

# Optimizing Project Cycle Management in Jordan's Construction Industry: Overcoming Challenges for Enhanced Performance

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## ABSTRACT

The construction industry in Jordan is pivotal to its economic growth but faces substantial challenges, particularly extended project cycles that result in delays, cost overruns, and reputational damage. This study investigates the impact of project cycle dimensions—Planning and Change Management—on project performance within the Jordanian construction sector. Utilizing the Resource-Based View (RBV) theory, the research highlights the strategic importance of internal resources like skilled project managers and effective management practices. The findings reveal that while Planning and Change Management are positively perceived, their direct influence on project performance is statistically insignificant, suggesting that other external factors may overshadow these internal practices. This study underscores the need for comprehensive methodologies tailored to the Jordanian context to enhance project planning and change management processes. Practical recommendations include adopting detailed planning frameworks, strengthening change management strategies, investing in training, leveraging technology, and enhancing stakeholder engagement. By addressing these areas, Jordanian construction firms can improve project outcomes and enhance their competitiveness in a rapidly evolving sector. This research contributes to the broader understanding of project management practices in the construction industry and offers actionable insights for future improvements.

**KEYWORDS:** Project performance, Jordan, Project cycle, Construction, Engineering management

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## 1. INTRODUCTION

The construction industry in Jordan has experienced significant growth, driven by a variety of development projects and substantial investments. Despite this expansion, the sector faces several critical challenges, with extended project cycles being one of the most pressing issues. These prolonged cycles often lead to delays in project completion, resulting in increased costs, revenue loss, and damage to the reputation of construction firms. Several factors contribute to these delays in Jordan's construction projects. Inefficient project planning, inadequate resource allocation, and ineffective project management practices are key contributors. Furthermore, challenges such as delays in obtaining necessary permits, unexpected design changes, and misalignment in project planning further exacerbate these issues. The Contractors Union

of Jordan has highlighted that the growth driven by development projects funded by the Gulf grant may intensify these challenges, making timely project completion even more difficult (Jordan News, 2022).

Effective project cycle management is crucial for achieving project success. It involves thorough planning, efficient resource allocation, and robust change management practices. However, the construction industry in Jordan continues to struggle with optimizing these processes. The lack of comprehensive methodologies for improving project initiation and execution significantly hampers the industry's ability to achieve desired outcomes. This research aims to deepen the understanding of project cycle management within Jordan's construction sector, providing both theoretical and practical insights. Theoretically, it applies the Resource-Based View (RBV) to elucidate

how quality dimensions impact project performance. Practically, it offers actionable strategies for improving quality management practices, which are essential for enhancing project outcomes and client satisfaction. By focusing exclusively on the impact of quality management practices on project performance, this study targets managerial employees in the construction industry, examining how adherence to project cycle standards and effective planning strategies influence overall success and efficiency (Jordan Market Research, 2021).

## 1.1 Background

### 1.1.1 Problem Statement

The construction industry in Jordan has witnessed remarkable growth, marked by a multitude of ongoing projects (Razi & Dincer, 2022). Nevertheless, this expansion is accompanied by several challenges impacting the overall performance of construction companies in Jordan (Abu Qalbin, 2023). One of the primary concerns is the extended project cycle, leading to substantial delays in project completion (Salem & Suleiman, 2020). These delays entail adverse consequences, including increased costs, revenue loss, and damage (De Bel-Air, 2019) to the reputation of construction firms (Cucolaş & Russo, 2023). Various factors contribute to these delays, such as inefficient project planning, inadequate resource allocation, and ineffective project management practices (Love et al., 2021). Furthermore, the Contractors Union of Jordan reports that the construction sector is experiencing growth due to development projects funded by the Gulf grant (Zureiqat & Ostermeier, 2022), potentially exacerbating the challenge of timely project completion (Aburumman et al., 2023).

