

Chapter 2

Literature Review

The researcher has studied concepts, theories and related research used to determine the research guidelines as follows:

1. Concept of Risk Management
2. Concept of Rules and Regulations
3. Concept of Risk Nature
4. Concept of Risk Impact
5. Concepts & Theories of Risk Management
6. Strategy Priority
7. Related Research

Concept of Risk Management

In both the public and private sectors, risk management (RM) has taken center stage in discussions about society and the economy. The adoption of RM frameworks and techniques in the public sector, which began in the 1980s, may be considered as a component of the modernization effort under New Public Management (NPM) (Lapsley, 2009, pp. 1-21). RM is seen as a governance instrument that supports policy decisions and decision-making (Mikes, 2011, pp. 226-245; Power, 2007; Hutter & Power, 2005 cited in Bracci, et al., 2022, p. 399). This pattern is related to a change in how risk is conceptualized (Power, 2007 cited in Bracci, et al., 2022, p. 399), moving away from an objective, measurable process guided by rules of probability and toward a process that takes into account unknown, unquantifiable uncertainties and dangers (Spira & Page, 2003 cited in Bracci, et al., 2022, p. 399). The interest in and importance of RM in the public sector have increased as a result of recent events like the financial crisis and the COVID-19 outbreak. Its centrality is highlighted not just by the public management discussion but also by regulators and policymakers (Black, 2005 cited in Bracci, et al., 2022, p. 398). The growing body of research on RM in the public sector focuses on a number of RM-related topics, including the impact and diffusion of formal RM practices and systems as well as informal ones (Palermo, 2014); integration of RM within an organizational process (Rana, et al., 2019, pp. 37-45); and contingency factors that affect RM (Subramaniam, et al., 2011, pp. 132-157). Additionally, there is still a

dearth of empirical data supporting the RM. In the academic literature, RM has only been briefly discussed. Little has also been learned about how RM is perceived and used at different organizational levels (Bhimani, 2009, p. 25). Mohammad (2014 cited in Wadesango, et al., 2018) states that successful implementation of RM requires compatible information systems that enable organizational information. He emphasized that risk management supported by information systems improves organizational performance. Anord acknowledged that a risk management system is a success factor as it can improve an organization's performance. A study by Hashim, et.al. (2012, pp. 167-182) showed that the integration of RMS and information technology has a strong relationship with improving business performance. A study by Al-Gharaibeh and Malkawi (2013, pp. 101-109) demonstrated that implementing RM processes in information systems improved the performance of public sector institutions. Many literature reviews have rejected arguments against adopting risk management information systems as a better success factor for improving healthy RMS. Their discussion demonstrated the use of organizational innovation and/or the application of new ideas as critical success factors in implementing risk management systems. Dugguh and Diggi (2015, pp. 66-73) hypothesized that sourcing new and different ideas would facilitate risk management and improve organizational performance. Mbizi, et.al. (2013, pp. 370-389) argue that innovation is the most important success factor that can support the implementation of RMS to achieve a better business position. A literature review by Zumitzavan and Udchachone (2014, pp. 272-282) suggested that new ideas within an organization can enable effective implementation and, as a result, have a significant impact on organizational performance. Various reviews by Manab and Kassim (2012, p. 405) argue that the implementation and success of risk management practices are the result of appropriate employee competencies. Hohan, et.al. (2015, pp. 289-295) also ignored the use of information system elements, pointing out that management skills are an important factor in the implementation of the risk management process. An analysis by Ahmed and Manab (2016, pp. 830-836) showed that all factors can contribute to the successful implementation of a risk management system. They also agreed with the proposal that factors such as management commitment, risk management and information systems integration have a positive impact on an organization's financial health. Scientists were unable to name a clear success factor. Dabari and Saidin (2015, pp. 740-754) agreed with other authors that an ineffective RMS is a key predictor of poor financial performance, but did not identify a key success factor. An IMF Analysis cites a lack of risk management as the main reason for poor organizational performance. Gates, et al. (2012, pp. 28-38) were

unbiased in identifying critical success factors. They found that most organizations in developing countries do not have risk management processes in place.

