Implementation Of Risk Management in Malaysian Construction Industry

Mohd Subki Bin Abdul Kadir [1,] Asmawi Muhammad [2] and Jamaliah M. Sopi[3]

[1,2,3] *Department of Civil Engineering, Polytechnic Kota Bharu, Kelantan, Malaysia.*

**Corresponding author:[3] jamaliahsopi@pkb.edu.my*

Abstract Applying risk management techniques to projects will improve project performance and efficiency in terms of cost, time and quality for both clients and contractors. Risks are involved in any construction project. Risk management is key to a successful project. Risk management is useful for both clients and contractors. Risk management includes three main processes and they are risk identification, Risk assessment and Risk response. Implementation of the risk management process before the start of any phase of the project will lead to less impact on the cost, time and quality of the project. Project risk reduction will reduce disputes between contractors and clients and reduce risk for both contractors and clients. Therefore, a well-drafted contract can list all the risks associated with the project and establish appropriate mitigations for these risks. The objective of this paper is to identify the level of risk management acceptance and consequences of improvement after appling risk management faced by the contractor. The construction industry is a very important industry for the economic development of the country. However, the industry has faced a serious problem of failure to complete projects within the stipulated time and cost. Thus, the purpose of this study is to assess the risk of various factors that cause excess time and cost throughout the life cycle of a construction project in Malaysia. Factors identified from previous studies. Risk management is a useful technique for the contractor to identify risks when designing new concept

Keywords: Construction Risk Management, Contractors, Construction, new concept.

INTRODUCTION

The construction business significantly contributes to the GDP (gross domestic product) growth of any nation by creating value, creating jobs, and increasing output. Risk management is crucial to achieving project goals due to the complexity of building projects, which contain diverse hazards affecting multiple stakeholders. A risk management strategy, which is a way to detect risks, can help a company or organisation run more effectively. The risk management cycle includes the identification, evaluation, mitigation, and ongoing monitoring of threats. Organisations and enterprises will advance as a result of this strategy's flexibility to alter and update assessments. This offers a way to evaluate the assessment and revise it as new information becomes available. Due to the complexity of construction projects, which involve different risks affecting various stakeholders, risk management is essential to attaining project goals. An organisation or business can operate more efficiently with the aid of a risk management strategy, which is a means to identify risks. Threats are identified, assessed, dealt with, and recurrently monitored as part of the risk management cycle. Because of this strategy's ability to modify and update assessments, organisations and businesses will advance. This provides a mechanism to analyse the evaluation and make revisions when new information comes to light. The objective of strategic risk management is to reduce potential dangers. The main goals of strategy risk management are to decrease the likelihood and effects of unfavourable events while increasing the likelihood and effects of positive events on the project. According to Abdul-Rahman, Wang, and Sheikh Mohamad (2015), delays, cost overruns, and a drop in project quality are all typical negative risks in construction projects. The risk reduction plan, which is

Crucial for sustaining the project's schedule, must include the identification of potential hazards (Ahmed, 2017). Due to resource constraints, businesses find it difficult to implement effective risk management (De Arajo Lima et al., 2020; Mitter et al., 2020; Verbano and Venturini, 2013; Jarillo, 1989). Potential risks must be addressed because the risk reduction strategy is essential for maintaining the project's schedule (Ahmed, 2017).

Recieved on 30 July 2023; Accepted on 15 August 2023; Publish online on 8 November 2023
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OBJECTIVE

The risk management is to identify the real components of risk management procedure being accepted projects and to ascertain the effects of risk management implementation on the quality, time and cost.

