

THE IMPACT OF PROJECT GOVERNANCE PRACTICES ON PROCUREMENT EFFICIENCY IN SAUDI IT ORGANIZATIONS

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Project Management

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ABSTRACT

Project governance has become an increasingly important component of organizational success, particularly in project-driven industries where effective decision-making, oversight, and accountability directly influence project outcomes. Within Saudi Arabia's rapidly growing information technology (IT) sector, procurement activities play a strategic role in ensuring that

projects receive the required goods, services, and technological resources in a timely and cost-effective manner. Despite the widespread adoption of project management methodologies and governance frameworks, many organizations continue to experience procurement-related challenges, including supplier delays, budget overruns, inefficient coordination, and inconsistent procurement performance. These recurring issues indicate that project governance practices may have a significant influence on procurement efficiency.

The purpose of this study is to examine the impact of project governance practices on procurement efficiency in Saudi IT organizations. Specifically, the research investigates how four key dimensions of project governance—planning governance, risk governance, communication governance, and monitoring and control governance—affect procurement efficiency measured through cost efficiency, time efficiency, and supplier performance.

A quantitative research methodology is adopted to achieve the objectives of the study. Primary data will be collected through a structured questionnaire distributed to professionals working in project management, procurement, contracts, and supply chain functions within Saudi IT organizations. The collected data will be analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, reliability analysis, Pearson correlation analysis, and multiple regression analysis will be employed to examine the relationships between the study variables and test the proposed hypotheses.

The study is expected to contribute to the existing body of knowledge by extending current research on project governance and procurement management within the context of Saudi Arabia's IT sector. It also aims to provide practical recommendations for project managers, procurement professionals, and organizational leaders seeking to strengthen governance mechanisms that improve procurement efficiency, enhance project performance, and support Saudi Arabia's Vision 2030 digital transformation initiatives.

Keywords: Project Governance Practices, Procurement Efficiency, Project Governance, Planning Governance, Risk Governance, Communication Governance, Monitoring and Control, Saudi IT Organizations.

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
AI	Artificial Intelligence
IT	Information Technology
KPI	Key Performance Indicator
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
SPSS	Statistical Package for the Social Sciences
SLA	Service Level Agreement
IV	Independent Variable
DV	Dependent Variable

CHAPTER ONE

1.1 Research Background

Organizations operating in today's dynamic business environment are increasingly required to deliver projects efficiently while maintaining high standards of governance, accountability, and operational performance. As projects become more complex, involving multiple stakeholders, sophisticated technologies, and extensive supplier networks, organizations can no longer rely solely on traditional project management methodologies to ensure successful project delivery. Instead, greater emphasis has been placed on project governance, which provides the framework through which projects are directed, monitored, controlled, and aligned with organizational objectives. Effective project governance establishes clear decision-making structures, accountability mechanisms, risk oversight processes, and performance monitoring systems that collectively enhance project execution and organizational performance.

Within project-based organizations, procurement represents one of the most critical functions supporting project success. Procurement activities ensure that projects receive the necessary goods, services, technologies, and external expertise required to achieve their objectives. Consequently, procurement efficiency directly affects project cost, schedule, quality, and overall organizational performance. Inefficient procurement processes frequently result in supplier delays, budget overruns, contract disputes, resource shortages, and schedule slippages, ultimately reducing the likelihood of successful project completion.

The importance of procurement has become particularly evident within Saudi Arabia's Information Technology (IT) sector. Under Saudi Vision 2030, government agencies and private organizations continue to invest heavily in digital transformation initiatives, cybersecurity programs, cloud computing, smart government services, artificial intelligence, and national digital infrastructure. These projects involve extensive procurement activities requiring coordination among project teams, procurement departments, suppliers, contractors, and regulatory authorities. Consequently, procurement efficiency has become a strategic capability rather than merely an operational function.

Project governance provides the organizational mechanisms necessary to improve procurement performance by ensuring that procurement activities are integrated within project planning,

monitored throughout project execution, supported by structured communication channels, and protected through proactive risk management. Governance practices establish clear responsibilities, standardized decision-making procedures, performance indicators, and accountability structures that improve coordination between project teams and procurement functions. When governance mechanisms are effectively implemented, procurement activities become more predictable, transparent, and aligned with project objectives, leading to improvements in cost efficiency, delivery performance, and supplier management.

Despite increasing awareness of project governance, many organizations continue to experience procurement inefficiencies even after implementing formal project management methodologies. In many cases, organizations possess documented governance frameworks but fail to consistently translate governance principles into improved procurement outcomes. Procurement decisions often remain reactive rather than proactive, communication between project and procurement teams remains fragmented, and governance mechanisms may exist formally without being effectively embedded into day-to-day project execution. This suggests that governance maturity alone does not automatically guarantee procurement efficiency unless governance practices are effectively implemented throughout the project lifecycle.