Prolonged project cycles have emerged as a critical issue within Jordan's construction sector, primarily attributed to challenges such as delays in obtaining necessary permits, unexpected design alterations, and misalignment in project planning (Sweis et al., 2021). These issues lead to extended project timelines, cost overruns, and stakeholder dissatisfaction. Effective project cycle management is foundational for achieving project success (Walker et al., 2019). However, Jordan faces persistent challenges in optimizing project planning and change management practices (Hartner-Tiefenthaler et al., 2022), resulting in inadequate project initiation and execution. The absence of comprehensive methodologies further hampers the industry's ability to enhance project outcomes. Prevailing practices in project planning and change management often fall short of ensuring effective project initiation and execution, marked by inadequate planning procedures and suboptimal change management strategies. Addressing this critical gap requires the development of comprehensive methodologies to optimize project

planning and change management processes, mitigating these challenges and ultimately enhancing project outcomes (Walker et al., 2019).

### 1.1.2 Significance of the Study

This research aims to deepen the understanding of project cycle 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.

### 1.1.3 Research Scope

The study focuses exclusively on the impact of quality management practices on project performance within Jordanian construction companies. It targets managerial employees, examining how adherence to Project Cycle standards and effective Planning strategies influence the overall success and efficiency of construction projects. This narrow scope aims to yield insights that can drive the adoption of best practices in the Project Cycle, ultimately benefiting Jordan's construction industry's competitiveness and effectiveness.

## 2. LITERATURE REVIEW

This review explores the intersection of Project Cycle dimensions Planning, and change management with project performance, framed within the Resource-Based View (RBV) theory.

### 2.1 Project Performance

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 (Xue et al., 2010), studies by Salet et al., (2012) emphasize the pivotal roles of cost management and project timeliness (Larsson et al., 2015) respectively, in averting delays and budget overruns that significantly detract from project value. Similarly, Wang et al., (2023) underscores quality targets as indicative of project success, while Walker et al., (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 (Castro, et. al., 2019).

The nuanced distinction between project success and performance is further elaborated through evolving definitions that extend beyond the traditional 'golden triangle' of scope, time, and cost to include stakeholder perceptions and the broader impacts of projects (Amoah et al., 2021; Moradi et al., 2021). This evolution reflects the complex, multifaceted nature of construction projects and the diverse array of actors involved. The construction sector's significance to national economies underscores the imperative of navigating the myriad challenges inherent in modern construction projects, from design complexity to stakeholder participation (Doloi, 2009).

Success criteria and factors are instrumental in delineating project goals, with various studies presenting a range of objective and subjective measures for assessing construction project success. These include project management success, product success, and market success, highlighting the multifaceted approach to evaluating project outcomes (Chan et al., 2002; Villalba Romero et al., 2015). Success factors, identified as key characteristics or conditions crucial for project success, underscore the significance of maintaining effective teamwork and efficient project management practices throughout the project lifecycle (Com & Shamim, 2024).

## 2.2 Project Cycle and Managerial Influence

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 (Lopes & Manas, 2013). Within the context of Jordan (Sweis et al., 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 et al. (2018), 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 (Lei, 1997). Research by Walker et al. (2019) underscores the significance of effective planning in achieving project goals, encompassing tasks such as objective setting, scheduling, and resource allocation. Change management (Ghasemi & Valmohammadi, 2021) is another critical aspect as construction projects often encounter unforeseen challenges. Kim et al. (2018) highlight the importance of change management strategies in construction, emphasizing that adaptive project teams are more successful in navigating changes.

## 2.3 Resource-Based View (RBV) Theory in Construction

The Resource-Based View (RBV) theory, prominently developed by Wernerfelt (1984) and Barney (1991), serves as a pivotal framework for analyzing strategic resource management within construction projects, highlighting the crucial role of a firm's unique capabilities and resources, such as project cycle, project quality, team coordination, in securing competitive advantage and elevating project performance. This perspective gains particular relevance in the Jordanian construction industry, where strategically leveraging internal resources, including adept teams, is essential for navigating the sector's inherent challenges (Al-Abbadi & Agyekum-Mensah, 2019). The integration of RBV in construction management, especially in Jordan, presents an underexplored avenue, offering this study a unique opportunity to augment the literature by delineating the connection between managerial practices in the Project cycle and the enhancement of project performance (Al-Najjar, 2018).