1. Rules and regulations have a significant influence on risk management:

Compliance with rules and regulations is a crucial aspect of risk management in many industries. Adhering to relevant laws and regulations helps organizations identify and address potential risks and ensures legal and ethical conduct. For citation and further research on this topic, you can explore academic journals and publications related to risk management, regulatory compliance, and specific industries or sectors of interest.

2. Risk impact has a significant influence on risk management:

Understanding the potential impact of risks is essential for effective risk management. By assessing the magnitude and consequences of different risks, organizations can prioritize their efforts and allocate resources accordingly. To find research citations on this topic, you can search for studies on risk assessment, impact analysis, and risk management methodologies.

3. Risk nature has a significant influence on risk management:

The nature or characteristics of risks can vary widely across different contexts and industries. Factors such as the likelihood of occurrence, severity of impact, and the ability to control or mitigate risks all influence the risk management approach. Research on risk taxonomy, risk classification, and risk characterization can provide insights into how risk nature affects risk management practices.

4. Strategy priority has a significant influence on risk management:

The prioritization of strategies and objectives can shape the overall approach to risk management within an organization. Different strategies may prioritize risk avoidance, risk mitigation, risk transfer, or a combination of approaches. Research on strategic risk management, decision-making frameworks, and risk management frameworks can offer relevant insights into the influence of strategy priority on risk management.

Concept of Rules and Regulations

Rules and regulations are an important part of construction risk management because they provide a framework for making sure that legal and ethical standards are followed and that the effects of risks on construction projects are kept to a minimum. People in academia agree that rules and regulations are important, and several studies have looked at the role of rules and regulations in the building sector. In 1998, Goh and Love did a study to find out how laws and regulations affect safety in construction

in Singapore. The study indicated that strong enforcement of rules and regulations may make construction sites much safer and reduce the frequency of accidents and injuries. The study suggested that construction organizations increase safety by coming up with good safety management plans that include following rules and regulations. In another study, Uzarski, et al. (2007, pp. 557-567) looked at how rules and regulations are used in the US construction industry to deal with environmental risks. The study concluded that following environmental rules might make environmental risk occurrences have far less of an effect on building projects, which would improve project outcomes and lower liability risks. The study suggested that construction organizations create effective environmental risk management plans that include following rules so that risk events have less of an effect on how projects turn out. In the same way, Loosemore and Lim's 2015 study looked at how rules and regulations affect the risk of corruption in the construction business. The study indicated that strong anti-corruption measures, such as strict enforcement of laws and regulations and openness in the procurement process, might make corruption risk events on building projects much less harmful. The study suggested that construction organizations create effective corruption risk management plans that include following rules and regulations to make sure that risk occurrences don't have too much of an effect on project results. Overall, the research shows that rules and regulations are a very important part of risk management in the building business. By following rules and regulations, the effects of risk events on construction projects can be greatly reduced, which can improve project outcomes and lower the risk of responsibility. To make sure a project goes well, construction companies must come up with comprehensive risk management plans that include following norms and regulations.

Concept of Risk Nature

The nature of risk in the construction sector is what makes risk occurrences unique to the construction industry. Understanding what risk is and how it works is important for making good risk management plans and reducing the effects of risk events on construction projects. Many academic papers and studies have talked about how important the nature of risk is. For example, various studies have looked at the nature of risk in the construction industry. Tam, et al. (2004, pp. 569-586) did a study on how risk works in the Hong Kong construction industry. The study found a number of risk variables that were unique to the construction sector. These included environmental factors, design issues, and organizational factors. The study suggested that construction

organizations establish risk management plans that take into account these distinct risk elements to lessen the effects of risk events on project results. Odeyinka and Yusif (1997, pp. 31-44) did another study on the nature of risk in the Nigerian building industry. The study found that the Nigerian construction industry has several specific risk factors, such as not enough planning, bad project management, and a shortage of experienced workers. The study suggested that construction organizations establish risk management plans that take into account these distinct risk elements to lessen the effects of risk events on project results. In the same way, Loosemore, et al. (2003, p. 108) looked into how risk works in the Australian construction industry. The study found a number of risk variables that were unique to the Australian construction sector. These included industry culture, procurement methods, and contractual arrangements. The study suggested that construction organizations establish risk management plans that take into account these distinct risk elements to lessen the effects of risk events on project results. Overall, the research shows that the nature of risk in the construction sector is complicated and varied, with distinct risk variables in different places and situations. To make sure projects go well, construction businesses need to come up with comprehensive risk management plans that are suited to the unique risks of their sector and region.