RESEARCH PROBLEM

In Malaysia's construction industry, risk management is still a relatively new concept, with only a few businesses using it. Hamimah et al. claim that Malaysia's industry has a bad reputation for risk management. Never before has risk management been more important than it is now. The increasing globalisation has led to a more complex evolution of the risks that contemporary businesses must deal with. The constant emergence of new risks is often a result of or related to the already pervasive use of digital technology. the recent external risk of the coronavirus pandemic, which at initially surfaced as a supply chain concern at several

However, they will have to deal with new hazards in the future, such as how to deal with them. Only a few organisations in Malaysia's construction industry are using risk management, making it a relatively new idea. Both academics and business professionals use the tools. According to Hamimah et al., Malaysia's industry has a bad reputation for risk management. There are two methods for identifying hazards in the risk management process: checklists and brainstorming. Every day, new threats surface, many of which are related to and made worse by the current pervasive use of digital technology. Yet in the future, they will have to cope with fresh threats, such how and when to put workers back to work and how to make their supply networks less vulnerable to disasters.

The growing need for risk management within enterprises is not sufficiently addressed by the project management approach now in use. As a result, many projects don't have adequate risk management procedures. A system that can effectively manage risk must be more dynamic than the risk itself. If not, it will likely struggle to fit in with corporate culture and other business practises. Despite the time and attention put into planning and deploying a system, it may not accomplish its aim right away and will need constant calibration. This requires the management's leadership, patience, wisdom, resources, and time. 2013 (Choudhry).

LITERATURE REVIEW

Even though it makes up less than 5% of the GDP, the building industry is a strong growth engine because of its extensive links with other economic sectors. (CIDB, 2006). The development and construction of highways, oil refineries, electrical or other transmission lines or towers, pipelines, and buildings are just a few of the projects that the construction industry is involved in, and it unquestionably makes a big contribution to Malaysia's wealth. (CIDB, 2006). According to Flanagan and Norman (1993), there are a variety of parties involved in the construction industry, including clients, consultants, and contractors, and each has a particular role to perform and task to fulfil. Any decision and investment made in a project must, therefore, deliver a risk/return profile that is competitive with the best that the financial market has to offer, claim Flanagan and Norman (1993). Therefore, any project-related choice and investment must have a risk/return profile that is competitive with the best the financial market has to offer. The client had little trouble understanding how important risk management was when deciding whether to start a construction project. a risk/return profile that, excluding the client, can compete with the best on the financial market. Numerous other members of the construction team, such as consultants, contractors, subcontractors, and suppliers, carry risks in addition to the client. This assertion is supported by Sawczuk (1996), who underlined that, regardless of how modest or simple the project may be, once the client and the contractor have signed a contract, they have accepted the risks.

Every construction company uses risk management as part of their decision-making process. One of the most exciting, dangerous, and challenging professions is construction. Due to numerous big projects missing deadlines and going over budget, the industry has a poor reputation for risk management. This is greatly influenced by changes in the weather, labour and plant productivity, and the quality of the materials. Risks are routinely ignored or handled carelessly, for example by adding a 10% contingency to the estimated cost of a project. This approach is frequently insufficient in the complex construction sector, which leads to expensive delays, legal action, and even bankruptcy (Hayes et al., 1986). Risk management must be considered in any construction company's decision-making process. Risk and ambiguity can be hazardous. Uncertainty and risk may be harmful to some construction projects for every building company. No matter the industry, the ability to effectively identify and manage risks will influence how quickly institutions and organisations can recover and rebuild, demanding a reassessment of risk management practises.

Recieved on 30 July 2023; Accepted on 15 August 2023; Publish online on 8 November 2023
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Construction risks are broken down into numerous categories according to the various project phases. Each risk category will receive a response, and all dangers associated to it will be listed:

1) The customer is responsible for ensuring that only competent and experienced bidders are solicited uncertainty and risk could be detrimental to some construction projects for every building company

2) A hazy scope of work should be as clear, unequivocal, and specific as feasible. If the task is not clearly defined, there will be a variety of gaps.

3) Range creep The scope of the project could grow and become more difficult as a result of the stakeholders adding more needs. Due to this, the project will be in danger.

4) There will be a time and financial impact on the project. A review of risk management practises is necessary because, regardless of the industry, the ability to quickly identify and manage risks will have an impact on how quickly institutions and organisations can recover and rebuild.

