

دراسة العلاقة بين معايير تقييم الموردين وأثرها على أداء الشركات الانشائية في المملكة العربية السعودية

Study for the relationship between supplier evaluation criteria and its impact on the performance of construction companies in the Kingdom of Saudi Arabia

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Chapter One: Introduction

Introduction:

Setting a criterion for selecting an appropriate vendor for a construction project in Saudi Arabia, as well as evaluating their performance during the contract implementation, is essential for ensuring successful project outcomes. Taking such a decision is critical and affect in life cycle of the project and cost which may break the limits of projects' budget, beside the schedule and time bounders. Purchasing started to become a big challenge for companies' project management and especially the projects managers taking care of vendors and managing relations with them. In Saudi Arabia, there is a huge number of projects related to constructions and represents the second largest industry after oil and gas in matter of volume and size.

According to project management processes, the most important pillar among all knowledge area is procurement; as it has an impact on the project cost, schedule, quality, customer satisfaction, and risks associated to the project which may cause ending of project or missing the project's contract.

The research is focusing on finding the most relevant criteria suitable for construction industry in Saudi Arabia; to select and evaluate vendors, Many factors can be considered while measuring their performance and will consider the basic factors tailored to the venders of construction materials.

The traditional approach of project implementation involves three main steps: planning, execution, and monitoring & control. In procurement management, these steps are applied across all projects but vary in the volume of tasks and effort depending on the project's nature and industry. In the construction industry, for instance, the success of a project is critically dependent on the efficiency of its procurement process.

Efficient and effective procurement approach affects all constrains (mentioned above) which project management working on ; including: cost to be within the budget, time to be within the schedule, and meeting the quality standards and policies. Strong leadership in procurement is crucial to accomplish the project the proper way and meet the business objectives.

Problem Statement and Significance:

One of the main common challenges for most of the construction companies in Saudi Arabic is to maintain vender's relationship and improve projects progress. The local market of Saudi Arabia is growing in respect of number of construction companies beside the number and volume of construction project

The significance of developing set of criteria impact various stakeholders and improving the construction industry in KSA, including:

- Prioritizing high-quality vendors and ensuring the services and material meeting project quality needs to avoid waste and rework.
- Minizine the risks associated with financial impact resulting from wasting of time or money.

- Grantee project success and long-life relations with all sponsors and gaining future proposed projects which will resulting the prosperity of all construction companies.

The size of the construction market and numbers of construction companies lead to significant area of research with will come out with useful and valuable results. Number of construction companies nearby two hundred thousand companies, more then half of are small company witch there're more need for optimization and resource utilization, and two percent are large companies (SCA, 2024).

Study Importance

The research addresses a critical need in the construction industry in Saudi Arabia. Establishing a set of criteria for selecting and evaluating vendors is essential for ensuring successful project outcomes. This importance is underscored by several factors:

- **Project Lifecycle Impact:** The decision-making process in vendor selection and evaluation directly affects the project's lifecycle, including its budget, schedule, and overall success. Efficient procurement is crucial to keeping costs within budget and timelines on schedule.
- **Industry Significance:** Construction is the second-largest industry in Saudi Arabia after oil and gas. The success of construction projects, therefore, has significant economic implications. Enhancing procurement processes can lead to better project outcomes and contribute to the industry's growth and stability.
- **Project Management Challenges:** Procurement management is one of the most critical areas in project management. Delays or mismatches in procurement can adversely affect project cost, schedule, quality, and customer satisfaction. This research aims to mitigate these risks by identifying suitable criteria for vendor evaluation.
- **Quality and Risk Management:** Prioritizing high-quality vendors ensures that services and materials meet project quality standards, reducing waste and rework. This is vital for minimizing financial risks and ensuring project success.
- **Stakeholder Benefits:** Developing a robust set of criteria benefits various stakeholders by improving vendor relationships, enhancing project progress, and securing future projects.

In summary, this research is crucial for advancing the construction industry in KSA by providing a structured approach to vendor selection and evaluation, thereby improving project outcomes and contributing to the industry's overall growth and efficiency.

