

DEVELOPMENT OF PROJECT RISK MANAGEMENT STRATEGY AT ENTERPRISE LEVEL

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ABSTRACT

Managing the risk termed as significant factor associated with operation of construction programs. Much earlier building project risk management studies (PRM) concentrated on the stage of the project rather than the stage of the client. The goal of this analysis was examining method of managing risk at the enterprise (ERM) level. The methodology undertaking a case study is followed whereby 2 multinational companies were studied with specific risk control strategies and results. Information through live interviews and archival records is obtained. Findings show that ERM will boost PRM's efficiency and output by managing enterprise-level project harm, that was focused over 4 main aspects: risk managing process, risk management team, organizational culture and external operation. The report would be beneficial to both executive management and researchers because it strengthens the awareness of how ERM can affect PRM and encourage more analysis.

KEYWORDS: *Construction Firms, Enterprise Risk Management, Project Risk Management, Project Planning and Design*

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INTRODUCTION

Risk management problem has played a key role in companies. Investors have been increasingly crying about sporadic Organization results issues. Researchers have developed majority of organizations' risk management activities as poor and insufficient. In 2002 and 2003, respectively, Enron and WorldCom 's organizational collapse revealed the inadequacies in business accounting procedures, the quality in financial statements, insufficient oversight and supervision, as well as weak corporate risk control programs. A study by the Economist Intelligence Unit demonstrated that because of interconnectedness of the global business environment, a large number of companies have perceived an increase in risk and its severity in their operation. Rod Eddington, the former chief executive of British Airways, once claimed before this troubling trend that businesses ought to get a wider outlook on risk reduction activities in operation. Nonetheless, the collapse of some of the world's leading companies caused the shareholders suspect board leaders of being selfish, irresponsible and incompetent in their position of supervision[1].

Experts concluded that management and board of directors did not understand the interconnectedness and capacity of the Organizational system along with the Domino impact of Organizational loss. Current world developments raised concerns over the effectiveness of the silo-based strategy, when only the most innovative companies lost severely in the economic crisis of 2009/2010 bringing massive damage to the US capital markets. Risk management has historically been decentralized and used in silos because of the conventional management role of grouping which literally organize activities into specific areas for effective and productive decision-making. There is always

a tendency in this respect for organizations to classify risks as managers organize corporate operations into distinct groups which are mutually exclusive. In addition, the interconnectedness between threats under organizational, financial and technological risk categories was typically overlooked with adverse consequences[2].

In reaction to the inadequacies of utilizing a silo-based method, however, to combat the impact of the conventional risk management strategy, ERM evolved. Some of the key aims of introducing ERM given the enormous resources required is to enhance the efficiency of businesses. A large number of companies have been or are in the process of planning to adopt ERM as an integral risk management strategy. Rating organizations have started integrating ERM into their assessment method in an attempt to promote adoption of ERM. Nigeria is also an important part of the world economy which is not relegated on that stage. Nigeria has suffered one type of financial crisis or the other for many years. The string of weak results encountered by Nigerian financial entities was due to inadequacies in risk control, inadequate reporting mechanisms and incompetent board leaders. Experts concluded that financial institutions' vulnerable conditions allow them to be more assertive in adopting a more rigorous approach for risk management. The Nigerian banking Organization, for example, regulates around 46 per cent of Nigeria 's entire equity market capitalization. The Nigerian stock exchange dropped about 80 per cent of its value from 2009 to 2010[3].

From 2010 to 2013, the financial institutions' market capitalization experienced an annual decline of 17.39%. The CBN audit report categorized eight banks in severe financial grief. Across both such cases, the risk reduction systems' inadequacies were listed as the key triggers of the success of weak companies across Nigeria. Despite the hypothesized advantages of ERM in organizations, analysts agree that very few organizations had succeeded in implementing ERM in practice. There is also a boom in the literature on risk assessment to establish a body of expertise in the field of essential performance factors. Studies are failed to demonstrate significant effects of ERM. There is a shortage of research on adoption of ERM in the sense of Nigeria, and the main factors that affect its activity[4].

The dynamic existence of construction ventures, their use of multiple actors, and their heavy reliance on geographical, economic, and human ecosystems and capital pose a risk management challenge for construction firms. Risk management in building projects has been recognised as a very critical method for achieving project objectives in terms of expense, energy, health, efficiency and sustainability. Much has been published on how to assess and control the risk of building programs, but much of the literature has concentrated on project-level risk management. It may, however, be highly misleading to view every project in isolation. At some times, multiple parallel projects operated by a organization fail to achieve goal. This could be the consequence not only of its failure, and Enterprise-level failure, which is a corporate risk management (ERM) problem. However, with the growing size of building ventures, rising technical sophistication, and intense organizational competitiveness, that's sufficient for handling danger. That makes an individual to look into academics and experts at risk management around the world in recent years[5].