Although previous research has extensively examined project management, procurement management, and project success independently, relatively limited empirical attention has been devoted to understanding how project governance practices influence procurement efficiency, particularly within Saudi IT organizations. Existing studies frequently investigate project governance in relation to project success, organizational performance, or strategic alignment, while procurement efficiency is often examined separately within supply chain or purchasing literature. Consequently, there remains limited empirical evidence explaining how governance practices contribute directly to procurement outcomes in project-based environments.

This study seeks to address this gap by examining the relationship between project governance practices and procurement efficiency within Saudi IT organizations. Specifically, the study investigates four dimensions of project governance—planning governance, risk governance, communication governance, and monitoring and control governance—and evaluates their influence on procurement efficiency measured through cost efficiency, time efficiency, and supplier performance. By providing empirical evidence from Saudi Arabia's rapidly evolving IT sector, the study aims to contribute to both academic knowledge and professional practice, offering practical recommendations that support improved project governance and enhanced procurement performance.

1.2 Research Problem

The rapid growth of Saudi Arabia's information technology sector has significantly increased the scale, complexity, and strategic importance of project-based work. Organizations undertaking digital transformation initiatives are expected to deliver projects within strict budgetary, scheduling, and quality constraints while simultaneously complying with governance

requirements, procurement regulations, and organizational policies. In such environments, procurement is no longer viewed as a purely administrative or transactional function; instead, it has become a strategic capability that directly influences project success through the timely acquisition of products, services, technologies, and specialized expertise.

Despite substantial investments in project management methodologies, governance frameworks, and digital procurement systems, procurement inefficiencies continue to challenge many Saudi IT organizations. Common issues include delays in procurement approvals, inconsistent supplier performance, budget overruns, inadequate coordination between project and procurement teams, and insufficient visibility over procurement activities throughout the project lifecycle. These inefficiencies frequently result in project delays, increased operational costs, contractual disputes, and reduced stakeholder satisfaction. As organizations continue to undertake increasingly complex technology projects, such procurement challenges become more costly and more difficult to manage.

Project governance has emerged as an important mechanism for addressing these challenges by providing structured oversight, accountability, decision-making processes, and performance monitoring throughout project execution. Effective governance establishes clear roles and responsibilities, integrates procurement planning into overall project planning, strengthens communication among stakeholders, manages project risks proactively, and continuously monitors project performance against predetermined objectives. Collectively, these governance practices are expected to create an environment in which procurement activities become more coordinated, transparent, and efficient.

However, although project governance is widely recognized as an essential component of successful project delivery, there remains limited empirical evidence demonstrating the extent to which governance practices directly influence procurement efficiency. Existing organizations frequently implement governance frameworks as compliance requirements or administrative procedures without fully understanding whether these governance mechanisms actually improve procurement outcomes. Consequently, organizations may invest considerable resources in governance initiatives while continuing to experience procurement inefficiencies that negatively affect project performance.

The problem is particularly evident within Saudi IT organizations operating under the ambitious objectives of Saudi Vision 2030. Government entities and private-sector organizations are managing increasingly sophisticated projects involving cybersecurity, cloud computing, artificial intelligence, enterprise resource planning systems, digital government platforms, and smart infrastructure. These projects typically involve multiple suppliers, complex contractual arrangements, evolving technical requirements, and strict implementation schedules. Under such conditions, weaknesses in project governance can rapidly translate into procurement delays, supplier coordination issues, contractual risks, and budget escalation. Therefore, understanding how project governance contributes to procurement efficiency has become both an operational necessity and a strategic concern.

Furthermore, previous research has predominantly examined project governance in relation to project success, organizational performance, or strategic alignment, while procurement research has largely focused on supplier management, purchasing processes, contract administration, or supply chain performance. Relatively few studies have investigated the relationship between project governance and procurement efficiency as integrated organizational constructs. This separation within the literature has limited understanding of how governance mechanisms influence procurement performance within project-based environments, particularly in Saudi Arabia's rapidly evolving IT sector.

Accordingly, this study addresses the following central research problem:

Despite the increasing adoption of project governance practices within Saudi IT organizations, procurement inefficiencies continue to persist, and limited empirical evidence exists regarding the extent to which project governance practices contribute to improving procurement efficiency.

By investigating this relationship, the study seeks to provide empirical evidence that supports organizational decision-makers in strengthening governance mechanisms capable of enhancing procurement efficiency and improving overall project performance.

1.2.1 Theoretical Gap

Although project governance and procurement management have each received considerable attention within the project management and supply chain management literature, they have largely evolved as separate research streams. Project governance studies primarily examine governance structures, decision-making authority, strategic alignment, stakeholder accountability, and project success, whereas procurement studies focus on purchasing strategies, supplier relationships, contract management, sourcing practices, and supply chain performance. Consequently, relatively limited research has integrated these two domains by examining how project governance practices influence procurement efficiency within project-based organizations.

