Contents available at the publisher website: G A F T I M . C O M

International Journal of Theory of Organization and Practice (IJTOP)

Journal homepage: https://journals.gaftim.com/index.php/ijtop/index

Operational Risk Management (ORM) as an Approach to Optimize Sustainability in the Construction Industry

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A R T I C L E I N F O

Keywords:
Operational Risk Management (ORM), Construction Industry, Risks, Sustainability

Received: Oct, 11, 2023
Accepted: Nov, 23, 2023
Published: Dec, 22, 2023

A B S T R A C T

In the contemporary domain, sustainable construction projects are growing in the market with advanced standards. With the application of new materials and technology in construction, there has been an exponential surge in risks. The significance of risk administration in optimizing sustainability in construction ventures is, therefore, augmenting. This study was aimed at expanding insights into project-related operational risks in the construction sector and their management. It was requisite to get familiar with good practices in the sector to suggest effective recommendations relating to the topic. The proposed study examined operational risk management (ORM) as an approach to optimize sustainability in the construction industry. We assumed an archival study and secondary analysis to construe the study hypothesis. Data gathering utilized both primary and secondary approaches. The questionnaire was used to reinforce the research outcomes. Data analysis involved categorization using a network of relationships. The results from 10 articles sampled in the study indicated that while most actors in the construction sector understand the importance of risk management, the role played by ORM in improving sustainability is not widespread.

1. INTRODUCTION

Globally, the construction sector is considered a primary economic contributor within developed countries and is a growing market for developing ones. Nevertheless, a slow-down in the yield rate, this industry remains the leading industrial sector worldwide. Conceptually, project performance has always signified a crucial issue in the construction sector. Therefore, it becomes imperative to understand what ventures mean. According to (Rachid et al., 2017), projects denote the means of valuable change concerned with forming something that never existed previously. Such ventures represent how construction corporations characteristically meet their objectives and implement their approaches. Most building ventures enshrine distinct stages conventionally covered in the most available works. The framework presented in Figure 1 reveals the standard project phases. Across the distinct construction venture life cycle, optimizing sustainability performance becomes an indispensable feature in realizing the objective of sustainable growth (Pieket Weeserik & Spruit, 2018). This study assumes the definition of sustainability as the development satisfying present requirements without compromising the capacity of future generations to satisfy their needs. (Tsai & Liao, 2017) indicates that many

establishments have adopted the sustainability concept through their mission strategy and statements to cope with corporate goals in a period demanding the application of different environmental and social approaches (Hsu et al., 2014). Frontrunners in various industries have been evaluating and assuming systematic measures to optimize their sustainability impact (I. Akour et al., 2021; M. T. Nuseir et al., 2021). This is predominantly by acknowledging that reorienting towards optimizing sustainability is requisite for guaranteeing their long-term feasibility (Pitinanondha, 2008).

Figure 1: Venture Development Cycle

In the context of the construction sector, sustainable growth has evolved as a novel and crucial agenda for improved practice. However, it is characterized by the enhanced utilization of resources and the development of structures with low social and ecological impacts (Samad-Khan, 2008). Therefore, it is imperative to note that construction sector has effectively passed the milestone of acknowledging the significance of integrating and optimizing sustainable growth into the core of its practices.