Comparison between ERM and PRM

There are some variations among PRM & ERM which are discussed as priorities, reach, risk types, structure and approaches & the individual in control as seen in Table 1. ERM 's goals will be consistent with the Organization's four objectives: financial, organizational, monitoring, and enforcement. While PRM 's goals These milestones might be aware of ERM's organizational goals if initiative were to be implemented effectively. Its largest difference is size. Unlike PRM, an ERM system will take into account internal and external incidents influencing the accomplishment of an entity 's goals, in which only incidents that could impact a single mission are taken into account, including prices, energy, price, protection and the

threats to the climate. The risk taxonomy may be different thereafter. The oriented threats of ERM can be categorized into competitive threats, Dangers to market, operating risks, associated costs & enforcement dangers [6].

For design contracts, but at the other side, PRM will comply with owner-contractor relationship, venue arrangements, private contractor arrangements, procurement & managerial systems, project implementation, project scheduling and preparing, & potential threats. ERM's frameworks and methods are relatively stable over a period of time, while PRM's may varies from project to project. First but not least, it is not the same set of individuals who are in possession of PRM and ERM. As part of a business strategy for an organisation, ERM wants a board member and a risk reduction Organization that facilitates it. People responsible for PRM typically Comes from the project inception that may be utilized exclusively on a single project. At the other side, although there are several variations, ERM & PRM are tightly related, particularly in project-based firms like building companies. Without PRM ERM cannot be applied and PRM should be called an integral component in ERM. Or put it differently, both struggle with managing risk but at different stages. ERM may create value by generating influences upon basis of organizations at both the micro (or organization-wide) basis and the small (or market unit). When the ERM program operates well, PRM will obtain further useful information[7].

Not traditional 'silo-based' risk reduction strategy, that helps businesses to take advantage of an adaptive risk management strategy that transfers the emphasis of the risk management role from being predominantly reactive to potentially competitive and strategic. ERM will bring a modern way of enhancing PRM in the building and manufacturing sectors. Like many other sectors, the building sector is defined as being project-based and labour-intensive, with individuality of the design, on-site manufacturing and high attrition ad hoc project teams. All of these combined means that the key reasons for project loss are significant and unmanaged threats. Benefit reduction is therefore a vital aspect of the operation of the building sector. ISO 32000 (ISO 2001) clearly describes danger as the impact of confusion on objectives, and identifies AS / NZS 4470 (Australia 2004 Standards). It termed to be "history, procedures and framework for exploiting future rewards when mitigating adverse consequences." In specific, Risk assessment in the case of project planning is a systematic approach for identifying, evaluating and handling the effect of dangers with goal of achieving the time targets of the project, expense, efficiency, climate, and health. Developing risk control strategies is primarily aimed at bringing value to project execution and increasing performance[8].

Work has been growing up to evaluate and develop risk reduction strategies in building programs. Past research on risk management activities concentrate primarily on (1) developing innovative approaches for risk evaluation and improvement of PRM performance; (2) Risk assessments & behaviors of contract workers; (3) implementation of PRM approaches in specific countries and foreign building programs; & (4) essential threats involved with development projects & risk management through multiple delivery methods;. These prior inquiries, however, were usually carried out at the stage of the enterprise. There has been no consideration of the organization's role in PRM [9].

Directly opposed to focussing on the complexity framework microphase, recent times has witnessed an increase in participation in organizational risk reduction that has moved from the organization's periphery operating areas to the enterprise level. Then thinking from a silo-based viewpoint on risk control, the tendency now Was to consider a holistic approach to danger reduction. The tread way commission's committee of sponsoring organizations (COSO) describes ERM as a mechanism that is controlled by the board of directors, managers, and other employees of an organization, implemented within the corporation and in a strategy environment. It is structured to recognize possible incidents that that impact the organization, mitigate risk into tolerance, and provide fair confidence of organizational targets being accomplished. In short,

ERM is a board-supervised, top-down mechanism that operates on and flows across an individual. It is influenced by individuals at all levels of an enterprise and, through an interconnected system, it tried to analyze, assess and handle any organizational risk. ERM generates wealth in this procedure in many aspects, like improving control measures, assigning and leveraging threat-treatment resources efficiently, enhancing productivity & loss minimization [10].