Furthermore, much of the existing literature conceptualizes governance at the organizational or corporate level, emphasizing executive oversight and organizational control. Comparatively fewer studies investigate governance practices at the project level, particularly planning governance, communication governance, risk governance, and monitoring and control governance, as measurable organizational capabilities that influence procurement outcomes. This creates a theoretical gap regarding the mechanisms through which project governance contributes to procurement efficiency.

In addition, existing empirical studies have predominantly focused on industries such as construction, manufacturing, public infrastructure, and engineering. Limited evidence exists within the information technology sector, where procurement processes differ substantially due to rapidly changing technologies, software licensing models, cloud-based services, cybersecurity requirements, and complex vendor ecosystems. Consequently, the theoretical

relationship between project governance and procurement efficiency remains insufficiently explored within Saudi IT organizations.

1.2.2 Practical Gap

From a practical perspective, Saudi IT organizations have made substantial investments in project governance frameworks, project management offices (PMOs), enterprise project management systems, procurement regulations, and digital procurement platforms. Despite these efforts, organizations continue to experience procurement inefficiencies that affect project delivery. Procurement delays, supplier coordination challenges, budget deviations, approval bottlenecks, and communication gaps remain common across many project environments.

One possible explanation is that governance practices are often implemented primarily to satisfy compliance requirements rather than to improve procurement performance. Organizations may establish governance structures, reporting mechanisms, and approval processes without ensuring that these mechanisms actively support procurement planning, supplier collaboration, and project execution. Consequently, governance may exist formally while producing limited operational improvements.

This practical gap highlights the need for empirical research that evaluates whether stronger project governance practices actually contribute to higher procurement efficiency.

Understanding this relationship will provide managers, procurement professionals, and project leaders with evidence-based insights that can guide governance improvements and strengthen procurement performance within Saudi IT organizations.

1.3 Research Significance

Research significance explains why the study is important from both academic and practical perspectives. Given the increasing reliance on project-based delivery within Saudi Arabia's rapidly expanding information technology sector, understanding how project governance practices influence procurement efficiency has become increasingly relevant. This study seeks to contribute to existing knowledge while providing practical guidance for organizations seeking to improve procurement performance through more effective governance mechanisms.

1.3.1 Theoretical Significance

From an academic perspective, this study contributes to the growing body of knowledge at the intersection of project governance and procurement management. Although both fields have developed extensively over the past two decades, they have generally evolved as separate areas of research. Project governance literature has traditionally focused on organizational oversight, strategic alignment, stakeholder accountability, decision-making structures, and project success. Conversely, procurement literature has primarily concentrated on supplier management, purchasing strategies, sourcing processes, contract administration, and supply chain performance. Comparatively limited attention has been given to understanding how

governance practices implemented throughout the project lifecycle influence procurement efficiency.

This study contributes to the literature by conceptualizing project governance practices as an integrated managerial construct composed of planning governance, risk governance, communication governance, and monitoring and control governance. Rather than examining these dimensions independently, the study investigates their collective and individual influence on procurement efficiency, thereby extending current theoretical understanding of governance within project-based organizations.

Furthermore, the research contributes to the limited body of empirical evidence available within the Saudi Arabian context. Most previous studies investigating project governance have been conducted in Western economies or within sectors such as construction, manufacturing, and public infrastructure. Comparatively little research has examined governance practices within Saudi IT organizations, despite the country's significant investment in digital transformation initiatives and increasingly complex technology projects. By providing empirical evidence from Saudi Arabia's IT sector, this study contributes localized knowledge that may serve as a foundation for future research within similar organizational environments.

The study also contributes methodologically by operationalizing project governance practices as measurable organizational capabilities and examining their relationship with procurement efficiency through quantitative analysis. This approach provides an empirical framework that future researchers may adapt or extend when investigating governance-performance relationships across different industries or organizational contexts.

1.3.2 Practical Significance

From a practical perspective, this study provides valuable insights for project managers, procurement professionals, organizational leaders, and policymakers responsible for improving project delivery and procurement performance within Saudi IT organizations. As organizations continue to undertake increasingly complex digital transformation initiatives, procurement activities have become strategically important for ensuring timely project delivery, cost control, supplier collaboration, and overall organizational performance.

The findings of this study are expected to assist project managers in understanding how governance practices contribute to procurement efficiency throughout the project lifecycle. Strong planning governance may improve procurement forecasting and scheduling; effective communication governance may strengthen coordination between project and procurement teams; proactive risk governance may reduce supplier-related uncertainties; and robust monitoring and control governance may improve accountability, transparency, and performance measurement.

Procurement professionals may also benefit from the study by identifying governance mechanisms that enhance procurement planning, supplier management, approval processes, and procurement coordination. Rather than viewing procurement solely as an operational

function, organizations may recognize procurement as an integrated governance process that directly supports project success.

Senior executives and organizational decision-makers may use the study's findings to strengthen governance frameworks, improve project governance policies, enhance procurement procedures, and establish governance structures that support better procurement outcomes. The research may also assist organizations in identifying governance weaknesses that contribute to procurement inefficiencies, thereby supporting continuous organizational improvement.