Concept of Risk Impact

Risk impact refers to the potential consequences or outcomes that may result from a risk event. The impact of risk is a critical factor in risk management, as it helps to assess the severity and likelihood of risk events and inform risk mitigation strategies. The importance of risk impact has been widely acknowledged in the academic literature, with several studies examining the impact of risk on project outcomes in the construction industry. One study by Akintoye and MacLeod (1997, pp. 31-38) investigated the impact of risk on construction project performance in the UK. The study found that risk events could have a significant impact on project outcomes, including delays, cost overruns, and quality issues. The study recommended that construction companies develop risk management strategies to mitigate the impact of risk events on project performance. Another study by Kangari and Riggs (1989, pp. 126-131) examined the impact of risk on construction project cost in the US. The study found that risk events could account for a significant portion of project cost, with some projects experiencing cost overruns of up to 100%. The study recommended that construction companies develop risk management strategies to control project cost and minimize the impact

of risk events. Similarly, a study by Zou, et al. (2015, pp. 317-320) investigated the impact of risk on project outcomes in the Chinese construction industry. The study identified several risk factors, including project complexity, contract management, and environmental factors, that could significantly impact project outcomes. The study recommended that construction companies develop risk management strategies that address these risk factors and mitigate the impact of risk events on project outcomes. Overall, the literature suggests that risk impact is a critical factor in the success of construction projects. Risk events can have significant consequences on project performance, including delays, cost overruns, and quality issues. It is essential for construction companies to develop effective risk. Zhang and Tiong (2020, pp. 224-239) looked at how risk occurrences affect how well a building project works. They found that risk events, such as delays, cost overruns, and quality problems, have a big effect on how well a project does. Jha and Iyer (2019) looked into how hazards affect how well a construction company makes money. They concluded that companies that handle risks well do better financially than companies that don't. Chai, et al. (2020, p. 2274) looked at how risks affect how well the construction business does at keeping people safe. They showed that risk events had a big effect on safety performance, making construction sites more likely to suffer accidents and injuries. Zou, et al. (2018, pp. 73-82) looked at how hazards affect how well construction projects stay on time. They observed that risk events have a big effect on how well a project is done on time and on budget, causing delays and cost overruns. Alhazmi and Liyanage (2019, pp. 159-168) looked into how risks affect how sustainable practices are used in the building business. They observed that risk events can make sustainable practices less likely to be used, which can lead to environmental and societal concerns.