Yes, ERM is often introduced as basic paradigm for handling assets of organizations that confront risk. The general statement that companies can boost their efficiency by utilizing ERM is progressively endorsed. Typically, companies create a department or appoint A specific person, including the risk committee, is accountable for ERM appropriately for aligning ERM with its management tools. Additionally, organizations need to put in place a diverse collection of policies and proposals objectives of the project. The business may employ an external provider, like a contractor, to better handle the danger, to meet the required competencies. This was proposed that, in order for ERM to be successful, organizations must go past technologies and create a risk management culture within the enterprise, and that ERM must permeate current processes and managers' internal actions in daily decisions[11].

The goal of this analysis is to examine how ERM can affect PRM's capability and efficiency by taking into account the characteristics of the construction Organization, its companies and projects.

Research Questions

- Is there a department within one's Organization that specializes in managing risks?
- Which is main factor in creating a risk reduction unit?? What sort of job is the duty of the Risk Control department? How can it handle the uncertainties of a project?
- Has the Organization developed process of managing danger for enterprises? How is it impacting PRM? What is ERM to PRM relationship?
- Have they sought to get support in managing external business risks? If not, why are they hiring external service and how is it going to affect PRM?

Table 1: Illustrates the Comparison between ERM and PRM

Features	PRM Factors	ERM Factors
Scope	Cost, strength, time, safety and environmental risks (influent on project implementation).	External and Internal events must be established which influence the accomplishment of an entity 's objectives.
Objectives	For completing the project in successful manner	Align with the four corporate goals – strategic, reporting, operational, and compliance.
Methods and Models	Varies depending upon the project	Relatively Constant
Categories of Risks	Site requirements, employer terms, owner-contractor relationship, requirements of the subcontractor, project implementation, project scheduling and preparing, procurement and management processes and potential risks.	Strategic risk, operational risk, market risk, financial risk and risk of compliance
Person In-charge	Project Managers	Top Managers

METHODOLOGY

Design

In this analysis a case study testing approach has been selected in two key purposes. At the initial stage, utilizes cases acceptable while experts want to gather rich scientific evidence to construct publicly relevant questions so technically efficient. Further, a case study should be used to investigate experimental theories where the methodologies of systematic analysis are not practical or necessary. When carrying out several case studies, it was emphasized that the goal is not to generalize findings like in more widely accepted surveys. In this analysis the method of methodological generalization is used. When the same hypothesis follows two or more instances so replication can be claimed.

Sample

Two multinational construction companies have been chosen as analysis sample. Chosen scenario requirements: The financial growth of the world has provided the construction Organization a large room for production. The Organization has gathered a wealth of practical experience in risk management during this process. In fact, both case companies are heavily participating in the foreign building sector. In the 1980s Organization A was founded, Specialise into construction & tube systems. That had carried out over 70 schemes for pipelines and tanks in Africa, Asia and Latin America. And, the challenges they face with all businesses risk assessment of ventures is not special. Hence, their risk reduction experience can have certain guidelines for their counterparts. After the value of enhancing risk management capacity was realized through the introduction of ERM, the state assets administration committee (SAAC) released the danger control guidelines of 2007. Organization B has for the past 20 years, since its creation in 1990, been committed to exploring business prospects in the overseas markets.

Instrument

The SAAC controls all public investments and manages State-owned Organization business activities. This provides instructions and supports ERM undertakings along with encouraging Centrally regulated state-owned corporations to follow the guideline. Some publicly controlled state-owned construction firms, like organization B, have attempted to develop their own ERM program. So other valuable insights to drive potential action can be learned from current ERM implementation activities. Organization B in particular was SAAC to its great action on ERM implementation. It was chosen utilizing optimal method to variance. Researchers observed that by choosing cases that vary substantially, knowledge may be gathered about the importance of specific situations for the case (utility) procedures, activity, and performance. The two case organizations are distinct in their ERM operation and quality of administration as seen in Table 2. The literature review showed that companies usually create a risk management team To merge ERM to the Quality Compliance Procedures. They also create policies for risk control, employ external service, and build an organizational culture that focuses on the risk. Thus, they plan to examine the disparity between the Through 4 viewpoints, 2 case managers seek to explain danger reduction approaches & to investigate whether ERM can affect PRM.

