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Optimizing Planning Management in Jordan's Construction Industry: Overcoming Challenges for Enhanced Performance

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Abstract

The construction industry in Jordan plays a critical role in the nation's economic development. However, the sector faces numerous challenges, especially in terms of extended planning that lead to delays, cost overruns, and damage to the reputation of construction firms. This study focuses on the impact of the planning dimension on project performance within Jordan's construction sector. Using the Resource-Based View (RBV) theory, the research emphasizes the strategic importance of internal resources, particularly skilled project managers and effective planning processes. The findings suggest that while detailed planning is essential for project success, external factors such as economic conditions and regulatory hurdles can undermine these efforts. The study highlights the need for comprehensive planning frameworks tailored to Jordan's unique context. Recommendations include adopting robust planning strategies, investing in project management training, and enhancing stakeholder engagement to improve project outcomes and the competitiveness of Jordanian construction firms.

Keywords: *Project Performance, Jordan, Planning, Project management.*

Introduction

The Jordanian construction industry has seen remarkable growth due to an influx of development projects and substantial financial investments. Despite this, the sector is often plagued by delays, cost overruns, and inefficient planning. Extended project cycles are particularly detrimental, leading to revenue loss and diminished reputational standing for construction firms (Jordan Times & Jordan News, 2022).

At the core of these issues is inefficient project planning, which often results in misallocated resources, unclear objectives, and poorly defined project timelines. Effective planning—plays a crucial role in mitigating these challenges and ensuring that construction projects meet their objectives on time and within budget (Abu Qalbin, 2023).

This research aims to explore the critical role that planning plays in improving project outcomes in the Jordanian construction industry. The study seeks to provide both theoretical insights and practical strategies for enhancing planning practices, contributing to more efficient project execution and better overall performance.

Problem Statement

The construction industry in Jordan is experiencing rapid growth, driven by large-scale development projects. Despite this expansion, the sector faces significant challenges, primarily due to inefficient project planning. Poor planning leads to frequent delays, cost overruns, and project failures, which negatively impact both the financial performance and reputation of construction firms (Salem & Suleiman, 2020).

Ineffective planning processes, such as inadequate resource allocation, unrealistic timelines, and vague

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planning (Walker & Johnson, 2019).

Addressing these issues is critical for the Jordanian construction industry to remain competitive in an increasingly demanding market. This study, therefore, aims to investigate how enhanced planning practices can mitigate delays and improve overall project performance within Jordan's construction sector.

Significance of the Study

This research aims to deepen the understanding of Planning management in Jordan's construction sector, offering theoretical and practical insights. Theoretically, it contributes by applying the Resource-Based View (RBV) to elucidate how quality dimensions impact project performance. Practically, it provides actionable strategies for improving quality management practices, crucial for enhancing project outcomes and client satisfaction.

Theoretical Background

This review explores the intersection of Planning with project performance, framed within the Resource-Based View (RBV) theory.

Project Performance in Construction

Project performance in the construction industry is a critical barometer of success, embodying a broad spectrum of dimensions including timeliness, cost management, quality adherence, scope definition, and participant satisfaction. These facets are crucial for engineering managers tasked with ensuring projects meet predefined standards, are delivered within budgetary confines, and achieve stakeholder contentment. Highlighting the complexity of construction projects, studies by Hasan Abu Raje (2024), Mason & Carter (2018) and Brown & Clark (2019) emphasize the pivotal roles of cost management and project timeliness, respectively, in averting delays and budget overruns that significantly detract from project value. Similarly, Smith (2017) underscores quality targets as indicative of project success, while Walker & Johnson (2019) point to scope management as foundational to effective project planning and execution. Participant satisfaction emerges as a holistic success metric, encompassing the collective approval of all stakeholders, thereby encapsulating the project's overarching success (Mitchell & O'Connor, 2016.

Project Planning in Construction

Efficiently managing the life cycle of construction projects remains a fundamental aspect of successful engineering management. Timely project delivery is a hallmark of effective project management, and any delays or prolonged project cycles can lead to financial losses and diminished stakeholder satisfaction (Lopez, 2015). Within the context of Jordan, Sweis, Nasser, (2021) pinpointed specific challenges such as permit acquisition delays, abrupt design changes, and inadequate life cycle planning as primary contributors to extended project timelines. These findings align with global observations made by Clark & Reed (2017), who emphasized the importance of streamlining project life cycles to enhance project profitability.

Comprehensive project planning is a crucial dimension of project life cycle management. Research by Walker, Pearce, (2019) underscores the significance of effective planning in achieving project goals, encompassing tasks such as objective setting, scheduling, and resource allocation. Change management is another critical aspect as construction projects often encounter unforeseen challenges. Lee & Kim (2019) highlight the importance of change management strategies in construction, emphasizing that adaptive project teams are more successful in navigating changes.