Concepts & Theories of Risk Management

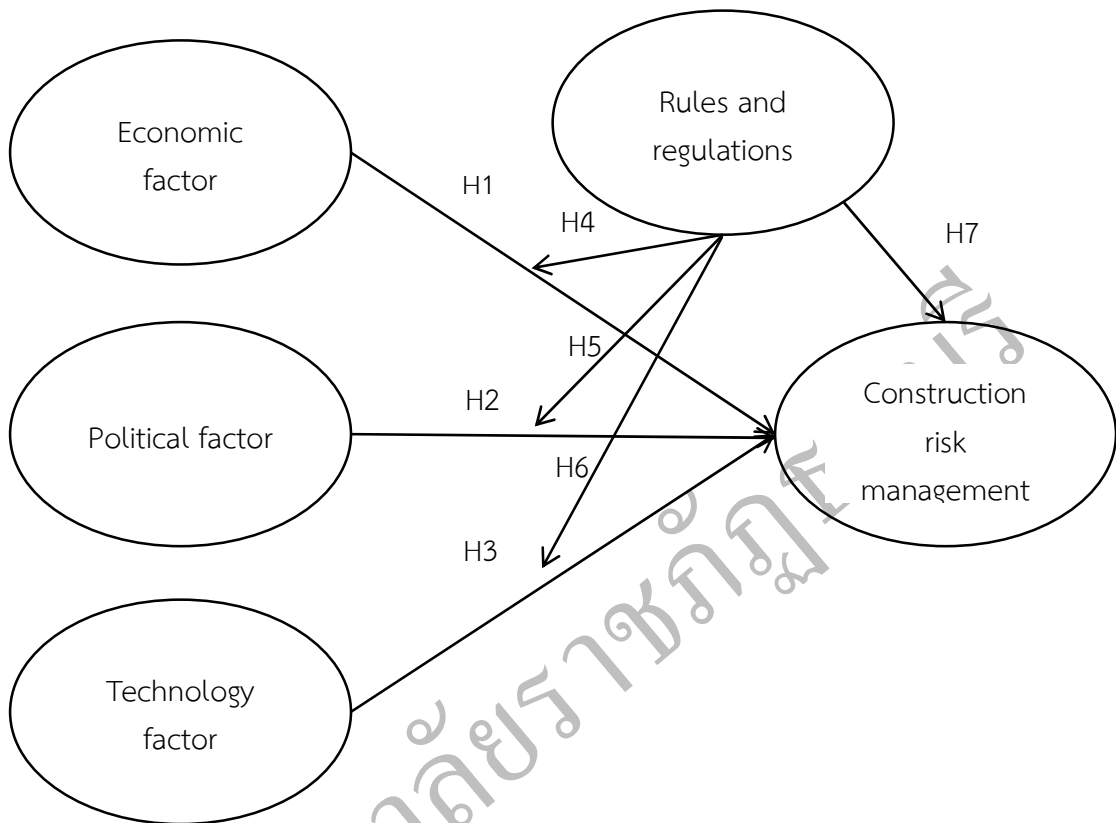


Figure 2.1 Concepts & Theories of Risk Management
(Adeleke, et al., 2018, pp. 115-124)

It was claimed that there was a considerable beneficial association between organizational external variables (Economy & Political) and construction risk management. A substantial favorable association between rules and regulations and construction risk management was also discovered in this study. As expected, rules and regulations were shown to significantly influence the association between organizational external variables and construction risk management. Similarly, a substantial interaction impact between rules and regulations and organizational external variables was discovered. The research's implications from a Nigerian perspective have also been examined.

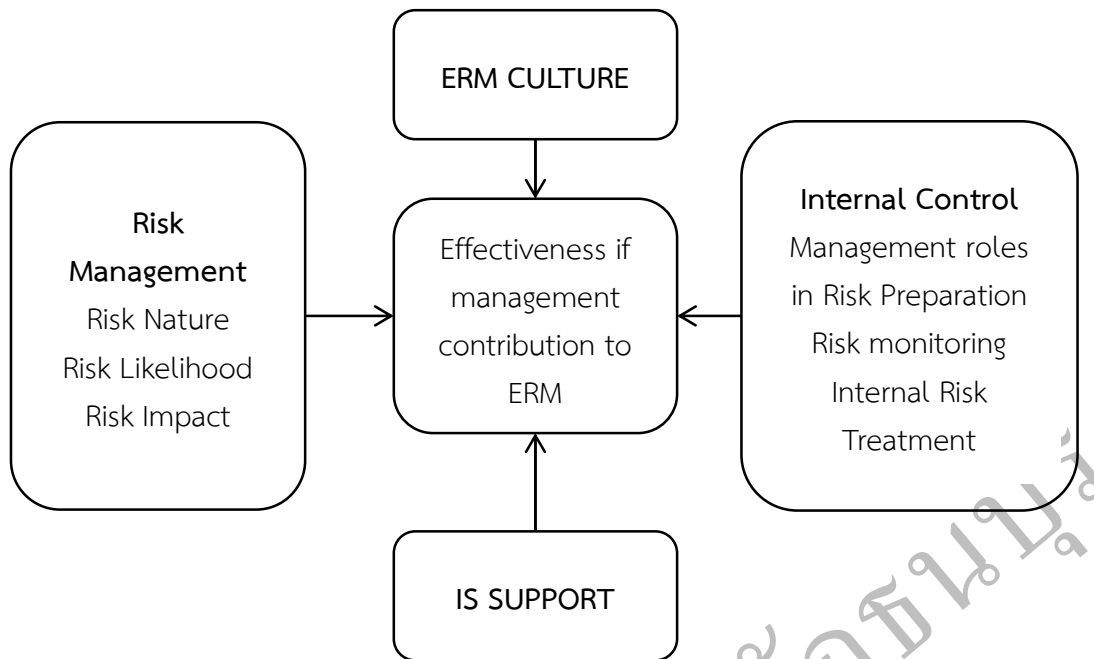


Figure 2.2 Risk Management influential factors (Soin & Collier, 2019, pp. 82-87)