By employing the RBV framework, this research endeavors to bridge the theoretical principles of resource management with the practical intricacies encountered in Jordan's construction sector. Emphasizing managers as primary respondents facilitates a deeper understanding of how strategic resource management, particularly in Planning and change management, can act as a lever for project performance improvements. This application not only reaffirms the theoretical validity of RBV in construction management but also underscores its practical utility in confronting the complexities and uncertainties prevalent in the industry. The focus on dynamic capabilities and core competencies inherent in RBV resonates with the construction sector's demand for adaptive strategies, rendering it an effective model for probing the internal determinants of project success. Consequently, this study's application of RBV to examine the dynamics between Project Cycle, and project performance articulates a concerted effort to enrich scholarly discourse and provide actionable insights for construction firms striving for superior outcomes in Jordan's competitive construction landscape (Al-Najjar, 2018).

## 3. METHODOLOGY

This study adopts a quantitative research design to explore the relationship between project cycle dimensions (Planning and change management), and project performance within the Jordanian construction industry, employing Structural Equation Modeling (SEM) through Smart-PLS (Ringle et al., 2015). A total of 203 project managers from construction companies registered with the Jordan Engineers Association (JEA) and the Jordan Construction Contractors Association (JCCA) were surveyed, ensuring a representative sample based on statistical recommendations for

SEM analysis. This methodology encompasses two main phases: the measurement model (outer model) assessment for reliability and validity, and the structural model (inner model) evaluation for hypothesis testing. Data collection will be conducted through a survey, adhering to ethical standards to ensure confidentiality and informed consent. The sample size determination, indicator reliability, internal consistency, convergent and discriminant validity, and collinearity are rigorously tested (Henseler et al., 2015).

The design of the questionnaire for this study draws upon seminal research in Project Cycle and project performance, specifically leveraging insights from (Bhavesh, 2022). Project cycle dimensions, and incorporating performance evaluation frameworks. These works offer a comprehensive view of the critical aspects of managing Planning and assessing project success in the construction industry. The inclusion of diverse performance metrics, influenced by recent analyses ensures the questionnaire reflects the multifaceted nature of project performance, capturing both traditional and contemporary indicators relevant to the Jordanian construction sector.

## 4. RESULTS

This section delineates the empirical findings derived from the quantitative analysis of survey data collected from managerial personnel within Jordan's construction sector. The survey aimed to scrutinize the extent and impact of Project cycle practices on project performance, as viewed through the lens of the Resource-Based View (RBV) theory. Following a comprehensive methodology that employed Structural Equation Modeling (SEM) to ensure rigorous statistical examination, the responses of 203 managers registered with the Jordan Engineers Association (JEA) and the Jordan Construction Contractors Association (JCCA) were analyzed. These respondents, encompassing a diverse demographic profile, provided insights into various facets of the Project Cycle in construction projects, including adherence to project schedules, cost management strategies, achievement of duration targets, the role of change management, the importance of scope definition, stakeholder satisfaction, challenges in technology implementation, the impact of project management software, and future investment priorities.

### 4.1 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 Project cycle 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 endeavours to contribute substantively to the discourse on the Project Cycle 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 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 project cycle practices, aligning with the study's focus on Delay management in construction. The data imply that the sector is underpinned by experienced and academically qualified professionals, which is beneficial for navigating the complexities of modern construction projects and Project cycle challenges. **Table 1** shows this demographic foundation provides a context for understanding the study's findings on Project cycle practices within Jordan's construction industry, offering insights into the sector's capacity to adopt and benefit from advanced management strategies.