At the national level, the study aligns closely with Saudi Vision 2030, which emphasizes digital transformation, operational excellence, institutional effectiveness, transparency, and public-sector modernization. Improving procurement efficiency through stronger project governance supports these national objectives by enhancing organizational performance, increasing accountability, reducing waste, and promoting more efficient utilization of public and private resources.

Ultimately, this research seeks not only to contribute to academic knowledge but also to provide practical recommendations that support organizational excellence through more effective governance of procurement activities within Saudi IT organizations.

1.4 Research Questions

Building upon the research problem, theoretical gap, and practical significance identified in the preceding sections, this study seeks to investigate the relationship between project governance practices and procurement efficiency within Saudi IT organizations. The research is guided by one principal research question supported by several sub-questions that collectively address the study's objectives.

Main Research Question

To what extent do project governance practices influence procurement efficiency in Saudi IT organizations?

To answer this central question comprehensively, the following sub-questions are proposed:

1. What is the current level of project governance practices implemented within Saudi IT organizations?
2. What is the current level of procurement efficiency achieved by Saudi IT organizations?
3. To what extent do planning governance practices influence procurement efficiency?
4. How does risk governance affect procurement efficiency within Saudi IT organizations?
5. What is the influence of communication governance on procurement efficiency?
6. To what extent do monitoring and control governance practices contribute to procurement efficiency?

7. Which dimension of project governance has the strongest influence on procurement efficiency?

These research questions establish the analytical direction of the study and provide the basis for developing the research objectives, hypotheses, conceptual framework, and empirical investigation presented in subsequent chapters.

1.5 Research Objectives

Research objectives translate the research problem into measurable goals that guide the investigation and establish the direction of the study. They define what the researcher intends to accomplish through data collection, statistical analysis, and interpretation of findings. In quantitative research, clearly formulated objectives ensure alignment between the research questions, hypotheses, conceptual framework, methodology, and subsequent analysis.

The primary objective of this study is to examine the impact of project governance practices on procurement efficiency within Saudi IT organizations. By investigating the relationship between governance mechanisms and procurement outcomes, the study seeks to provide empirical evidence that contributes to both academic understanding and organizational practice.

To achieve this overarching aim, the following specific objectives are established:

1. To assess the current level of project governance practices implemented within Saudi IT organizations, with particular emphasis on planning governance, risk governance, communication governance, and monitoring and control governance.
2. To evaluate the current level of procurement efficiency within Saudi IT organizations by examining procurement performance in terms of cost efficiency, time efficiency, and supplier performance.
3. To examine the relationship between project governance practices and procurement efficiency, determining whether stronger governance practices are associated with improved procurement outcomes.
4. To determine the relative influence of each project governance dimension—planning governance, risk governance, communication governance, and monitoring and control governance—on procurement efficiency.
5. To provide evidence-based recommendations that assist project managers, procurement professionals, and organizational leaders in strengthening project governance practices to enhance procurement efficiency and overall project performance.

Collectively, these objectives provide a structured roadmap for the empirical investigation undertaken in this study. They ensure that every stage of the research—from questionnaire design and hypothesis development to statistical analysis and interpretation of results—remains aligned with the central purpose of examining how project governance practices contribute to procurement efficiency in Saudi IT organizations.

1.6 Research Hypotheses

Hypotheses constitute the analytical foundation of quantitative research by providing testable propositions regarding the expected relationships between the study variables. Based on the theoretical foundations discussed in Chapter Two and the conceptual assumptions underlying project governance and procurement management, this study proposes that stronger project governance practices positively influence procurement efficiency.

Project governance provides organizations with structured mechanisms for planning, oversight, communication, risk management, accountability, and performance monitoring. These governance mechanisms are expected to improve procurement activities by strengthening coordination, reducing uncertainty, enhancing transparency, and supporting timely decision-making throughout the project lifecycle. Consequently, organizations demonstrating stronger governance practices are expected to achieve higher levels of procurement efficiency.

To empirically examine these relationships, the following hypotheses are proposed.

Main Hypothesis

H1

Project governance practices have a statistically significant positive effect on procurement efficiency in Saudi IT organizations.

To examine the influence of individual governance dimensions, the following sub-hypotheses are formulated.

H1a

Planning governance has a statistically significant positive effect on procurement efficiency.

Planning governance ensures that procurement requirements, project schedules, budgets, resource allocations, and procurement milestones are systematically integrated into project planning activities. Effective planning governance is therefore expected to improve procurement predictability, reduce procurement delays, and enhance overall procurement performance.

H1b

Risk governance has a statistically significant positive effect on procurement efficiency.

Risk governance enables organizations to identify, assess, monitor, and mitigate procurement-related risks throughout project execution. By proactively managing supplier risks, contractual uncertainties, and procurement disruptions, organizations are expected to improve procurement efficiency and reduce operational uncertainty.