Construction organizations were able to lower the likelihood of risks occurring during construction operations by taking into account both the nature of the risks and the potential impact such risks may have. The use of Risk Likelihood contributed not only to a reduction in the number of accidents involving construction workers but also to a shortening of the overall time of the projects. In a similar vein, the influence of organizational external factors with Risk Likelihood on construction risk management has demonstrated that the majority of construction companies that implement the aforementioned factors have the opportunity to deliver their projects within the stipulated time, cost, and qualities, which can be used as a yardstick to measure the quality of a good project. This was discovered through the study of the relationship between Risk Likelihood and the organizational external factors.

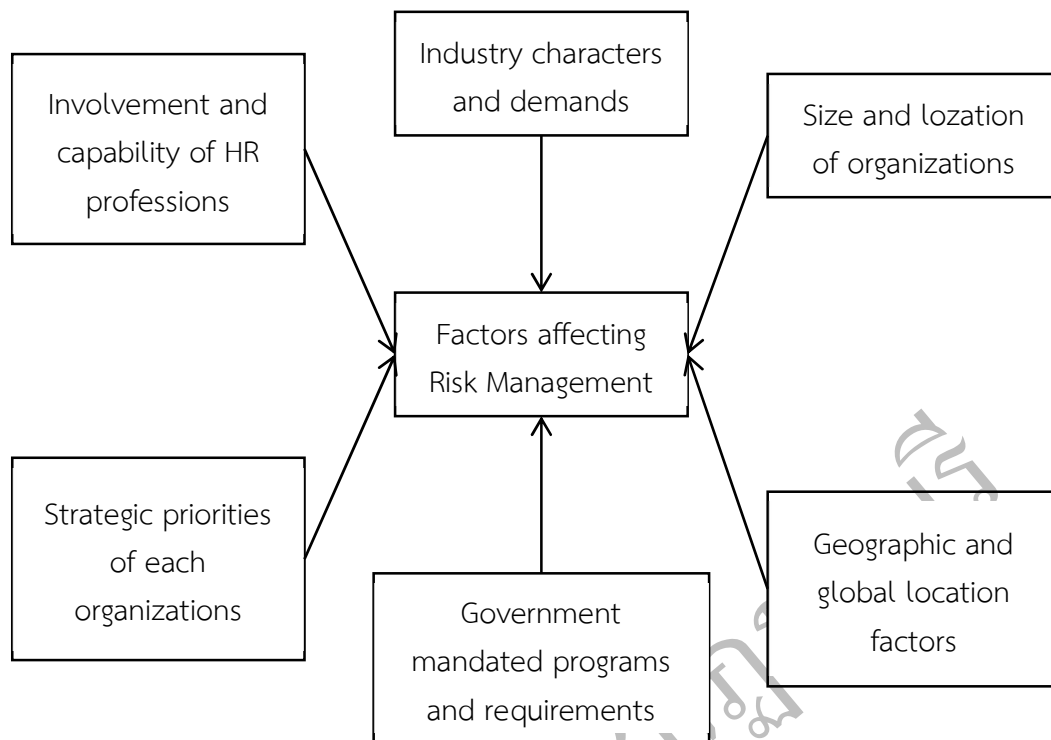


Figure 2.3 Risk Management (Kousky & Kunreuther, 2018, pp. 181-204)

This chapter will review and summarize the Kousky & Kunreuther (2018, pp. 181-204) which are currently widely recognized internationally. Enterprise Risk Management Framework and a review of relevant foreign and domestic research such as the Guidelines on Comprehensive Risk Management for Central Enterprises issued by the State-owned Assets Supervision and Administration Commission of the State Council of the PRC in 2018.