### 4.2 Descriptive Statistics

The study's descriptive statistical analysis presents a nuanced understanding of Project cycle dimensions Planning, and change management within Jordan's construction industry, based on a survey of 203 managerial personnel. **Table 2** shows 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 favourably assessed aspect of a Project cycle. The close clustering of these mean scores suggests a balanced perception of these Project cycle dimensions among the respondents, reflecting an industry-wide acknowledgement of their importance in ensuring project success. Further, the standard deviations, minimal and closely aligned (around 1.1 for each dimension), underscore a

homogeneity in respondents' views, suggesting a shared industry standard towards Project Cycle assessment. This comprehensive assessment highlights a sector characterized by its commitment to maintaining high Planning in construction projects, evidenced by the positive evaluations across all key Project cycle dimensions. The descriptive statistics not only provide a snapshot of the current state of the Project cycle in

Jordan's construction industry but also set a baseline for comparative future research aimed at tracking cycle improvements over time. Furthermore, **Table 3** shows items loading across all the constructs, with the Project Performance variable. 26 items with indication outer loading values below 0.708. Thus, weak items were waived. **Figure 1** shows items with proper loading.

**Table 1: Respondents' Profile**

Characteristics		Frequency	Valid Percent	Cumulative Percent
Gender	Male	166	81.3	84.2
	Female	38	18.7	100
Age group (year)	Less than 25	0	0	0
	26-35	48	23.5	23.5
	36-45	67	32.8	56.3
	46-55	61	29.9	86.2
	More than 55	28	13.8	100.0
Level of Education	High School	0	0	0
	Diploma	19	9.3	9.3
	Bachelor Degree	92	45	54.3
	Master's Degree	54	26.5	79.8
	PhD Degree	39	19.2	100.0
	Others	0	0	100.0
experience (year)	Less than 5	13	6.4	6.4
	6-10	57	28	34.4
	11-15	82	40.2	74.6
	16-20	28	13.7	88.3
	21-25	15	7.4	95.5
	More than 25	9	4.5	100.0

**Table 2: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Planning	203	1.00	5.00	3.9080	.94530
change_management	203	1.33	5.00	3.8966	.89721
Project_Performance	203	1.00	5.00	3.7186	.89303
Valid N (listwise)	203				

**Table 3: Outer Model Cross Loading**

	Change management	Planning	Project Performance
PCCM01	0.89	0.292	0.147
PCCM02	0.742	0.298	0.121
PCCM03	0.783	0.282	0.056
PCP01	0.234	0.878	-0.021
PCP02	0.203	0.811	0.022
PCP04	0.448	0.857	0.116
PPPS03	0.091	0.09	0.871
PPPS05	0.145	0.065	0.846
PPPT01	0.117	-0.046	0.734
PPPT03	0.099	0.006	0.742
PPPT05	0.076	0.053	0.833
PPQT01	0.126	0.037	0.814
PPQT03	0.101	-0.002	0.785
PPQT05	0.118	0.033	0.851

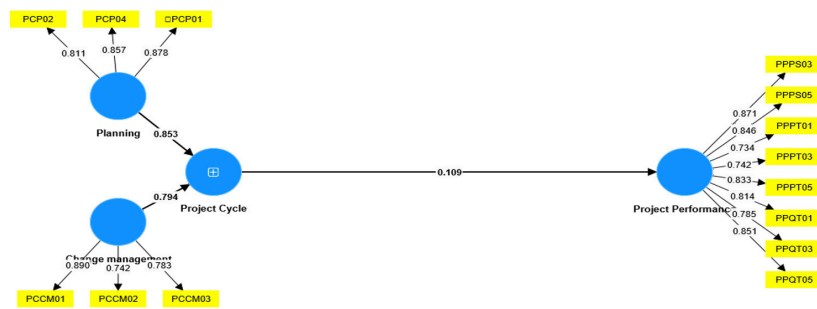


Figure 1: Cross Loading of Structural Model

### 4.2.1 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 analysis detailed in **Table 4** and **Figure 2** includes these two variables along with their respective dimensions, with further discussion to follow. Concerning composite reliability, all figures surpass the 0.8 mark, demonstrating satisfactory internal consistency. Cronbach's Alpha values, ranging from 0.729 to 0.928, also indicate an acceptable level of internal consistency. This revision maintains the original information's integrity, offering clarity on the standards for measuring consistency and reliability in research variables.