1.1. Construction Risks

Nonetheless the success attributed to the sector, challenges grow when implementing sustainability guidelines within the traditional construction sector (H. Alzoubi et al., 2022; M. T. Nuseir, Aljumah, & El Refae, 2022a). Usually, the construction enterprise evolves in an incessantly turbulent setting. According to (Yang et al., 2017) (Al-Dmour et al., 2023; Mat Som & Kassem, 2013), sustainable construction growth in the setting relies on the rapid development of scientific and technological progress and individuals' outlooks concerning venture sustainability (Elkhatib, M., Al Hosani, A., Al Hosani, I., & Albuflasa, 2022). With advanced technological development and augmented complexity, project management has emerged as a requisite approach for managing and delivering more effective ventures in line with intended cost, time, and quality (A. I. Aljumah, Nuseir, et al., 2022c; Khan et al., 2022). A key element in venture success is attributed to good risk handling and identification that could affect the scope (A. Al-Maroof et al., 2021; A. I. Aljumah, Nuseir, et al., 2022a; Ghazal, Hasan, Abdullah, et al., 2023). It should be noted that operation risk management (ORM) denotes a vital aspect of project management with much application in the construction sector (Alshawabkeh et al., 2021; Amiri et al., 2020; M. El Khatib et al., 2023). This is since ventures occasionally fail to satisfy deadlines or overrun costs. When ORM is effectively employed, it impacts the performance and accomplishment of the projects (El khatib, Beshwari, et al., 2023; Louzi, Alzoubi, El Khatib, et al., 2022). It is vital as it occasions to informed decisions, particularly in the sector that is willing to accommodate risks to meet its operational objectives (Kassem & Martinez, 2022) (Tariq, Alshurideh, Akour, Al-Hawary, et al., 2022). Building ventures are typified by their intricacy and diversity, commonly described as multifaceted tasks with even the creation of miniature size ones necessitating the advanced skills, duties, and materials (Lykourentzou et al., 2011).

Construction ventures are exposed to various threats during inception (A. H. Al-Kassem, 2017; M. M. El Khatib et al., 2023; Louzi, Alzoubi, Alshurideh, et al., 2022). However, it is imperative to identify the risks present at the various stages and assess their management (H. M. Alzoubi, Alshurideh, Kurdi, et al., 2022). With the contemporary world demanding sustainable undertakings in all sectors, the construction sector requires to thrive towards sustainable practices (M. T. Alshurideh, Obeidat, Victoria, Alzoubi, et al., 2022; M. El Khatib, Al Qurashi, et al., 2021). Hence, diverse risks arise along the sustainable constriction process since it is an evolving and developing sector. This study focuses on employing ORM to optimize sustainability in the context of construction project lifecycles when threats may still advance.

1.2. Research Gap

The concept of risk management in construction ventures has been explored across the literature. Moreover, considerable extensive studies have

been conducted in the recent past. Among the primary outcomes of the endeavors includes the identification of venture risks towards attaining sustainability (Ahmed & Nabeel Al Amiri, 2022). Importantly, the identification phase of the ORM is the most studied since it is essential in classifying the threats linked to the venture to manage them and leverage them appropriately. When construction projects are assessed from a venture life cycle viewpoint, risk identification becomes a challenge (H. M. Alzoubi, Alshurideh, Al Kurdi, et al., 2022). An extended venture life cycle standpoint is required since most risks in the operation phase necessitate management. However, it should be noted that there exists a gap between the sustainable building practices' current knowledge and related risk identification (Aityassine et al., 2022; H. Al-Kassem, 2014; Almasaeid et al., 2022). Therefore, the background and research gap have led to the following study hypothesis: ORM as an approach plays a considerable role in optimizing sustainability in the construction industry. This study aims to understand whether construction corporations that aspire for sustainable practices can employ ORM to effectively identify the risks related to the practices and ultimately optimize sustainability (H. M. Alzoubi, Ahmed, et al., 2022; M. El Khatib, Khadim, et al., 2023; M. T. Nuseir, Aljumah, & El Refae, 2022b).

2. LITERATURE REVIEW

Several scholars have managed to evaluate the ways ORM manages risk and also promotes sustainability. Some of the authors also identified how ORM effectively optimized risks and sustainability.

2.1 Ways ORM Manage Risk and Sustainability

In a study conducted by (A. Aljumah et al., 2023; Gaytan et al., 2023; E. Khatib et al., 2021) in the green building projects, they identified that the best framework for managing risks are through proper selection of the contractors, having a time buffer that can accommodate all the legal processes, and the establishment of a financial model which is deliberately proactive (M. Alshurideh, Alzoubi, Alshurideh, Kurdi, et al., 2022). Green risks are most likely to increase when a company decides to adopt sustainable aspects in their construction projects (Al-Kassem et al., 2012; Aziz et al., 2023). It makes it essential for the constructors to establish green construction that can help them to come up with the best strategies that can effectively influence how the risks are managed (M. Alzoubi et al., 2021; Mubeen et al., 2022). (Ahmed et al., 2022; R. S. Al-Maroof, Alnazzawi, et al., 2022) has identified that managing project risk and any other possible uncertainty means that the people responsible for the construction should conduct thorough search while exploiting the right opportunities (R. S. Al-Maroof, Alnazzawi, et al., 2021; M. T. Alshurideh, Alzoubi, El khatib, et al., 2022; M. M. El Khatib & Ahmed, 2018). It is the best way to enhance the performance of the project which includes the synergies among the various interests that might arise among the parties involved (M. El Khatib et al., 2022; Lee, Nawanir, et al., 2023).