Resource-Based View (RBV) Theory in Construction

The Resource-Based View (RBV) theory, as articulated by Barney (1991) and Wernerfelt (1984), provides a valuable framework for analyzing how internal organizational resources—particularly skilled personnel and planning tools—contribute to competitive advantage. In the context of Jordanian construction,

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strategic planning is an essential internal resource. The ability to efficiently plan and allocate resources, manage timelines, and anticipate potential challenges is what sets successful construction firms apart from their competitors.

Methodologies

This study adopts a quantitative approach to examine the impact of project planning on project performance within the Jordanian construction sector. A survey was conducted among 203 project managers from construction companies registered with the Jordan Engineers Association (JEA) and the Jordan Construction Contractors Association (JCCA). The data collected was analyzed using Structural Equation Modeling (SEM) to explore the relationship between planning practices and overall project performance.

The research questionnaire was designed to capture various dimensions of planning, including objective setting, resource allocation, and risk management. The results were analyzed to determine the effectiveness of planning in improving project outcomes.

Results

The findings reveal that effective planning is a critical factor in achieving project success. Respondents indicated that projects with clear, detailed planning phases were more likely to be completed on time and within budget. However, the data also highlighted several external factors—such as regulatory delays and fluctuating economic conditions—that can impact the effectiveness of even the most meticulously planned projects.

Table 1 presents a summary of the descriptive statistics for the key variables related to project planning.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Planning	203	1.00	5.00	3.8210	.94530
Project_Performance	203	1.00	5.00	3.6276	.89303
Valid N (listwise)	203				

Respondents' Demographic

The analysis is structured to first present the respondents' demographic characteristics, offering a contextual backdrop that enriches the understanding of the perspectives and experiences influencing the reported outcomes. Subsequent sections are dedicated to the detailed exposition of responses to the eight key questions formulated to explore the critical dimensions of engineering management within the construction industry. This structured presentation aims not only to shed light on the prevailing Planning practices but also to unveil the underlying challenges and opportunities for enhancing project performance in Jordan's burgeoning construction sector. By mapping the empirical data against the theoretical framework established in the literature review, this section endeavors to contribute substantively to the discourse on Planning management in construction, thereby addressing the identified research gap and advancing the body of knowledge within this domain.

The respondents' demographic profile reveals a predominant participation of males (81.3%), mirroring the construction industry's traditional gender dynamics globally and within Jordan. This gender distribution underscores the need for diversity and inclusion efforts in the sector. The age demographics, primarily

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clustered within the 36-45 (32.8%) and 46-55 (29.9%) age brackets, indicate a workforce of seasoned professionals, suggesting that the industry benefits from a depth of experience likely influencing project management practices and decision-making processes. Furthermore, the high educational attainment among respondents, with a significant portion holding Bachelor's (45%) and Master's degrees (26.5%), reflects a well-educated management layer. This educational background is crucial for adopting and implementing advanced Planning practices, aligning with the study's focus on Delay management in construction.

Descriptive Statistic

The study's descriptive statistical analysis presents a nuanced understanding of Planning,—within Jordan's construction industry, based on a survey of 203 managerial personnel. These dimensions collectively exhibit mean scores ranging from 3.71 to 3.91 on a 5-point scale, indicating a consistently positive evaluation across the board, with Serviceability slightly edging out as the most favorably assessed aspect of Project Planning. The close clustering of these mean scores suggests a balanced perception of these Planning among the respondents, reflecting an industry-wide acknowledgment of their importance in ensuring project success. Further, the standard deviations, minimal and closely aligned, underscore a homogeneity in respondents' views, suggesting a shared industry standard towards Planning assessment. This comprehensive assessment highlights a sector characterized by its commitment to maintaining high Planning in construction projects. The descriptive statistics not only provide a snapshot of the current state of Planning in Jordan's construction industry but also set a baseline for comparative future research aimed at tracking cycle improvements over time.

Table 2. Outer Model Cross Loading

P01	**0.801**	0.752
P02	**0.779**	0.717
P03	**0.763**	0.717
P04	**0.802**	0.758
P05	**0.845**	0.839
P06	**0.836**	0.806
PPPS03	0.812	**0.848**
PPPS05	0.777	**0.808**
PPPT01	0.759	**0.801**
PPPT03	0.766	**0.789**
PPPT05	0.777	**0.830**
PPQT01	0.738	**0.787**
PPQT03	0.816	**0.839**
PPQT05	0.770	**0.823**

Furthermore, Table 2. shows items loading across all the constructs, with Project Performance variable. 26 items with indication outer loading values below 0.708. Thus, weak items were waived. Appendices provides outer loading tables with and without weak items. Figure 1. shows items with proper loading.