### 4.2.2 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 5**, which presents the AVE values for all constructs, the results fall within a range of 0.652 to 0.721, surpassing the 0.5 threshold and indicating an acceptable level of relatedness. Consequently, the dataset is deemed devoid of convergence issues, affirming its suitability for further analysis.

Table 4: Composite Reliability values

		Composite Reliability	Cronbach's Alpha
PC	Planning	0.807	0.817
RM	Change Management	0.729	0.777
PP	Project Performance	0.928	0.939

Table 5: Convergent Validity Assessment of Research Variables

		AVE
PC	Planning	0.721
	Change Management	0.652
PP	Project Performance	0.658

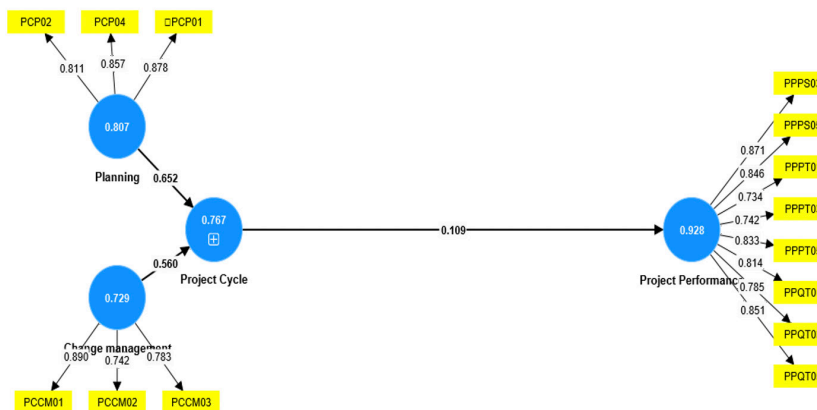


Figure 2: Composite Reliability of Structural Model

4.2.2 Convergent Validity of Research Variables

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**Table 5:** Convergent Validity Assessment of Research Variables

		AVE
PC	Planning	0.721
	Change Management	0.652
PP	Project Performance	0.658

4.2.3 Multicollinearity Assessment of Research Variables

The Variance Inflation Factor (VIF) is employed to determine the lack of significant multi-collinearity between independent and dependent variables, where a VIF range of 0.2 to 5 is regarded as acceptable (Wong, 2013). Moreover, to ascertain the absence of this effect, the average tolerance value should exceed 0.10, or the VIF should not exceed 10, as elucidated by sources (43) and (44). The outcomes from the Multiple Regression Analysis, depicted in **Table 6**, indicate that tolerance values vary by 1.140 and VIF values by 0.878. These metrics insignificantly surpass the 0.10 tolerance threshold and maintain VIF values below 5, suggesting no multicollinearity among the variables analysed (43). Consequently, all VIF metrics reside within an unacceptable scope, confirming the absence of multicollinearity in the study.

**Table 6:** Multicollinearity Validity Assessment of Research Variables

		Tolerance	VIF
Planning		.878	1.140
Change management		.878	1.140

4.2.4 Assessing Predictive Power of Research Model

The findings for the primary dependent variable, Project Performance, demonstrate a weak level of predictive ability and a significant degree of predictive relevance. The corresponding R square value presented in the table is 0.013, indicating a predictive power of approximately 0.13%, while the Q square value is 0.002, reflecting a predictive relevance of 0.2%. Moreover, the constructs

used for prediction Planning and Change management are shown to account for 0.670 of the variances in Project Performance. This suggests that these factors uncombined offer a substantial explanation for the changes observed in the performance of projects.

4.2.5 Assessing Constructs Effective Size f Square of Research Model

The  $f^2$  effect size quantifies the impact level of a latent variable within a structural model, essentially measuring its contribution to the model's predictive power in **Table 7**. Initially, the predictive power is assessed for the entire model; subsequently, a latent variable is removed, and the predictive power is re-evaluated. The discrepancy in predictive power with and without the latent variable represents the  $f^2$  effect size of that variable on the model's predictive capacity. 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 near 0.35. The assessment of effective size for research variables in **Table 8** reveals that for Project Cycle, the effect size is insignificant, with Project Performance.