H1c

Communication governance has a statistically significant positive effect on procurement efficiency.

Communication governance establishes structured information-sharing mechanisms among project stakeholders, procurement teams, suppliers, and organizational management. Effective communication governance is expected to strengthen collaboration, improve procurement coordination, minimize misunderstandings, and support informed procurement decision-making.

H1d

Monitoring and control governance have a statistically significant positive effect on procurement efficiency.

Monitoring and control governance provide continuous oversight of procurement activities through performance measurement, reporting, compliance monitoring, and corrective actions. Organizations demonstrating stronger monitoring and control governance are expected to achieve higher procurement efficiency by identifying deviations early and maintaining alignment with project objectives.

The proposed hypotheses collectively establish the analytical framework for the statistical analysis conducted later in this study. They provide measurable relationships that will be tested using quantitative techniques, allowing the study to determine both the overall influence of project governance practices and the individual contribution of each governance dimension to procurement efficiency.

1.6.1 Summary of Research Hypotheses

To facilitate a clear understanding of the proposed relationships between the study variables, Table 1.1 summarizes the research hypotheses formulated for empirical testing. The hypotheses are derived from the theoretical foundations of project governance and procurement management discussed in the literature and represent the expected positive influence of project governance practices on procurement efficiency.

Table 1.1 Summary of Research Hypotheses

Hypothesis	Statement	Expected Direction
H1	Project governance practices have a statistically significant positive effect on procurement efficiency.	Positive

H1a	Planning governance has a statistically significant positive effect on procurement efficiency.	Positive
H1b	Risk governance has a statistically significant positive effect on procurement efficiency.	Positive
H1c	Communication governance has a statistically significant positive effect on procurement efficiency.	Positive
H1d	Monitoring and control governance have a statistically significant positive effect on procurement efficiency.	Positive

The hypotheses presented above establish the analytical basis for the quantitative investigation undertaken in this study. Each hypothesis will be statistically tested using correlation and regression analyses to determine whether project governance practices significantly influence procurement efficiency within Saudi IT organizations.

1.7 Research Model

A research model provides the conceptual structure that illustrates the relationships between the variables investigated in a study. It translates theoretical assumptions into an analytical framework that can be empirically tested through quantitative research. By identifying the independent and dependent variables and illustrating the expected direction of influence between them, the research model serves as the foundation for hypothesis development, questionnaire design, data collection, and statistical analysis.

The conceptual model proposed in this research is grounded primarily in Project Governance Theory, the Project Management Body of Knowledge (PMBOK® Guide), governance literature, and procurement management theory. These theoretical perspectives collectively suggest that

effective governance mechanisms strengthen organizational control, improve decision-making quality, enhance stakeholder coordination, reduce project uncertainty, and ultimately improve procurement performance.

Within Saudi IT organizations, project governance practices are expected to influence procurement efficiency by ensuring that procurement activities are integrated into project planning, supported by structured communication, monitored continuously, and managed proactively through effective risk governance. Consequently, stronger governance practices should contribute to improved procurement outcomes in terms of cost efficiency, time efficiency, and supplier performance.

Based on these theoretical assumptions, this study conceptualizes Project Governance Practices as the independent variable and Procurement Efficiency as the dependent variable.

1.7.1 Variables of the Study

The study consists of one independent variable and one dependent variable.

Independent Variable

Project Governance Practices

Project governance practices refer to the managerial mechanisms, structures, and organizational processes used to direct, monitor, control, and support project execution. For the purposes of this research, project governance practices are represented by four dimensions:

- Planning Governance
- Risk Governance
- Communication Governance
- Monitoring and Control Governance

These dimensions collectively represent the governance capabilities responsible for ensuring accountability, coordination, transparency, and effective project oversight.

Dependent Variable

Procurement Efficiency

Procurement efficiency refers to the ability of an organization's procurement function to acquire goods and services effectively while minimizing cost, reducing procurement cycle time, and maintaining high supplier performance.

The construct is measured using three dimensions:

- Cost Efficiency
- Time Efficiency

- Supplier Performance

These indicators collectively represent the effectiveness of procurement activities throughout the project lifecycle.

1.7.2 Conceptual Framework

Based on the theoretical foundation and research hypotheses developed in this chapter, the conceptual framework proposes that stronger project governance practices positively influence procurement efficiency.

More specifically, planning governance is expected to improve procurement scheduling and resource allocation; risk governance is expected to reduce procurement uncertainty and supplier-related disruptions; communication governance is expected to strengthen coordination between project teams, procurement professionals, and suppliers; while monitoring and control governance is expected to enhance accountability, transparency, and continuous procurement performance improvement.

Collectively, these governance dimensions form an integrated governance system that contributes to higher procurement efficiency within Saudi IT organizations.

1.7.3 Theoretical Justification

The proposed conceptual model is supported by several complementary theoretical perspectives that explain how governance mechanisms contribute to organizational performance.