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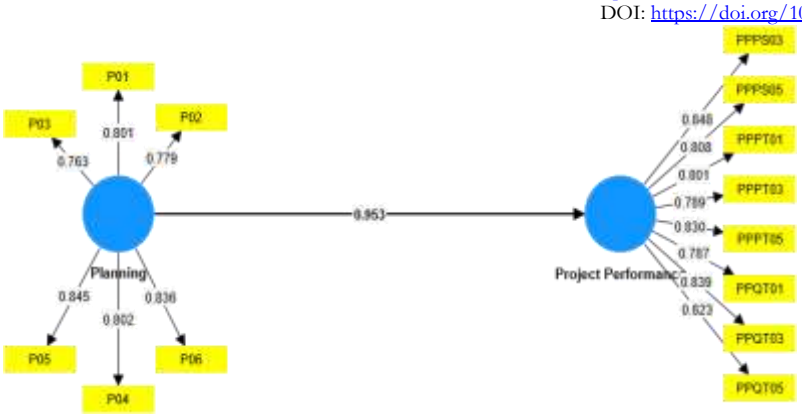

Figure 1. Cross Loading of Structural Model

Source: Smart PLS 3.3.9

Internal Consistency of Research Variables

Each variable should reflect a uniform concept, ensuring internal consistency, which can be assessed through Cronbach's Alpha or the composite reliability metric. A value exceeding 0.7 indicates success, while a threshold of 0.6 may be deemed adequate for preliminary studies (Hair et al., 2021). The cronbach's Alpha for Planning was 0.891, and Project Performance 0.928. for the compsite Reliability for planning was 0.917 and performance was 0.941 wich is in acceptable level.

Convergent Validity of Research Variables

This section evaluates the degree of connection among items within the same variable, using the Average Variance Extracted (AVE) as a measure. AVE values exceeding 0.5 are considered acceptable. According to Table 3, which presents the AVE values for all constructs, the results fall within a range of 0.648 to 0.666, surpassing the 0.5 threshold and indicating an acceptable level of relativeness. Consequently, the dataset is deemed devoid of convergence issues, affirming its suitability for further analysis.

Table 3. Convergent Validity Assessment of Research Variables

		AVE
PC	Planning	0.648
PP	Project Performance	0.666

Assessing Constructs Effective Size f Square of Research Model

According to the guideline set by source (50), the f^2 values are categorized as follows: small for values around 0.02, medium at approximately 0.15, and large for values above 0.35. The assessment of effective size for research variables for Planning was 9.798, the effect size is significant, with Project Performance.

Path Coefficient of Research Model Relations

Table 4 shows the path coefficient assessment with the values of T Statistics and Beta values. For the main dependent variable, Project Performance, the relation was unaccepted with the dependent variable, which are Planning was accepted with Project Performance. The precedence for the relations based on the path coefficient value (Beta) are PC (H1: $\beta = 0.116$).

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Table 4. Path Coefficient Assessment of Research Variables

Hypo	Relationship	Std. Beta	Std. Error	T-value	P-value	Status
H1	Planning –> Project Performance	0.116	0.007	133.21	0.000	unsupported

Discussion

This study confirms the vital role of effective planning in improving project performance within Jordan's construction sector. Proper planning helps reduce delays, control costs, and ensure timely project completion. Companies that invest in detailed planning are more likely to meet their objectives, emphasizing the need for clear goals and realistic timelines.

However, external factors like regulatory delays and economic uncertainties can still disrupt even the best plans. Addressing these risks alongside solid planning practices is crucial for success.

The findings suggest that standardizing planning processes across the industry and focusing on consistent implementation can further enhance project outcomes. Overall, while planning is essential, it should be paired with strategies to handle external challenges to optimize project performance.

Implications of this Study

This study offers practical implications for construction managers and policymakers in Jordan. By focusing on improving planning practices, construction firms can enhance their project performance, reduce delays, and minimize cost overruns. The development of comprehensive methodologies and best practices tailored to the Jordanian context is essential for achieving these goals.

Conclusions

This study highlights the critical role of planning in improving project performance in Jordan's construction industry. Effective planning, including clear goal setting, resource allocation, and timeline management, significantly reduces delays and cost overruns. However, external challenges such as regulatory hurdles and economic fluctuations can still disrupt well-planned projects. While planning is essential, its success depends on addressing these external factors alongside the internal management of resources. The study emphasizes the need for standardized planning processes across the industry and recommends that construction firms invest in comprehensive frameworks and risk management strategies to enhance overall project outcomes. Ultimately, a balanced approach to both planning and external risk mitigation is key to ensuring successful project completion in Jordan.

Recommendation

To enhance project performance in Jordan's construction sector, companies should adopt comprehensive planning frameworks that include clear objectives, realistic timelines, and efficient resource allocation. Standardizing these planning processes across the industry will ensure consistency and reduce project variability. Additionally, firms must strengthen risk management practices to mitigate external challenges such as regulatory delays and economic fluctuations. Investing in training for project managers and teams will further enhance the implementation of effective planning, ensuring better project outcomes and improved overall performance.

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Future Research

Future research should explore barriers to effective Planning in Jordan and investigate additional variables like stakeholder engagement and technological adoption. Longitudinal studies could offer insights into the long-term impact of improvements in these areas.

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