Risks	13	16	Pre/Post contract
17.	Past loss in similar project	8	21	Pre-contract
18.	Skills of project Team	18	11	Pre/Post contract
19	Average	12	17	

Source: Field survey, 2015.

4.3. Discussion of Findings.

4.3.1. ***Risk Identification***: Table 1 shows that the sampled contractors were able to identify eighteen [18] types of risks. For example ten [10] out of twenty nine [29] respondents represent 34+48% of the sample were able to identify project scope risks, while an average of twelve [12] out of twenty nine [29] representing 41-38% were able to identify one risk or the other out of the eighteen [18] types of risks identified. The number of contractors who could identify risks varied from five [5] to twenty [20] of the twenty nine respondents.

Table 2: Effect of Risks Identified and Ability to Manage Them

S/N	Risks Identified	Effect of Risks on Project Quality	Cost	Time	Method of Risks Management Adopted
1.	Project Scope Risks	Positive	Positive	Positive	Early Identification
2.	Design and Specification Risks	Positive	Positive	Positive	Risk analysis
3.	Quality Risks	Positive	Positive	Positive	Risk analysis
4.	Time Overrun Risks	Positive	Positive	Positive	Early Identification
5.	Cost Overrun Risks	Positive	Positive	Positive	Mitigation/risk analysis
6.	Leadership Risks	Positive	Positive	Positive	Early Identification
7.	Organizational Risks	Positive	Positive	Positive	Risk analysis
8.	Physical Resources Mobilization and Utilization Risks	Positive	Positive	Positive	Early identification
9.	Technology Risks	Positive	Positive	Positive	Mitigation
10.	Contractual Risks	Positive	Positive	Positive	Mitigation
11.	Force Majeur and Ecological Risks	Positive	Positive	Positive	Early identification
12.	Political, WTO, Legal and Social Risks	Positive	Positive	Positive	Early identification
13.	Financial and Economic Risks	Positive	Positive	Positive	Mitigation/Risk analysis
14.	Safety, Health and Environmental Risks	Positive	Positive	Positive	Mitigation
15.	Funding Failure Risks	Positive	Positive	Positive	Mitigation/ Early identification
16.	Communication and Network Failure Risks	Positive	Positive	Positive	Mitigation/ Early identification
17.	Past loss in similar project	Positive	Positive	Positive	Early identification
18.	Skills of project Team	Positive	Positive	Positive	Mitigation

Sources: Field Survey, 2015.

4.3.2. ***Effect of Risks and Management Ability***: Table 2 above shows that all types of risks identified would have their positive effect on projects if not adequately managed. This table also indicates the method that could be adopted to manage such risks, ranging from early identification to risk analysis and mitigation and at which of the two major stages of projects i.e. pre, and post contract stages.

5. Conclusion

The respondents of risk perception indicated that indigenous small scale contractors in Ekiti State, Nigeria were far below average in risks identification and management. Some did not even clearly understand what risk in construction really meant, beyond those of site accidents. Their perception of risk in terms of project objectives of cost, time and quality was generally inadequate.

The level of education of most of the respondents obviously reflected in their risk awareness, identification and management perception. A good number of them did not formal education in construction related disciplines while the few that were educated did not see risk management as a critical phenomenon.

6. Recommendation

- Risk management should be a continuing activity in project development from inception and throughout the life of the project.
- Formal education of potential practitioners in the construction industry should include risk management. In other words 'Risk Management' should form part of University and Polytechnic curricula for Building and related programmes.
- Informal training through seminars and workshops should be used to create awareness in un-educated contractors and further refresh the educated ones.
- Engagement of all construction stake holders at project inception will enhance proper identification of risks from sketch design and joint/coordinated mitigation efforts at the beginning.
- Public sector (ministries and corporations) and construction professional bodies such as NIOB, NIQS, NIA, and NSE e.t.c. should establish Risk Management Units within their organization.

7. Suggestion for further research

This research was limited to Ekiti State; hence could be not be acceptable for the generality of Nigeria. Therefore it is suggested that this kind of research be made in at least one state of the remaining five geo-political zones and specifically Abuja and Lagos.

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