Table 2: Illustrates the Comparison between the Organization A and B

Risk Factors	Organization A	Organization B
Market areas	Asia, America, China and Europe	America, Africa, Europe, Asia, and China.
General condition of risk management	ERM hasn't been carried out	ERM has been carried out; Paying a lot of Education about risk control, & a range of expertise.
Ownership	State-owned and Centrally-ruled enterprise	Government regulated & locally controlled business

Operating condition	During the past 10 years, has operated more than 25 EPC ventures and 3 PMC schemes; has failed other ventures	Undertaking safe and balanced development; hiring more than 6,000 domestic and foreign workers to implement 8 billion US dollar programs.
Risk management department	Has not established the Risk Management Department (RMD) and precisely divided other department / individual responsibility at enterprise level.	Has formed an autonomous enterprise-level RMD.
Corporate risk culture	May not find future threats as a concern while making project managerial decisions.	Has built and nurtured an organizational culture centered on risk.
Risk management procedure	Lack of formal procedure	Has enhanced procedures for risk management at level of enterprise

Data Collection

The data for this analysis were obtained primarily from face-to-face interviews. This was used to assess queries and respondents were required to have in-depth responses to certain more important topics, thereby allowing for better comprehension. The interviews were performed with a variety of workers from each organization. Many were administrators or representatives of divisions at the organization stage. You will have a clearer view of PRM condition into whole company, and recognize how their research will influence and enhance PRM. Conversations were administered in a structured survey fashion, a number of other leading respondents were answered & supplementary questions are being asked throughout the think this quote, where necessary. The same concerns is:

- Was there an corporate team specialized in managing risk at stage of the company?
- What is the main purpose of setting up a branch for risk management? What kind of job does the dept of Risk Control have to do? How can it manage project uncertainties?
- Has the organisation's risk rising operational been developed for companies? Why does it affect PRM? How is PRM partnership with ERM?
- How does PRM function where no risk mitigation protocol is required?
- Have they sought to get support in managing external business risks? If not, why are they hiring external service and how is it going to affect PRM?

Data Analysis

Information is manually reviewed by labeling, description, & reciting throughout this study. Next, interaction information & associated documents are categorized and divided into analysis simplification groups (e.g., risk assessment situation, PRM & ERM disorder). The coding process is carried out recursively in circuits so that it doesn't suggest key concepts by a single round of research but are created by a wealth of data. Second, for record observation, the critical commentary or explanatory notes are annotated. Lastly, memo knowledge is being used to determine the causal & impact series of events among ERM & PRM. Data triangulation ensured accuracy of the espoused information: a case study methodology with multi-methods; Trying to interview a community of staff; & testing the relevant documents.

RESULTS AND DISCUSSIONS

Organization A has developed an autonomous organizational risk management department (RMD), that's responsible for setting systems & tactics for risk management, corporate risk mitigation, through divisions, overseeing policy and process compliance, and offering strategic assistance to the PRM. The related divisions carry out detailed risk evaluation and response, as seen in Table 3. The RMD will automate resource utilization, organize risk control of all programs and develop the PRM program and It's become most efficient. The absence of RMD may therefore lead to some bad outcomes. In Organization B, there is no RMD, no other department or person managing and chairing the risk management function of the organization at the level of the business (Table 3). Consequently, the risk reduction practice of the Organization cannot be carried out in a structured way, nor directed by a clear course of growth. The RMD can acquire more detailed information via different decreasing the asymmetry of PRM information. Of starters, several of Organization A 's overseas ventures are In Europe, africa and south America, where all have substantial financial, social & environmental threats.

Every year, RMD must assess the threats that could exist in such regions, which could not be done on an autonomous / personal contract basis, so that tasks can be referred to into advance for production of coping mechanisms. Near to the RMD, Business A periodically publishes a comprehensive study reviewing all of the programs' current challenges in PRM and summarizing best practices in risk managing. The RMD frequently arranges training & conferences on preparation to share experiences with project managers and relevant experts. Through this way the expertise and information at project level will be passed to the business scale, and Organization-wide sharing. In addition, Organization B interviewees said one of the primary issues they face is that project-level personnel lack skills and abilities in risk management. For example, the project workers may not know how to obtain evidence for claims as per insurance policies when insured property is affected. Lastly, the insurer cannot fully claim the loss.