Project Governance Theory argues that projects require structured oversight, clearly defined responsibilities, transparent decision-making processes, and continuous performance monitoring to achieve strategic objectives. Effective governance establishes accountability while ensuring that project decisions remain aligned with organizational priorities and stakeholder expectations.

Similarly, the PMBOK® Guide (PMI, 2021) emphasizes governance throughout the project lifecycle by integrating planning, communication, risk management, and performance monitoring into project execution. These governance mechanisms support informed decision-making, reduce uncertainty, and facilitate effective coordination among project stakeholders.

From a procurement perspective, procurement management theory suggests that efficient procurement depends not only on purchasing procedures but also on governance mechanisms that coordinate planning, supplier management, contract administration, performance measurement, and organizational accountability. Procurement efficiency therefore emerges as a governance outcome rather than merely an operational achievement.

Furthermore, Systems Theory provides additional support for the proposed model by viewing organizations as interconnected systems whose performance depends on the effective

interaction of multiple subsystems. Within project-based organizations, project governance and procurement functions operate as highly interdependent components. Weaknesses in governance inevitably affect procurement performance, while improvements in governance enhance coordination, transparency, and organizational efficiency.

Collectively, these theoretical perspectives provide a robust foundation for examining the proposed relationship between project governance practices and procurement efficiency within Saudi IT organizations.

1.8 Scope of the Study

The scope of a research study defines its boundaries by specifying the context, variables, population, geographical coverage, timeframe, and methodological approach adopted by the researcher. Clearly defining the scope helps establish the limits of the investigation while ensuring that the research remains focused on achieving its objectives. This study examines the impact of project governance practices on procurement efficiency within Saudi IT organizations. The scope is defined as follows.

1.8.1 Geographical Scope

The study is conducted within the Kingdom of Saudi Arabia, focusing primarily on organizations operating in the information technology (IT) sector. Respondents are drawn from organizations located in major cities such as Riyadh, Jeddah, Dammam, and other regions where technology-driven organizations and digital transformation initiatives are concentrated. Although the findings may provide useful insights for organizations operating in similar environments, the conclusions are intended specifically for the Saudi IT sector.

1.8.2 Organizational Scope

The research focuses on project-based organizations operating within the Saudi IT industry. These organizations include government entities, semi-government organizations, private-sector companies, technology service providers, software development firms, cybersecurity organizations, systems integrators, and digital transformation companies that regularly execute projects involving procurement activities.

The study targets professionals directly involved in project governance and procurement activities, including:

- Project Managers
- Procurement Managers
- Procurement Officers
- Contracts Specialists
- Supply Chain Professionals
- Project Coordinators
- PMO Personnel

- Other professionals involved in project governance and procurement decision-making

Their practical experience provides valuable insights into the implementation of project governance practices and their influence on procurement efficiency.

1.8.3 Conceptual Scope

Conceptually, the study examines one independent variable and one dependent variable.

The independent variable is Project Governance Practices, which consists of four dimensions:

- Planning Governance
- Risk Governance
- Communication Governance
- Monitoring and Control Governance

The dependent variable is Procurement Efficiency, which is measured through three dimensions:

- Cost Efficiency
- Time Efficiency
- Supplier Performance

The study specifically investigates the relationship between these variables and does not examine other organizational factors such as leadership style, organizational culture, digital transformation maturity, employee competencies, financial performance, or organizational strategy.

1.8.4 Time Scope

The study represents a cross-sectional investigation conducted during the academic year 2025–2026. Data are collected from respondents at a single point in time to assess their perceptions regarding current project governance practices and procurement efficiency. The study does not investigate changes over time or evaluate governance practices longitudinally.

1.8.5 Methodological Scope

The research adopts a quantitative research methodology based on the positivist research philosophy and a deductive research approach.

Primary data are collected through a structured questionnaire distributed electronically to professionals working within Saudi IT organizations. The collected data are analyzed using the Statistical Package for the Social Sciences (SPSS). Statistical techniques include descriptive statistics, reliability analysis, Pearson correlation analysis, and multiple regression analysis to examine the proposed relationships between the study variables.

By defining these boundaries, the study maintains a focused investigation while ensuring that its findings remain relevant to the objectives established in Chapter One.

1.9 Structure of the Study

To ensure logical progression and coherence, this research is organized into five interconnected chapters. Each chapter addresses a specific stage of the research process, beginning with the identification of the research problem and concluding with the interpretation of findings and recommendations. The structure follows the academic research framework prescribed by Midocean University and reflects the sequential development of empirical research.

Chapter One: Introduction

Chapter One introduces the study by presenting the research background, identifying the research problem, and explaining the theoretical and practical gaps that justify the investigation. The chapter further discusses the significance of the research, establishes the research questions, objectives, and hypotheses, presents the conceptual framework, defines the scope of the study, and outlines the overall structure of the thesis. This chapter provides the foundation upon which the remainder of the research is built.