2.2 Ways ORM Optimize Risk and Sustainability

The majority of the risks faced by organizations are associated with the environmental or in other cases social issues. identified that a life-cycle perspective of the project is important for consideration because it will enhance the risk optimization process. A decisive success factor will be necessary when it comes to assessment of risks. (H. M. Alzoubi, Ghazal, El khatib, et al., 2022; M. T. Nuseir & Aljumah, 2022) argued that risk can be optimized through the use of various technologies which include work flow, analytics, and dashboards among many others. However, it would require proper planning and also the full control of the cycle of project (Bawaneh et al., 2023; M. El Khatib, Ibrahim, et al., 2023). It means that regardless of the environmental risks, many companies with the appropriate measures and strategies in place, it is possible to achieve sustainability while managing all major risks that the construction company is facing (I. Akour et al., 2022; M. El Khatib, Yaish, et al., 2021; M. T. Nuseir, Aljumah, & El-Refae, 2022).

Operational Risk Management (ORM) has emerged as a critical framework for organizations seeking to optimize sustainability in the face of dynamic and complex operational environments (Nadzri et al., 2023). This literature review synthesizes insights from prior research studies to elucidate the role of ORM in fostering sustainability across diverse industries (H. M. Alzoubi, In'airat, et al., 2022; M. El Khatib et al., 2021). Research in ORM underscores its conceptual foundations as a comprehensive

approach to identify, assess, and mitigate risks that could impede operational effectiveness (I. A. Akour et al., 2022; A. H. Al-Kassem et al., 2022). Studies emphasize ORM as an iterative process embedded in organizational culture, contributing to long-term sustainability goals. Studies showcase the symbiotic relationship between ORM and sustainability principles (M. T. Alshurideh, Alzoubi, Ghazal, et al., 2022; Ghazal, Hasan, Alzoubi, et al., 2023; Yasir et al., 2022). ORM is seen as a strategic tool aligning risk mitigation efforts with sustainability objectives, ensuring that organizations proactively address environmental, social, and governance (ESG) concerns (A. Al-Kassem et al., 2013) (Tariq, Alshurideh, Akour, & Al-Hawary, 2022).

Exploring the intersection of ORM and stakeholder management, research highlights how a robust ORM framework enhances stakeholder confidence (M. El Khatib, Khayat, et al., 2023; M. T. Nuseir & Aljumah, 2020). Effective risk management practices positively influence perceptions of organizational responsibility, thereby contributing to sustainable relationships with stakeholders (Al-Awamleh et al., 2022; Arshad et al., 2023; M. El Khatib, Zitar, et al., 2023). Specifically, within the realm of environmental sustainability, ORM is identified as a catalyst for identifying and mitigating operational risks associated with environmental impacts [73], [74. Studies delve into how ORM frameworks contribute to sustainable practices, resource efficiency, and compliance with environmental regulations (H. M. Alzoubi et al., 2020; Blooshi et al., 2023; M. Nuseir & Elrefae, 2022). Research underscores the pivotal role of ORM in optimizing sustainability within supply chains (A. Aljumah et al., 2020; M. El Khatib et al., 2022). ORM practices aid in identifying risks associated with suppliers, ensuring the continuity of the supply chain, and mitigating potential disruptions that may impact sustainability goals (M. T. Alshurideh et al., 2023; M. T. Nuseir et al., 2020). While ORM holds promise in optimizing sustainability, studies also acknowledge challenges and barriers in its integration (A. I. Aljumah, Nuseir, et al., 2022b; H. Alzoubi & Ahmed, 2019). These may include organizational resistance, a lack of awareness, and the need for a unified approach to embed ORM within sustainability strategies (M. T. Alshurideh, Alquqa, Alzoubi, Al Kurdi, & Alhamad, 2023) (Abudaqa et al., 2022; A. I. Aljumah, Shahroor, et al., 2022; Lee, Wong, et al., 2023).