Table 3: Illustrates the Comparison between Organization A and B in Duties of Risk Management at Enterprise Level

Organization	Duties	Departments
A	To maintain service efficiency and to prevent risks to safety and security. To evaluate and handle the economic and legal consequences of contract.	Legal, Contract and QHSE
B	To coordinate the company's risk management. Improve policy strategy and the institutional risk evaluation. To evaluate and handle the financial and regulatory threats to the deal. Identifying and evaluating project threats before bidding. To maintain service efficiency and to prevent risks to security and safety.	Planning, Commercial, Development, Marketing and Risk Management

Organization A has no specific legislation and policies on risk management, and no consistent description or division of risk management duties. As one of the risk reduction studies from Organization A shows, the lack of the RMP has been the biggest barrier to effective PRM. An interviewee from Organization A said, In many situations it would Allow a prolonged period to determine because there is no simple process and division of duties. Organization B has established Appropriate risk practices (RMP), both at enterprise stage & at product level& organization level, which separate departmental and employee roles, and offers guidelines for risk management operation. Finally, certain risks cannot be replicated early, which has created massive damages. Organization A has been seeking to shift the status quo. They evaluated their building insurance control program last year, and on that basis expect to collaborate with a university to develop a research cycle. The key material of the proceeded is the division of duty / responsibility and a knowledge sharing process. Organization B is now working to improve the current process. They consider important to create best network of

communication among level of the business and level of the project.

It is since organization A has started to develop new industries and organization fields in recent years, including EPC (engineering-procurement-building) or BOT (build-operate transition) projects. All this demand that stakeholder bear greater liability and risk. For e.g., for BOT ventures, so all planning, acquisition, design, project finance, and project execution will be carried out by the contractor. This needs more regular and timely contact at project and business level, which is something that Business A plans to continue to pursue which engage. To sum up, implementing a risk management plan will render the organization's PRM more realistic and offer a foundation for risk reduction at both categories of the business and the level of the project. Both companies plan the protocol at the business level to achieve a clearer understanding of the current organizational framework, the division / allocation of duty / responsibility, and the interaction among divisions at level of project at the level of business.

At the enterprise stage, there are more opportunities and technical knowledge; both of these benefits will help the company build an effective RMP to increase PRM performance.

Companies also found out preparation danger was highly complex in nature, but the specific expertise and resources of the organization are minimal. We then need to switch to external services (ES) for support, such as consulting companies or academic organizations, particularly if they choose to start a modern organization. That is expressed in the current strategy associated with fields for BOT ventures in Company B. They expect to recognize the potential threats and establish the risk-responding approach in advance to ensure the effectiveness of their first BOT project. Yet this job is hard to do on their own, because they lack the necessary expertise. Consequently, they received support from advisors, analysts and the professional building firms. Best Buy has collaborated with experts in the evolution of the building insurance fund, as stated in the previous portion. This is worth remembering that the expense of recruiting the external contractor is often cheaper than performing the job in-house. Company A's corporate and compliance team head said: Since they become acquainted with the foreign insurance Organization, they typically hire insurance agents to support us cope with insurance-related issues, so they will pass liabilities to insurers of fairly small insurance costs so good quality coverage.

In the meantime, the interviewees clarified that the project will recruit the ES on its own, but typically needs a lengthy search and consultation process, which is time consuming. At the other side, enterprise-level bargaining with the ES will take maximum advantage of the size benefit to provide better support at a cheaper price. Thus, both businesses aim to develop long-term, enterprise-level relationships with the ES. And whether it's a fresh Start, there is no need to re-select or discuss the ES, and the project team will provide a time-efficient, time-saving solution straight from the ES. Corporate culture is a gateway to risk reduction performance. It is the foundation of many plays, which is a significant element of the operation of an entity and a vital factor of effectiveness. In fact, certain elements of organizational culture may help reduce danger directly from the project. Company B, for example, is dedicated to providing feedback to the local society. When developing schools and hospitals, they help municipal councils and establish strong working ties with local communities and residents, thereby reducing certain dangers.

CONCLUSIONS

This research adds to the information base of PRM development by revealing it can affect PRM in the development sector and Organization. Results demonstrate that ERM may have a beneficial impact on PRM adoption. Furthermore, the results further indicate that construction companies can monitor project risks at the business level by fostering a risk-concentrated

community, create a risk assessment department, build up a risk control system & get extra help, and thereby increase the efficiency of PRM. Depending on the criteria, the two case firms were chosen to ensure that adequate knowledge could be gathered, support the researchers in general findings of the case study which should be taken as a logical model set. The details are obtained from two building companies, though, so the conclusions are preliminary, and must be viewed and implemented with care. Potential work may require collecting data from other building companies to determine how the results can be strengthened. Nevertheless, this constraint does not completely negate the assumption that the evidence found in present work indicates ERM 's role to boost PRM.

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