Strategy Priority

Strategy priority refers to the order in which a company's strategic objectives are ranked in terms of importance (Mintzberg, 1978, pp. 934-948). This prioritization of strategic objectives is critical in the development and implementation of an effective strategic plan. The importance of strategy priority has been widely acknowledged in the academic literature, with several studies examining the impact of strategy priority on business performance and success. One study by Kurniawan and Suharyono (2017, pp. 95-108) found that the alignment of strategy priority with business objectives and values was positively related to firm performance in the Indonesian construction

industry. The study found that companies with a clear and well-defined strategy priority achieved better financial performance, higher customer satisfaction, and greater employee engagement. Another study by Chinyio and Olomolaiye (2011, pp. 251-266) examined the impact of strategy priority on construction project success in the UK. The study found that companies with a higher priority on safety achieved better project outcomes, including fewer accidents, lower costs, and better quality. Similarly, a study by Shenhar and Dvir (2007, p. 191) found that companies with a clear and well-defined strategy priority achieved higher levels of project success in the US construction industry. The study identified four types of strategy priority (efficiency, market, technology, and capability) and found that companies that aligned their strategy priority with their project objectives achieved better project outcomes. Overall, the literature suggests that strategy priority is a critical factor in the success of construction companies and projects. Companies that prioritize safety, sustainability, innovation, or other strategic objectives achieve better financial performance, higher customer satisfaction, and greater employee engagement. It is essential for construction companies to align their strategy priority with their business goals and values to ensure long-term success in the industry. Liu, et al. (2019, p. 04019047) did a study on how strategic priorities and the success of a building project are connected. They observed that for a project to be successful, the strategic aims of project managers and senior management have to be in sync. They also observed that the amount of prioritizing of strategic goals is linked to the success of a project. Yang, et al. (2019, pp. 215-239) looked into how the construction industry's strategy priorities affect innovation. They found that companies that put innovation at the top of their strategic goals are more likely to use new techniques and technologies. This makes the companies better at what they do and makes them more competitive. Nguyen, et al. (2023, pp. 833-852) looked at how strategy priority affects the way risk management is done in the construction business. They discovered that organizations whose strategic goals put risk management at the top are more likely to have good risk management practices, which lead to better project results and lower costs. Zheng, et al. (2019, pp. 374-384) looked at how the construction industry's strategy priorities affect sustainable development. They found that companies that put sustainability at the top of their list of strategic goals are more likely to use sustainable practices, which is good for the environment and society. Zheng, et al. (2019, p. 23728) looked into how strategy priority affects how well safety is done in the construction business. They found that companies whose corporate goals put safety first are more likely to have good safety management procedures. This means that construction sites will be safer and have fewer accidents.

Related Research

1. Relation Between Rules and Regulations and Risk Management

Rules and regulations are a key part of making sure that hazards in the construction sector are managed well. Several studies have looked into the link between laws and regulations and how the construction industry handles risks. Ameyaw, et al. (2020, p. 2135) did a study that looked at how rules affect construction risk management in the UK. The study concluded that laws played a big part in getting the business to use good risk management methods. The study suggested that construction businesses make sure they are following the rules as part of their risk management plans. This would help the projects turn out better. In the same way, Goh and Love's (1998, pp. 51-59) study looked at how rules and regulations affect construction safety in Singapore. The study indicated that strong enforcement of rules and regulations may make construction sites much safer and reduce the frequency of accidents and injuries. The study suggested that construction organizations increase safety by coming up with good safety management plans that include following rules and regulations. Ogunsemi, et al. (2016, p. 04015077) did another study that looked at how rules affect construction risk management in Nigeria. The study concluded that laws were a very important part in getting the industry to use good risk management methods. The study suggested that construction businesses make sure they are following the rules as part of their risk management plans. This would help the projects turn out better. Overall, what we know about risk management in the construction business implies that rules and regulations are important parts of it. Compliance with rules can help people manage risks better and improve the results of a project. To make sure a project goes well, construction companies must come up with comprehensive risk management plans that include following norms and regulations.