Efforts to quantify the impact of ORM on sustainability have led to the development of specific metrics (M. Alshurideh et al., 2023). Research explores the establishment of key performance indicators (KPIs) that assess the effectiveness of ORM in achieving sustainability objectives (I. Akour et al., 2023; M. M. El Khatib et al., 2019), providing organizations with measurable benchmarks (H. M. Alzoubi, Sahawneh, Alhamad, et al., 2022; M. El Khatib et al., 2020; Gulseven & Ahmed, 2022; M. T. Nuseir, 2020). Examining real-world applications, case studies illuminate instances where organizations have successfully integrated ORM principles to optimize sustainability outcomes (H. Alzoubi et al., 2020; M. El Khatib, Ahmed, et al., 2023; Hani Al-Kassem, 2021; Sakkthivel et al., 2022). These practical examples offer insights into the strategies employed and lessons learned from the convergence of ORM and sustainability (M. T. Alshurideh et al., 2023) (R. S. Al-Maroof, Alahbabi, et al., 2022).

The synthesis of research studies underscores the multifaceted relationship between Operational Risk Management and sustainability (AlDhaheri et al., 2023; M. El Khatib, Alzoubi, et al., 2023; Ghazal, Hasan, Ahmad, et al., 2023). ORM is not merely a risk mitigation strategy but a holistic approach that, when strategically integrated, contributes to the optimization of sustainability across various dimensions (Amiri et al., 2020; M. T. Nuseir, 2021; Varma et al., 2023). As organizations navigate an increasingly complex business landscape, understanding the synergies between ORM and sustainability becomes imperative for achieving long-term resilience and responsible business practices(A. I. Aljumah et al., 2021a).

3. METHODS

This study undertakes a constructionist outlook as risks may regularly vary depending on guidelines, actions, and influences. The concept of sustainability is understood to be constituted by social interactions. The study intends to employ social constructivism as a philosophical standpoint as a guide in developing a questionnaire so as to answer the research question that also plans to interpret and analyze collected outcomes subjectively. With the primary aim being to

understand the role of ORM in optimizing sustainability, constructivism assumptions are requisite and relevant to the study and may help in the replication of the research results. The study similarly acknowledges that the author's values and preconceptions of the subject might influence the study.

3.1. Research Design

This study employs archival study and secondary analysis to construe the research hypothesis. This design is applicable since there is a broad range of literature and data. Moreover, the subject is expansive to study directly. Furthermore, it tries to explore the association and impact on the building sector while confronting potential risks within ventures. Importantly, most data is of good quality involving ORM and its implications on sustainability (M. T. Alshurideh, Alquqa, Alzoubi, Al Kurdi, & Hamadneh, 2023; H. M. Alzoubi, Kurdi, et al., 2022; M. El Khatib, Beshwari, et al., 2023). The study is requisite as it provides the foundation for data manipulation within distinct data sets and extensive analysis (Alhamad et al., 2021; Farrukh et al., 2023). It is a preferred design since being part of qualitative research, it helps triangulate with relevant focus groups in exploring the research hypothesis.

3.2. Data Assortment

Both secondary and primary information gathering styles will be employed. Primary data will involve going directly to the source and utilizing questionnaires. Secondary data will be assembled from bibliographic catalogs and archives. Crucial information will be obtained through the search by topic and keywords. Importantly, the study concentrates on secondary data since public sustainability and ORM records and documents will be accumulated to gain an improved understanding of how the construction sector uses ORM to augment sustainability. Combined with the primary data, it will grant a holistic view of the sector's processes consistent with the purpose of this study.

3.3. Selection

The population is selecting based on the research hypothesis. Therefore, resources and archival data on corporations in the construction industry will be targeted for data gathering. Construction Managers in ADNOC Refining and Borouge will be provided questionnaires to help in the implementation of ORM to optimize sustainability. A non-probability sample will be used, considering the nature of the study and the uncertainty of how large the sample can be and the limitations of generalizations. Such samples are utilized to offer facts regarding distinct cases or participants in the population enclosed in the study that is important for it. Thus, self-sampling will be employed and will involve construction managers in working for different companies who will be contacted via email.