Study Purposes

The research aims to achieve several key objectives:

- **Developing Vendor Selection Criteria:** To establish a comprehensive set of criteria tailored specifically for the construction industry in Saudi Arabia, ensuring the selection of high-quality vendors capable of meeting project requirements and standards.
- **Evaluating Vendor Performance:** To create a robust framework for the continuous evaluation of vendor performance throughout the project lifecycle, ensuring adherence to quality, timelines, and budget constraints.
- **Enhancing Procurement Processes:** To improve procurement management practices within the construction industry, thereby reducing risks associated with project delays, cost overruns, and quality issues.
- **Mitigating Financial and Operational Risks:** To set a base for identify strategies that minimize the financial and operational risks associated with vendor selection and management, ensuring smoother project execution and completion by ensuring consistent delivery of high-quality materials and services.
- **Supporting Project Success:** To contribute to the overall success of construction projects by ensuring that all procured materials and services meet the necessary quality standards, thereby reducing waste and rework.
- **Contributing to Industry Growth:** To support the growth and development of the construction industry in Saudi Arabia and all the world by providing a structured approach to vendor management, which can lead to increased efficiency, reduced costs, and improved project outcomes.
- **Ensuring Compliance with Standards:** To ensure that all procurement activities comply with relevant industry standards and policies, thereby maintaining high levels of quality and reliability in construction projects.
- **Facilitating Future Research:** To lay the groundwork for future studies in the field of procurement management in the construction industry, offering valuable insights and data for further academic and practical advancements.

By achieving these purposes, the research aims to significantly improve the efficiency and effectiveness of vendor management in the construction industry in Saudi Arabia, contributing to better project outcomes and overall industry prosperity.

Study Questions

The research titled "The Criteria of Vendors Evaluation for Construction Projects in KSA" seeks to answer several critical questions that will guide the study and provide valuable insights into the procurement management practices in the construction industry in Saudi Arabia. These questions include:

- What are the essential criteria for selecting vendors in the construction industry in Saudi Arabia? (specific criteria, attributes and qualifications should to be considered).
- How can vendor performance be effectively evaluated throughout the project lifecycle? (evaluation metrics and indicators to assess performance by continuous monitoring and control).
- What factors should be considered while measuring vendor performance specifically for construction materials? (influence of quality, delivery time, cost, and compliance with regulatory requirements and industry standards).
- What procurement practices are currently being used in the construction industry in Saudi Arabia and how do these practices could be?
- How can the findings can be applied to improve procurement management and What actionable recommendations can be derived achieve better project outcomes?

By addressing these questions, the research aims to provide a comprehensive understanding of vendor selection and evaluation in the construction industry in Saudi Arabia, offering practical solutions and recommendations to enhance procurement practices and contribute to the industry's overall growth and success.

Research Hypotheses

How project manager in the field of project management can deal with procurement base on standardized criteria for evaluation vendors and avoid all losses in the cost and time.

This come up with, what is the appropriate methodology for controlling the selecting the vendors and managing the relationship for success of all parties. Beside insuring of more practical methodology to be deployed in projects in kingdom of Saudi Arabia. The main research hypotheses are as follows:

1. Establishing a comprehensive set of criteria for vendor selection significantly improves the quality and efficiency of construction projects in Saudi Arabia.
2. Continuous evaluation of vendor performance throughout the project lifecycle leads to improved project success rates.
3. Effective procurement management practices are positively correlated with project cost control and adherence to schedules.
4. Strong vendor relationships enhance overall project quality and reduce rework and waste.

5. The construction industry in Saudi Arabia faces unique challenges in vendor management that require specialized criteria and evaluation methods.
6. Implementing a structured vendor management framework reduces the risks associated with financial and operational aspects of construction projects.
7. Compliance with industry standards and policies in procurement processes leads to higher levels of customer satisfaction and project success.
8. Long-term partnerships with vendors contribute to the sustainable growth and prosperity of construction companies in Saudi Arabia.

Chapter Two: Literature Review

literature review

which explores the main dimensions in supplier selection, including sourcing strategy, decision scope, selection criteria, and solution approaches. The results indicate that constructions supplier selection regarding items with a high purchasing importance should lead to holistic selection criteria. In addition, items comprising a high complexity of supply and production activities should require integrated selection and different sources of uncertainty associated with decision scope. There are still many research opportunities in the supplier selection area, particularly in the integrated selection problems and hybrid solution methods, as well as in the risk mitigation, sustainability goals, and new technology adoption.

This paper aims to contribute to literature in different ways. to expand the preceding literature by providing an updated and comprehensive review of supplier selection in constructions industry in Saudi Arabia and its relationship on the industry and broader than prior reviews. We'll also understand how supplier selection should be formulated in different contexts. Third, we connect four different supplier selection dimensions (sourcing strategy, decision environment,

Summary of Past studies

The selection and evaluation of vendors in construction projects is a critical process in Saudi Arabia where the construction industry is a major economic driver. Evaluation criteria provides valuable insights into how these practices influence project outcomes that examines existing research to identify key themes, methodologies, and gaps related to vendor evaluation in construction projects.