SAMPLE AND POPULATION

Naturally, risk management and risk assessment are very important to project management. In general, there has been increasing focus on the importance of risk management in enterprises. The most frequently used management standards, such as ISO 9001, ISO 1001, and ISO 45001, have altered in their most recent iterations, and the risk management standard ISO 31000 has emerged and is likely to see growing use, both of which are examples of this tendency. (2020). Experts from all over the world concur on ISO standards. Project issues with implementation and expense overruns are also frequent [Flyvbjerg, 2006].

It is common knowledge that making bad decisions during the project planning phase can result in costly and serious project complications. Managers and staff from construction firms that are registered with the Malaysian city of Kuala Lumpur's CIDB (Construction Industry Development Board) serve as the study's population. The researchers successfully applied simple random sampling to all workers and managers from the construction. The questionnaire was then disseminated to the chosen sector, and the researchers used the computer to choose the necessary respondents from the list of all construction sector participants before gathering information on the project success-related elements. Variables * 10= n in which the sample size would be 60 considering of having 6 variables in this current study.

TABLE 1 above provides an insight into what the respondents think positively consideration towards the risk management strategies in the construction industry.

Consideration towards risk	**Respondents**	
Positive	60	100
negative	0	0
neutral	0	0
total	60	100

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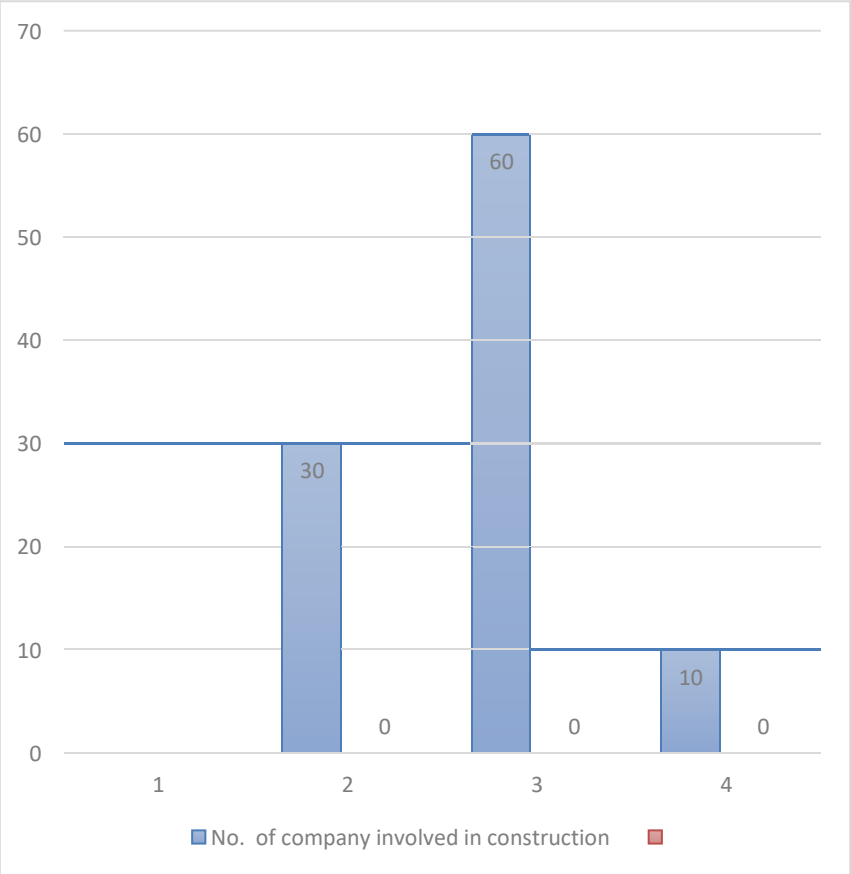

FIGURE 1. Number of companies involved in construction

30 (G7)	**less 5 years**
60 (G4,G5,G6)	between 5-10 years
10 (G1,G2,G3)	more than 10 years