3.4. Data Evaluation

The recorded data was systemized in relation to the theoretical context advanced by the topics covered in the study. The analysis was undertaken in the order of coherence towards arriving at the necessary conclusions. Data categorization involved the following network of relationships.

3.4.1. Integrity of Study Outcomes

The credibility of the study findings is closely linked to the findings and whether they may be generalized. It considers whether they are reliable and valid. The study has employed analytical findings to attempt and improve the theory already established by using archival resources and literature of some of the biggest and most successful establishments within the construction sector. This measure ensures that the results may be generalized and applied also for further exploration in a similar setting. The credibility of the study findings was arrived at by selecting data gathering approaches and processes so that they produced reliable results.

4. RESULTS

Most articles published in the previous years were linked with the implementation of ORM in the construction sector. Based on the 10 articles focused on in this study, the expected results in the articles were expressed in percentages that were classified separately. The categories and percentages are as follows: result assessment in implementing risk management (55%), types of risk factors impacting sustainability (20%), and awareness of ORM to improve sustainability (25%).

Figure 2: Research Finding Summary

The research results revealed that while considerable players in the construction industry understand the significance of risk management, there is reduced familiarity in the role played by ORM in improving sustainability. Most employees in the construction sector still lack consciousness of ORM despite their increased perception of the matter. Concerning risks, the industry equals economics at the universal level. Nonetheless, it is a complex sector and does not always reveal a positive performance.

The specification of the objective limitation related to risk factors holds increased importance for the application of ORM in the construction sector to optimize sustainability. In particular, sustainability and financials are the key risks encountered by the sector followed by quality factors. Realizing the three scopes of sustainability, including ecological, social, and commercial ones, in building ventures is the principal risk. The results indicated the lack of knowledge of, as well as experience, and expertise in sustainable construction and management as the key factors. Other sector risks include strategic and regulatory ones. In countering these risks that inhibit sustainability, the systematic application of ORM is requisite.

5. DISCUSSION

During the analysis of the archival data information in relation to the ORM approach in advancing sustainability in the construction industry, many general findings were discovered. Nevertheless, the dearth of connection between the application of ORM and optimized sustainability, in general, was experienced. The questionnaire targeted to help the researcher to establish particular details and discrepancies between the literature and the real-world.

5.1. ORM in Augmenting Sustainability

A literature search and analysis of information from archival studies indicate that management theories have a robust foundation, particularly in the construction sector. Venture risk administration and sustainability in the building sector are extensive topics. Various researchers that have examined the theoretical framework of ORM in enhancing sustainability offer significant insights into venture risks that have been considered as being occurrences or uncertain instances that provoke a positive or negative impact on project goals. In some cases, they are considered unfavorable possible possibilities. Within a venture, a risk administration process is requisite in ensuring the attainment of its goals. In particular, operation risks relate to the adverse deviation of the company's performance due to the nature of the operation as opposed to how it is financed (M. Alshurideh, Almasaeid, El Khatib, Alzoubi, et al., 2022; M. M. El Khatib & Ahmed, 2020). Thus, addressing operation risks represents a key approach towards augmenting value for a company.

Operation risk management has evolved as a vital aspect in contemporary projects. It has developed into a culture, processes, and structures that are

intended to attain potential prospects while managing adverse occurrences. Conceptually, managing opportunities and risks within ventures is an integral component of effective management. Importantly, project goals are realized better through ORM with benefits ranging from detecting likely bad outcomes, as well as leveraging on the desirable ones.

A close relationship between ORM and improved sustainability is observed in the role of ORM within the venture life cycle. In this context, ventures signify finite endeavors that end with the delivery of the final product or results, or are consistent with the project goals. Nonetheless, an effective culmination of a project life cycle necessitates effective risk management. In particular, the identification phase is considered one of the most crucial to a successful ORM. However, it is imperative to note that undetected risks are unmanageable (R. S. Al-Maroof, Alhumaid, et al., 2021). The other phases involve risk quantification through the assessment of probability and impact. ORM similarly involves risk monitoring, which encompasses documentation and reassessment to guarantee effective measures.