2. Relation Between Risk Impact and Risk Management

Risk impact is a key part of how well hazards are managed in the construction sector. Several studies have looked at how the impact of risk and how it is managed in the sector are related. Aibinu and Jagboro did a study in 2002 that looked at how risk affects construction projects in Nigeria and how successful they are. The study indicated that good risk management methods might lower the effects of risk events on project outcomes by a lot, which would increase the number of successful projects. The study suggested that construction businesses come up with effective ways to deal with risks so that they have less of an effect on how projects turn out. In the same way, Hosseini, et al. (2015, pp. 317-327) looked at how risk impact and safety management

work together in the construction business. The study demonstrated that good safety management methods can make a big difference in how safety risks affect the results of a project. This makes the project safer and reduces liability concerns. The study suggested that construction businesses come up with effective ways to control safety hazards so that they have less of an effect on how projects turn out. Zayed, et al. (2014, pp. 1195-1210) did another study that looked at how risk management strategies affect how risks affect building projects in Egypt. The study indicated that good risk management methods might lower the effects of risk events on project outcomes by a lot, which would increase the number of successful projects. The study suggested that construction businesses come up with effective ways to deal with risks so that they have less of an effect on how projects turn out. Overall, the research shows that good risk management procedures are very important in the construction industry to reduce the effects of risk occurrences on project outcomes. It is important for construction organizations to create effective risk management plans that include risk impact analysis to reduce the effects of risk events on project outcomes.

3. Relation Between Risk Nature and Risk Management

In the construction sector, there are many different kinds of risks, from safety risks to financial risks. Effective risk management procedures are a must if these risks are to have less of an effect on how a project turns out. Several studies have looked at how the type of risk and how it is managed in the industry are related. Zhang, et al. (2020, pp. 149-161) looked into the link between the type of risk and the success of construction projects in China. The study indicated that good risk management procedures may lower the effects of hazards on project outcomes by a large amount, no matter what kind of risks were included. The study suggested that construction businesses come up with effective ways to deal with hazards so that they have less of an effect on how projects turn out. Odeyinka, et al. (2016, pp. 423-439) also looked at the association between the type of risk and the success of a project in the UK construction industry. The study indicated that good risk management procedures may lower the effects of hazards on project outcomes by a large amount, no matter what kind of risks were included. The study suggested that construction businesses come up with effective ways to deal with hazards so that they have less of an effect on how projects turn out. In 2014, Naoum and Egbu did another study that looked at how risk management methods affect the success of building projects in the Middle East. The study indicated that good risk management procedures may lower the effects of hazards on project outcomes by a large amount, no matter what kind of risks were included. The study suggested that construction businesses come up with effective

ways to deal with hazards so that they have less of an effect on how projects turn out. Overall, the research shows that good risk management methods are important for reducing the effects of risks on project outcomes, no matter what kind of risks are included. It's important for construction organizations to come up with good risk management plans that include risk analysis to lessen the effects of hazards on how projects turn out.

4. Relation Between Strategy Priority and Risk Management

The construction industry is inherently dangerous, and a project's success depends on how well risks are managed. In the construction sector, putting risk management at the top of the list demands a strategic plan to find and deal with issues. Several studies have looked at how strategy priority and risk management work together in the business world. Ogunsemi, et al. (2016, p. 04015077) did a study on how strategy priority and risk management work together in the UK construction industry. The study indicated that construction businesses who made risk management a top priority as part of their overall strategy had much better project results than those that didn't. The report suggested that construction businesses make risk management a top priority as part of their overall plan to improve the way projects turn out. In the same way, Ogunsemi, et al. (2016, p. 04015077) looked at the link between strategy priority and risk management in the Portuguese construction industry. The study indicated that organizations whose overall strategy put risk management at the top had much better risk management practices and better project results than those whose overall strategy didn't put risk management at the top. The report suggested that construction businesses put risk management at the top of their list of priorities as part of their overall plan to improve risk management practices and project results. In another study, Zayed, et al. (2014, pp. 1195-1210) looked at how risk management methods affect the success of building projects in Egypt. The study found that construction organizations who put risk management at the top of their list of priorities had much better risk management practices and better project results than those that didn't put risk management at the top of their list of priorities. The report suggested that construction businesses put risk management at the top of their list of priorities as part of their overall plan to improve risk management practices and project results. Overall, the research shows that making risk management a top priority as part of a company's overall strategy is essential to the success of a construction project. As part of their overall strategy, construction businesses must put risk management at the top of their list of priorities if they want to improve their risk management procedures and the way projects turn out.