FIGURE 2. Level of Risk management acceptance among organization

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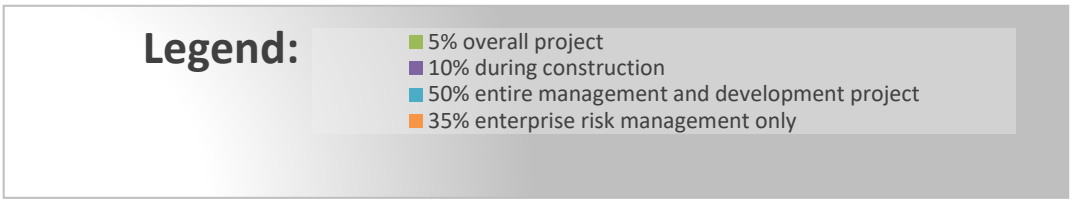

Pie chart above provides acceptance of level risk management strategies in the construction industry.

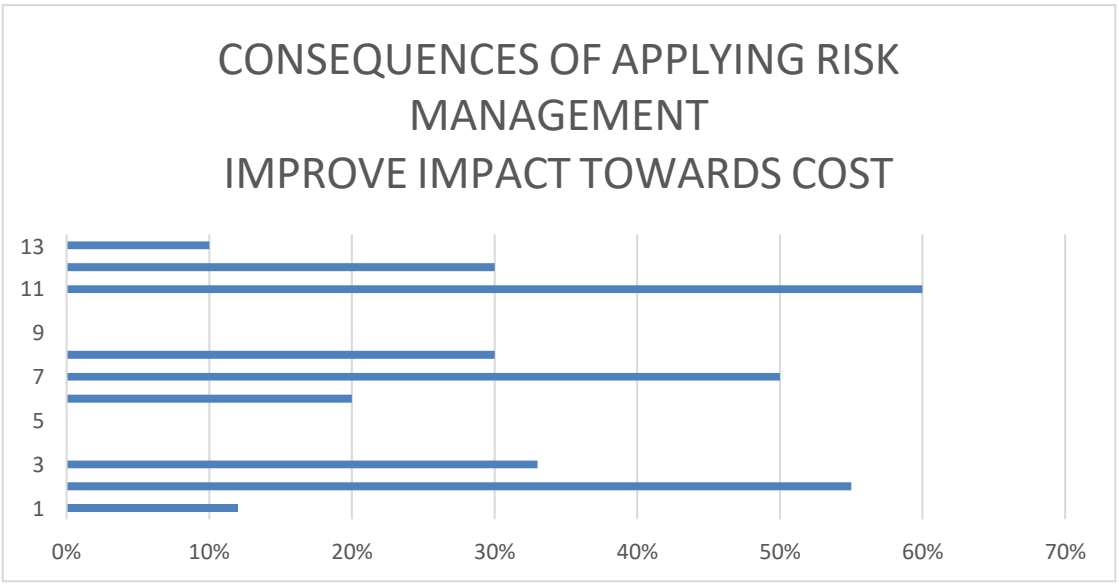

FIGURE 3 above provides an improving cost into what the respondents think positively consideration towards the risk management strategies in the construction industry. Category G7 is the highest score in time impact.

TABLE 2. Number of samples of company involved in construction

30	less 5 years	G7
60	between 5-10 years	G4,G5,G6
10	more than 10 years	G3,G2,G1

Grade	Limit for tender
G1	Not exceeding RM200,000
G2	Not exceeding RM500,000
G3	Not exceeding RM1 million
G4	Not exceeding RM3 million
G5	Not exceeding RM5 million
G6	Not exceeding RM10 million
G7	No limit

Source: Construction Industry Development Board Malaysia (CIDB)