ORM has a considerable role in construction ventures. The industry has been considered among the most active and dynamic ones globally; though, it enshrines varied risks. ORM is of great importance in construction ventures as they commonly fail to meet deadlines. Thus, it is evident that ORM's role in the industry is underscored by various reasons. Ventures in the sector are distinctive, thus involving threats (Abudaqa et al., 2021; El khatib, Mahmood, et al., 2023). They involve diverse actors, varied approaches, and consumption of efforts among others. Importantly, construction projects are continually inclined to achieve sustainability.

Sustainability is referred to in most literature and is employed broadly to denote the satisfaction of a company's direct and indirect stakeholders. This is without affecting its capability to satisfy the requirements of prospective shareholders. Importantly, it integrates social, economic, and environmental features both in the short and long term. This sustainability concept relating to social, economic, and environmental dimensions makes it conceivable to be integrated into project management. In the context of the construction industry, the concept provides a reaction to issues of environmental impact and resource utilization.

However, there exist numerous challenges in sustainable construction. It is obvious that the building sector change immensely to satisfy the challenges of construction. Changes are likely to transpire in the policy, technology, education, incentives, and construction process areas among others. Therefore, ORM in the construction sector is supposed to facilitate and optimize sustainability (A. I. Aljumah et al., 2021b; Ghazal, Al-Dmour, et al., 2023). This aspect of risk management is largely interested in environmental and social responsibility risks. Optimizing sustainability will necessitate sustainability risk management, which implies embedding sustainability threats into the risks register and handling them appropriately. Most of the risks that inhibit sustainability fall into existing and emerging environmental, governance, and social risks. They arise when corporate conduct or actions of the functioning environment create susceptibilities that might occasion operational, financial, or reputational losses in value.

The review of data reveals that ORM is an emerging field with little exploration made on it. Importantly, improper ORM in the construction sector might leads to severe breakdown of process continuity, which can result in considerable losses. ORM is a safeguard that construction establishments should take into account not only to retain corporate continuity in check but also to safeguard its sustainability. Thus, it is evident that ORM enshrines all risk assessment approaches and measures of an entity's ongoing process, risk resolution-making, implementation of risk controls, and primary risk indicators among others. When properly managed, they guarantee that the industry could optimize sustainability.

6. CONCLUSION

The primary objective of this study involved determining whether establishments in the construction sectors can identify risks related to these practices that inhibit sustainability. It also involved understanding how the risks could be managed through ORM without compromising the sustainability goals. The research hypothesis was: *'ORM as an approach plays a great role in optimizing sustainability in the construction industry.'* By exploring the study hypothesis, several conclusions were pointed out. Firstly, risk

management denotes a very vital aspect of construction ventures as they often fail to satisfy deadlines or overrun costs. There is still a lot to accomplish in risk management in the construction sector. This is due to the increasing significance of the performance and success of construction ventures where risks' outcomes are so pertinent. Nonetheless, the success of building projects to optimize sustainability depends on the effective application of operational risk management. Another conclusion from the study is the existence of possible risks, including new technologies, practices knowledge, and expertise among others, in the projects connected to sustainable construction. These issues are ingrained within the venture development cycle. Nonetheless, the research results indicated that effective ORM serves to optimize sustainability in such ventures.

- *Recommendations*

Based on the empirical findings and the analysis of how establishments in the construction sector operate in terms of risks, this study may propose a simple model that may be followed to achieve enhanced sustainability through ORM.