Chapter Two: Literature Review

Chapter Two critically reviews the existing literature relating to project governance practices and procurement efficiency. The chapter examines the theoretical foundations supporting the study, discusses previous empirical research, identifies knowledge gaps within the existing literature, and develops the theoretical framework supporting the proposed conceptual model. The literature review provides the academic justification for the hypotheses formulated in Chapter One.

Chapter Three: Research Methodology

Chapter Three explains the research methodology adopted to achieve the objectives of the study. It describes the research philosophy, research approach, research design, target population, sampling procedures, questionnaire development, data collection methods, validity and reliability procedures, ethical considerations, and statistical techniques used for data analysis. This chapter establishes the methodological rigor of the study and ensures transparency and replicability.

Chapter Four: Data Analysis and Discussion of Findings

Chapter Four presents the empirical analysis of the collected data. It begins by describing the demographic characteristics of the respondents, followed by reliability and validity assessment of the research instrument. Descriptive and inferential statistical analyses are then conducted to test the proposed hypotheses. The findings are interpreted and discussed in relation to the

theoretical framework and previous studies reviewed in Chapter Two, highlighting similarities, differences, and practical implications.

Chapter Five: Conclusion and Recommendations

Chapter Five concludes the research by summarizing the principal findings in relation to the research objectives and hypotheses. It discusses the theoretical and managerial implications of the findings, acknowledges the limitations of the study, and presents recommendations for practitioners and future researchers. The chapter concludes by highlighting the overall contribution of the study to the fields of project governance and procurement management within Saudi IT organizations.

1.10 Chapter Summary

This chapter introduced the research by presenting the background, identifying the research problem, and explaining the theoretical and practical gaps that motivated the study. It highlighted the significance of examining the relationship between project governance practices and procurement efficiency within Saudi IT organizations and established the research questions, objectives, hypotheses, and conceptual framework that guide the investigation. The chapter also defined the scope of the study and outlined the structure of the thesis.

Collectively, these sections provide the conceptual and methodological foundation for the research. They establish a coherent framework that links the research problem to the empirical investigation while ensuring consistency between the study variables, theoretical foundations, and methodological approach.

The following chapter builds upon this foundation by reviewing the relevant academic literature on project governance practices and procurement efficiency. It examines existing theories, synthesizes previous empirical findings, identifies remaining gaps in knowledge, and develops the theoretical framework that supports the proposed research model.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to examine the theoretical foundations and empirical literature relevant to the relationship between project governance practices and procurement efficiency. A comprehensive literature review is essential because it positions the research within the existing body of knowledge, identifies theoretical and empirical gaps, evaluates previous findings, and establishes the conceptual foundation upon which the present study is built. As noted by Saunders et al. (2019), a well-developed literature review not only summarizes previous research but also critically analyzes existing theories and empirical evidence to justify the need for further investigation.

Over the past two decades, project governance has evolved into one of the most important disciplines in project management. Organizations increasingly recognize that successful project delivery depends not only on effective project management techniques but also on governance structures that provide strategic direction, accountability, oversight, stakeholder engagement, and performance monitoring throughout the project lifecycle. As projects become larger, more technologically complex, and strategically significant, governance mechanisms play an increasingly important role in ensuring that projects remain aligned with organizational objectives while managing risks, resources, and stakeholder expectations effectively.

At the same time, procurement has undergone a similar transformation. Traditionally viewed as an administrative purchasing function, procurement has become a strategic organizational capability that contributes directly to project success and organizational competitiveness. Modern procurement extends beyond acquiring products and services; it encompasses supplier relationship management, strategic sourcing, contract administration, risk mitigation, value creation, and long-term organizational sustainability. Particularly within project-based organizations, procurement performance directly influences project cost, schedule, quality, and stakeholder satisfaction.

The relationship between project governance and procurement efficiency has therefore attracted growing interest among researchers and practitioners. Effective governance provides the policies, structures, decision-making mechanisms, and oversight necessary to coordinate procurement activities throughout project execution. Governance mechanisms ensure that procurement decisions are aligned with project objectives, procurement risks are proactively managed, communication remains transparent, and procurement performance is continuously monitored and improved. Consequently, procurement efficiency should not be viewed solely as the responsibility of procurement departments, but rather as an organizational outcome influenced by the maturity of project governance practices.

This relationship is particularly important within Saudi Arabia's information technology sector. Saudi Vision 2030 has accelerated investment in digital transformation, cybersecurity, cloud computing, smart government services, artificial intelligence, and advanced digital infrastructure. These initiatives require organizations to execute increasingly complex projects involving multiple contractors, international suppliers, rapidly changing technologies, and significant financial investments. Under such conditions, procurement efficiency becomes a critical determinant of project success, while project governance provides the organizational framework necessary to coordinate these complex procurement activities.