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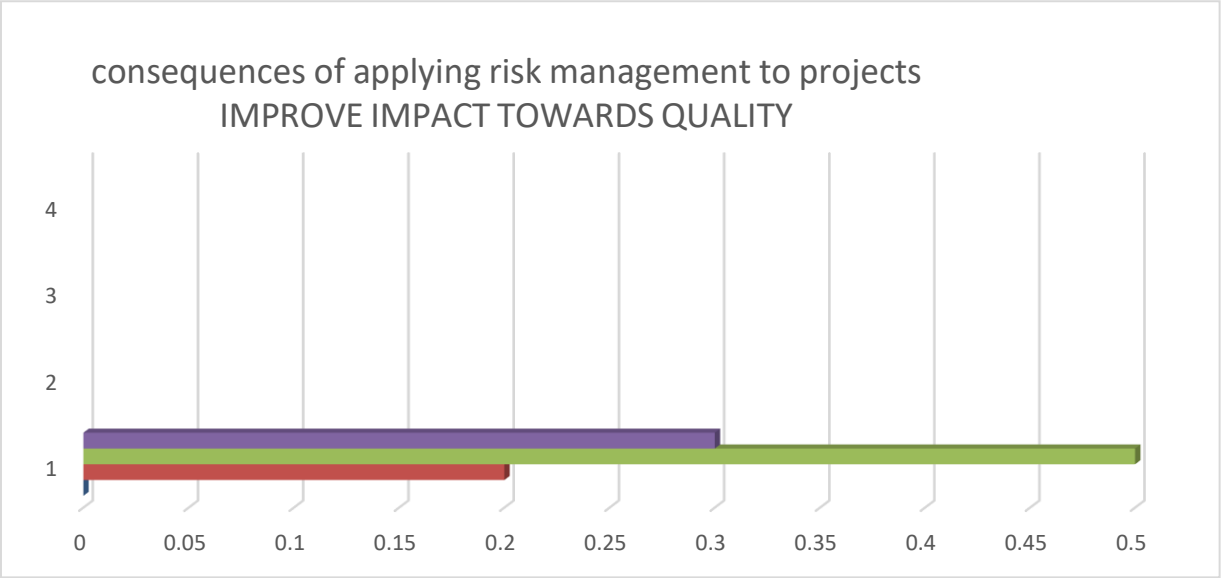

FIGURE 4 Above provides an improving quality into what the respondents think positively consideration towards the risk management strategies in the construction industry. Category G4,G5,G6 is the highest score in quality impact.