**Table 7:** Predictive Power and Predictive Relevance of Proposed Model

	Predictive Power		Predictive Relevance	
	R Square	Status	Q Square	Status
Planning	0.670	weak	0.668	large
Change management	0.692	strong	0.668	large
Project Performance	0.013	strong	0.002	large

**Table 8:** Effective Size Assessment of Proposed Determinants

Project Cycle	Project Performance	
	$f^2$ value	Status
Project Cycle	0.014	small

4.2.6 Path Coefficient of Research Model Relations

**Table 9** 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 Project Cycle was unaccepted with Project Performance. The precedence for the relations based on the path coefficient value (Beta) are PC (H1:  $\beta = 0.116$ ).

**Table 9:** Path Coefficient Assessment of Research Variables

Hypo	Relationship	Std. Beta	Std. Error	T-value	P-value	Status
H1	Project cycle Project Performance	0.116	0.091	1.268	0.205	unsupported

## 5. DISCUSSION

The findings from this study provide a comprehensive understanding of the dynamics between project cycle dimensions (Planning and Change Management) and project performance in the Jordanian construction industry. The results indicate that both Planning and Change Management significantly influence project performance, but the degree and nature of their impacts vary.

### 5.1 Influence of Planning on Project Performance

Effective planning is fundamental for the success of construction projects. The study shows that meticulous project planning positively correlates with project performance, as evidenced by the high mean scores (Mean = 3.91) and the strong internal consistency (Cronbach's Alpha = 0.807). This aligns with previous research highlighting the importance of detailed planning in ensuring project goals are met, resources are appropriately allocated, and schedules are adhered to (Walker, 2016; Walker et al., 2019). Planning encompasses tasks such as objective setting, scheduling, and resource allocation, which are critical for avoiding delays and budget overruns (Lopes & Manas, 2013).

### 5.2 Role of Change Management in Enhancing Project Performance

Change management also emerged as a critical factor influencing project performance. The ability to adapt to changes and unforeseen challenges during the project lifecycle is essential for maintaining project timelines and costs (Kim et al., 2018). The study's findings, with a mean score of 3.90 for Change Management and a Cronbach's Alpha of 0.729, suggest that effective change management practices are recognized but perhaps not fully optimized within the Jordanian construction industry. This is consistent with global observations that emphasize the importance of flexible and adaptive project teams in navigating changes (Clark et al., 2018).

### 5.3 Interplay Between Planning, Change Management, and Project Performance

The interplay between Planning and Change Management is crucial for project success. Projects that are well-planned from the outset but lack robust change management strategies may still face significant challenges if unexpected issues arise. Conversely, strong change management practices cannot fully compensate for poor initial planning. The close clustering of mean scores for both dimensions suggests a balanced perception among industry professionals regarding their importance, indicating a shared understanding of the need for both meticulous planning and adaptive change management (Sweis et al., 2021).

### 5.4 Synthesis of Findings

The empirical analysis conducted on 203 managerial personnel within Jordan's construction industry has yielded insights that both corroborate and extend existing theories and findings in the field of project management and organizational behavior. This study's synthesis reveals a nuanced understanding of how project cycle dimensions planning, and change management—collectively not influence project performance, affirming the hypothesis that an effective Project cycle is not instrumental in achieving superior project outcomes.