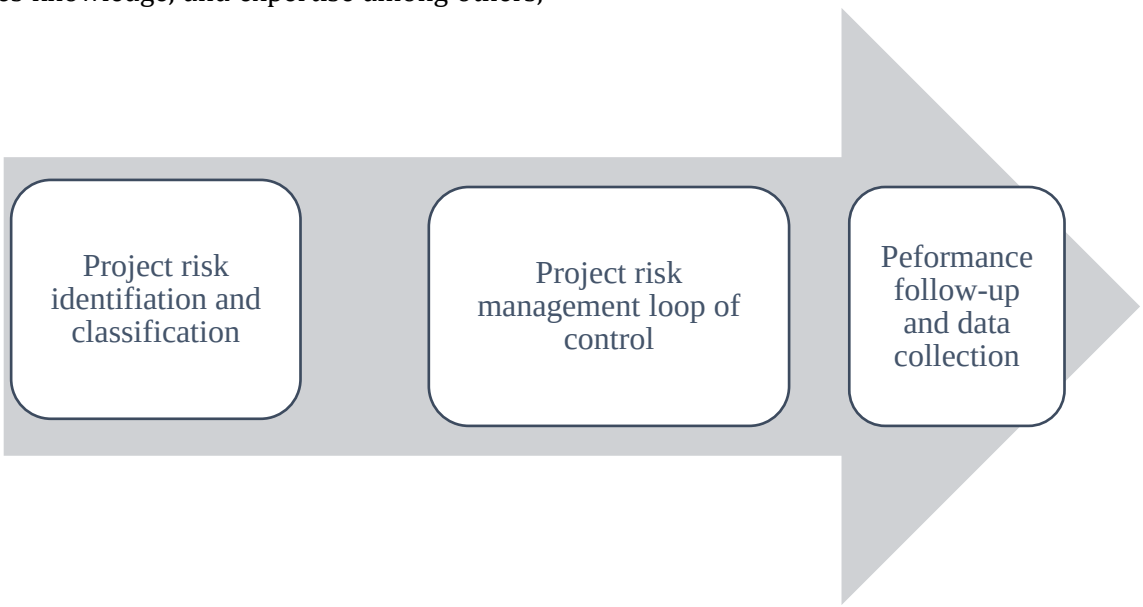

Figure 3: Sustainable Projects' Model for Extended Venture Risk Management

This model does not aim to alter how operational risk management is accomplished. Instead, it proposes how the process may be enhanced, extending it to evaluation phases that might assist in the attainment of the requirements of sustainable projects. As shown in Figure 4, the model recommends a pre-venture assessment for all conceivable threats that could influence sustainability. Largely, it places a special focus on risk identification and further evaluation for effective response and monitoring. The eventual phase of data collection assistes in granting required feedback of the risk management for improvement in future ventures.

Another recommendation is related to managerial implications and limitations of the study. It is recommended to implement the findings of the study and ensure an increased knowledge base regarding sustainable construction through the adoption of ORM. Managing risks in the initiation phase could prove profitable to corporations in the sector. With the study, limitations regarding methodology, data collection approaches, and strategy can be identified. Furthermore, it is vital to note that the study may present challenges of generalizability of the findings since the archival data present considerable differences. Future studies, integrating corporations in the construction sector, should provide improved data to draw a more comprehensive model. This is since companies in the sector could differ in size, personnel, revenues, and ventures. Similarly, a bigger sample would have proven valuable to assessing and further establishing the role of ORM in optimizing sustainability. While the companies' data forming part of this study provides insightful

information, a a bigger sample would augment the precision of the presented model.

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Appendices

Appendix 1: Interview Questionnaire

Dear Respondent,

This questionnaire forms part of a thesis study aimed at establishing the role of operational risk management (ORM) in optimizing sustainability. Its scope is within the construction sector. The aim of the research is to establish whether construction corporations understand various risks that impact sustainability. The second objective is to learn if those risks are identified, how construction corporations use ORM to deal with them and optimize sustainability.

You are kindly implored to go through the highlighted queries for the dialogue.

Thank you in advance!

1. General Information

1.1. Name: ……

1.2. Organization: ……..

1.3. How long have you been working in the building sector? ……

1.4. Do you wield any academic insights regarding risk management/operation risk management/project management? (If yes, kindly specify)

……

……

……

1.5. Name of the venture: ……..

1.6. Responsibilities within the project:

……

……

……

2. Interview Questions regarding Operation Risk Management (ORM)

2.1. What is your perception of risk management in your establishment?

2.2. How do you assess ORM implementation in relation to time, cost, and need?

2.3. What project phases do you usually employ ORM?

2.4. Do you partake in risk handling?

2.5. What type of threats/risks do you evaluate in the

venture? (Tick, where appropriate)

Table 1: Types of Project Risks.

	Yes	**No**
Operational	O	O
Financial	O	O
Quality	O	O
Sustainability	O	O
Economic	O	O

2.6. What risks are normally detected in the venture phases?

2.7. Are there distinct risks related to the sustainability of projects? (Yes/No)

2.8. What is your approach to dealing with these threats?

Thank you for your participation!