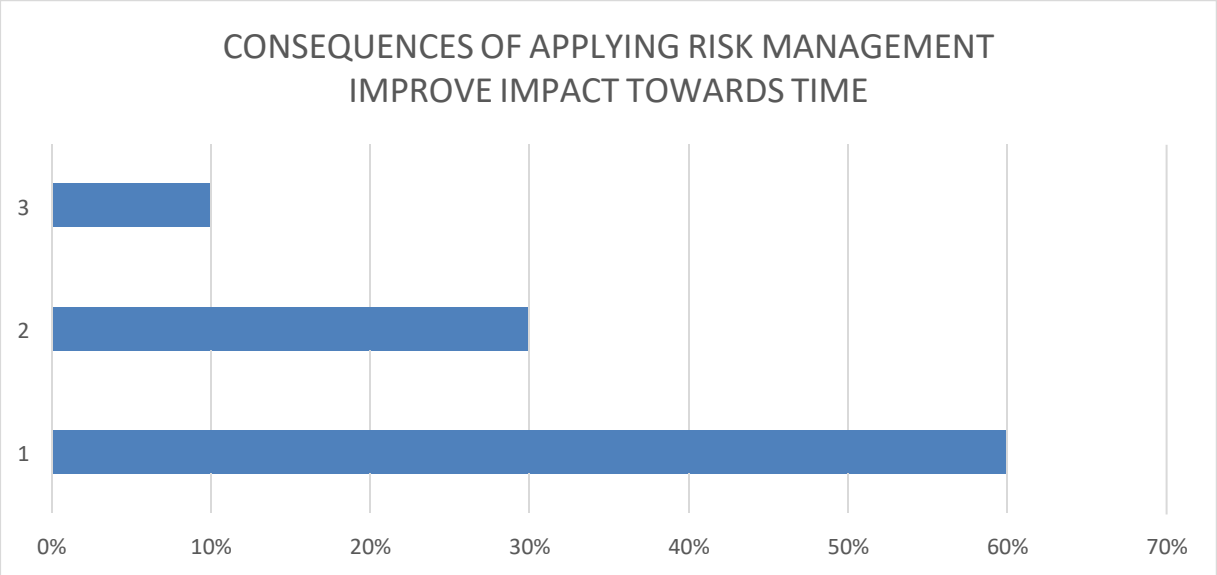

FIGURE 5 above provides an improving time into what the respondents think positively consideration towards the risk management strategies in the construction industry. Category G7 is the highest score in time impact.

DISCUSSION AND CONCLUSION

One sector of the economy that is subject to numerous expected and unforeseen risks is the construction sector. These risks may have a higher effect on project budget, performance, and quality. Therefore, a good and systematic risk management strategy is required to manage risk in the most effective way possible in order to assure the project's success. For managing risks in a construction project, our different tactics include risk avoidance, risk transfer, risk mitigation, and risk acceptance. According to the questionnaire's results, there are a few three-factor repercussions of risk management practiced in their business, such as towards cost, quality, and time. Despite studies indicating low levels of risk management acceptance in the client's business, this group's impression of risk management is quite positive. Despite studies indicating low levels of risk management acceptance in the client's business, this group's impression of risk management is quite positive. The majority of

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them concur that risk can influence project budget, productivity, performance, and quality. Additionally, respondents concur that risk management should be used in specific types of building projects, such as those involving new technology. Although preliminary findings suggest that most respondents are unaware of risk management, there is good feedback regarding respondents' perceptions of risk management. There is a better future to be adopted in this business and this new idea will gradually gain greater acceptance.

It is crucial to choose a strategy that can lower risk for all project participants. No project can be guaranteed to be risk-free. However, a significant amount of risk can be decreased by carefully crafting the contract document. No project can be guaranteed to be risk-free. However, a significant amount of risk can be decreased by carefully crafting the contract document. The method should be chosen after identifying the project's risks and the factors that have a substantial impact on its performance, studying them, and deciding on the best ways to mitigate them. Risk management is a useful technique used by contractors. In discussions of risk management, many experts emphasise that managing risk is a formal position for companies that are heavily regulated and whose business entails risk when the topic of risk management is brought up. For instance, G7 businesses have long maintained sizable risk departments that are often run by a chief risk officer (CRO), a position that is currently largely reserved for G6, G5, G4, G3, and G2 sector. Furthermore, since the risks that financial services organisations confront are frequently based on numerical data, they may be successfully evaluated and studied using well-established techniques and technology. Risk situations in financial institutions can be roughly modelled. The level of risk management must be deliberate, exhaustive, and consistent for G4, G5, and G6 contractors because risk tends to be more qualitative and hence tougher to control. By detecting, prioritising, and focusing on risks that could prevent value from being produced, preserved, and achieved or that potentially degrade current value, enterprise risk management practises help an organisation. While some risks have only a slight impact on a company, others have a more significant one. It also helps the company take advantage of potential new opportunities, which is as important.

In order to achieve the objective of maximising shareholder value and growing market share while maintaining a positive reputation, a company must take efforts to ensure organisational risks are routinely discovered and studied for effective management of identified risks. The Board of Directors and Senior Management must uphold a professional dissatisfaction in order to advance and uphold the risk management culture at all levels. The strategy should not be developed in isolation of risk management practices because there may be elements in the strategy that may lead the organization to potential and significant operational and financial losses if the timely risk assessment processes are not performed for each component of the strategy. In order to analyse the corporate strategy from a risk perspective, the organisation routinely includes the risk management team in this process. It becomes crucial for risk management experts to take into account the organizationally relevant economic considerations and legal standards that must be met during the execution of the strategy.

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