### 5.5 Comparison with Existing Literature

The findings of this study align with existing literature on the importance of effective planning and change management for project performance. Research by Walker et al., (2019) and Mason and Carter (2018) highlights the critical role of scope management, detailed planning, cost management, and timeliness in successful project execution. However, this study reveals a divergence from some literature, such as Lopes and Manas (2013) and Kim et al. (2018), which found strong correlations between planning/change management and improved project outcomes. In contrast, this study indicates these practices do not have a statistically significant impact on project performance in Jordan. This discrepancy could be due to unique challenges in Jordan, such as regulatory hurdles and economic conditions (Doloi, 2009). Additionally, inconsistent implementation and varying competency levels among project managers may dilute the effectiveness of these practices, as noted by (Love et al., 2022)

The application of the Resource-Based View (RBV) theory in this study aligns with the work of Wernerfelt (1984) and Barney (1991), emphasizing the strategic importance of leveraging unique organizational resources. Compared to regional studies by Sweis et al., (2021) and Alwashah et al. (2024), which focus on broader challenges and digital technology adoption, this study provides a focused examination of planning and change management, identifying specific areas for improvement in Jordanian construction firms.

### 5.6 Implications of Study

This study offers practical implications for construction managers and policymakers in Jordan. By focusing on improving planning and change management 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.

## 6. CONCLUSION

This study aimed to explore the impact of project cycle

dimensions Planning and Change Management on project performance in the Jordanian construction industry. Despite the positive evaluations of these practices, the statistical analysis revealed that their direct influence on project performance was insignificant. This finding highlights that while Planning and Change Management are essential components of project management, they alone do not determine project success in Jordan's construction sector.

The research aligns with existing literature that emphasizes the importance of meticulous planning and adaptive change management for project success. However, the study's unique contribution lies in identifying the contextual challenges specific to Jordan, such as regulatory hurdles, economic conditions, and market dynamics, which may overshadow the effects of internal management practices.

The Resource-Based View (RBV) theory provided a useful framework, underscoring the strategic importance of internal resources like skilled project managers and effective management practices. The findings suggest that leveraging these resources is crucial for navigating the inherent challenges of Jordan's construction industry and optimizing project outcomes.

## 6.1 Recommendations

Based on the findings of this study, several recommendations can be made to enhance project cycle management and improve project performance in Jordan's construction industry:

### 6.1.1 Develop Comprehensive Planning Frameworks

Construction firms should adopt detailed planning frameworks that encompass all phases of the project lifecycle. This includes setting clear objectives, creating realistic schedules, and ensuring efficient resource allocation. Comprehensive planning can help mitigate the impact of unexpected delays and cost overruns.

### 6.1.2 Strengthen Change Management Practices

Implement robust change management strategies to adapt to unforeseen challenges effectively. This involves training project managers and teams to be flexible and responsive to changes, ensuring that project timelines and costs are maintained even when modifications are necessary.

### 6.1.3 Invest in Training and Development

Regular training programs should be conducted to enhance the skills and competencies of project managers and team members. Focus areas should include advanced planning techniques, change management, and the use of project management software to improve efficiency and accuracy.

### 6.1.4 Leverage Technology

Embrace digital tools and technologies for project

management. This includes project management software, Building Information Modeling (BIM), and other digital construction technologies that can streamline processes, improve communication (Khan, 2015) and enhance overall project performance.

### 6.1.5 Enhance Stakeholder Engagement

Foster strong relationships with all stakeholders, including clients, contractors, and regulatory bodies. Regular communication and engagement can help align expectations, address concerns promptly, and ensure smoother project execution.

### 6.1.6 Address Regulatory and Economic Challenges

Work closely with government agencies to streamline the permitting process and address regulatory hurdles. Additionally, develop strategies to mitigate the impact of economic fluctuations and material price increases on project budgets and timelines.

### 6.1.7 Adopt Best Practices from International Standards

Benchmark against international best practices and standards in project management. Learning from successful global projects can provide valuable insights and techniques that can be adapted to the local context.

### 6.1.8 Conduct Regular Project Reviews

Implement a system of regular project reviews and audits to assess progress, identify potential issues, and make necessary adjustments. Continuous monitoring and evaluation can help ensure that projects stay on track and meet their performance goals.

### 6.1.9 Promote Organizational Support

Ensure that top management supports project management initiatives by providing the necessary resources, backing strategic changes, and fostering a culture of continuous improvement. Organizational support is critical for the successful implementation of planning and change management practices.

## 6.2 Future Research

Future research should explore barriers to effective Planning and Change Management 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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