With a focus on the context of Saudi Arabia, the construction is the major industries with spread of the companies on middle, western and eastern geographical locations. The main companies work in construction of building, specialized construction activities, and services to building and land scape activities (SCA, 2024).

The financial stability of a vendor is another critical criterion. A vendor's financial health ensures that they have the necessary resources to complete projects without delays or financial difficulties. Studies by (Enshassi, 2006) highlight that financial stability is a key factor in vendor selection to mitigate risks associated with project execution.

Compliance with local regulations and standards is essential. Vendors must adhere to safety standards, environmental regulations, and other legal requirements. Research by (Zawawi, 2014) indicates that regulatory compliance is a key criterion that ensures vendors meet the legal and safety standards required for construction projects in Saudi Arabia.

The literature reveals a preference for empirical research methods, including case studies, surveys, and statistical analyses, to investigate vendor evaluation criteria. These methods provide a comprehensive understanding of the factors influencing vendor selection and performance. For example, the use of multicriteria decision-making techniques such as the Analytic Hierarchy Process (AHP) and the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) are common in evaluating and prioritizing vendor criteria (Saaty, 1980) (Hwang, 1981).

While there is substantial research on vendor evaluation criteria, specific studies focusing on the construction industry in Saudi Arabia are limited. The existing literature highlights the need for more context-specific research that addresses the unique challenges faced by the construction industry in Saudi Arabia. Additionally, there is a call for developing comprehensive frameworks and models that can guide procurement practices and vendor management in this region (Assaf, 2006).

The systematic review of literature underscores the critical role of vendor evaluation criteria in ensuring the success of construction projects. Key themes such as quality, financial stability, technical capability, past experience, and regulatory compliance emerge as significant factors in the vendor selection process. Future research should focus on addressing the gaps identified and developing tailored approaches that cater to the specific needs of the construction industry in Saudi Arabia. This will not only improve project outcomes but also contribute to the sustainable growth of the construction sector in the region.

Chapter Three: Research Methodology

Research Methodology

This research aims to employ various research methods and techniques, using survey results and feedback, to collect data on the crucial issue of vendor evaluation criteria for construction projects in Saudi Arabia. There is a wealth of data available from project managers, engineers, and related personnel to procurement, which helps the researcher understand and contextualize the different situations encountered during the research. This extensive data provides a significant advantage, offering numerous examples of how to formulate and test hypotheses in the context of vendor evaluation in construction projects. The study will involve documentation analysis, statistical methods, and observation to collect, analyze, and interpret both primary and secondary data.

Research Tools:

Statistical survey targeting all construction project managers, engineers, and all workers related to procurement management and dealing with vendors. Statically analysis software, data analysis techniques, and visual reporting and demonstration techniques. Based on factors; provide practical model which demonstrate the criteria for selecting vendors and managing effective relationship along the project lifecycle.

Research Timeline

Jul 1 – Aug 8:	Completing the finalizing research
Jul 20 – Jul 24:	Initial gathering of procurement processes criteria and related texts, with preliminary analysis. Produce initial primary source analysis. Continue secondary source text reading. Survey completion and collecting data.
Jul 10 – Jul 20 :	Survey results study and final data analysis.
May 24 – Aug 8:	Writing up.

References

References

- Assaf, S. A.-H. (2006). Causes of delay in large construction projects. *International Journal of Project Management*, 24(4), 349-357.
- Enshassi, A. A.-H. (2006). *Causes of contractor's business failure in developing countries The case of Palestine*. . *Journal of Construction in Developing Countries*, 11(2), 1-14.
- Hwang, C. L. (1981). *Multiple Attribute Decision Making Methods and Applications*. New York Springer-Verlag.
- Saaty, T. L. (1980). *The Analytic Hierarchy Process*. New York McGraw-Hill.
- SCA, A. S. (2024, 6 18). *Muqawil*. Retrieved from <https://muqawil.org/>:
<https://muqawil.org/en/newinformationcenter/statistics>
- Zawawi, N. A. (2014). An evaluation of critical success factors in industrialised building system projects in Malaysia. *Modern Applied Science*, 8(6), 10-21.