Despite increasing recognition of project governance, relatively limited empirical research has investigated its direct influence on procurement efficiency, particularly within Saudi IT organizations. Existing studies have generally examined governance in relation to project success, organizational performance, strategic alignment, or corporate governance. Similarly, procurement studies have primarily focused on supplier management, purchasing performance, contract management, or supply chain effectiveness. Comparatively few studies have integrated these two research domains by examining procurement efficiency as an outcome of project governance practices.

This chapter seeks to bridge that conceptual gap by reviewing the most relevant theories and empirical studies relating to both project governance and procurement efficiency. The review establishes the academic foundation for the research hypotheses proposed in Chapter One while identifying areas where existing knowledge remains limited.

The chapter is organized into several sections. Section 2.2 examines the concept of project governance practices as the independent variable, including its theoretical evolution, governance principles, and the four governance dimensions adopted in this study: planning governance, risk governance, communication governance, and monitoring and control governance. Section 2.3 reviews procurement efficiency as the dependent variable, discussing its conceptual foundations and the dimensions of cost efficiency, time efficiency, and supplier performance. Section 2.4 analyzes previous empirical research examining the relationship between project governance and procurement performance, highlighting areas of agreement and inconsistency within the literature. Section 2.5 identifies the theoretical and empirical research gaps that justify the present study. Finally, Section 2.6 summarizes the chapter and establishes the transition to the research methodology presented in Chapter Three.

Overall, this literature review provides the theoretical foundation necessary for understanding how project governance practices may contribute to procurement efficiency within Saudi IT organizations. By critically synthesizing existing research and identifying unresolved issues, the chapter establishes a strong conceptual basis for the empirical investigation that follows.

2.2 Project Governance Practices (Independent Variable)

Project governance has become one of the most significant disciplines within modern project management because it provides the structures, authority, and accountability necessary to ensure that projects achieve their intended strategic objectives. As organizations increasingly execute projects that involve multiple stakeholders, substantial financial investments, rapidly evolving technologies, and complex supplier ecosystems, effective governance has become essential for maintaining transparency, controlling risks, and ensuring consistent organizational performance.

Unlike traditional project management, which primarily focuses on planning and executing project activities, project governance provides the organizational framework within which project decisions are made, responsibilities are assigned, performance is monitored, and strategic objectives are safeguarded. Governance therefore acts as the bridge between executive management and project execution by ensuring that projects remain aligned with organizational priorities throughout their lifecycle.

The Project Management Institute (PMI, 2021) describes governance as a system through which organizations direct, monitor, and control projects while ensuring accountability, transparency, and value realization. Similarly, Müller (2017) argues that project governance establishes the authority structures, decision-making mechanisms, policies, and oversight processes required to achieve project success while balancing stakeholder expectations and organizational objectives.

Within project-based organizations, governance influences nearly every aspect of project execution. It determines how projects are authorized, how resources are allocated, how procurement decisions are approved, how risks are managed, how communication flows across organizational boundaries, and how project performance is evaluated. Consequently, governance extends beyond administrative compliance and becomes an organizational capability that supports effective decision-making and continuous performance improvement.

The growing importance of project governance has been reinforced by increasing project complexity across industries. Digital transformation, globalization, outsourcing, cybersecurity, cloud computing, and strategic procurement have significantly expanded the number of stakeholders involved in project delivery. These developments require organizations to coordinate internal departments, external suppliers, contractors, regulatory authorities, and executive management through structured governance mechanisms that maintain consistency and accountability.

Within Saudi Arabia's information technology sector, project governance has assumed even greater strategic importance due to Vision 2030 and the rapid expansion of national digital transformation initiatives. Government agencies and private organizations are simultaneously implementing large-scale technology projects involving enterprise resource planning systems, artificial intelligence, cybersecurity infrastructure, cloud migration, smart government services, and digital platforms. These projects require governance systems capable of coordinating procurement activities across multiple suppliers while ensuring regulatory compliance, financial control, and timely project delivery.

For the purpose of this study, project governance practices are viewed as the practical mechanisms through which governance is implemented during project execution. Rather than examining governance as an abstract organizational concept, this research focuses on four governance dimensions that directly influence procurement activities:

- Planning Governance
- Risk Governance
- Communication Governance
- Monitoring and Control Governance

These governance practices collectively provide the organizational discipline necessary to improve procurement efficiency by strengthening planning, reducing uncertainty, enhancing collaboration, and improving oversight throughout the procurement lifecycle.

Accordingly, project governance practices constitute the independent variable of this study and are expected to positively influence procurement efficiency within Saudi IT organizations.

2.2.1 Concept and Evolution of Project Governance

The concept of project governance has evolved considerably over the past three decades. Early project management literature concentrated primarily on operational activities such as

scheduling, budgeting, resource allocation, and project control. Success was traditionally evaluated using the “Iron Triangle” of cost, time, and scope (Atkinson, 1999). While these operational techniques improved project execution, they proved insufficient for managing increasingly complex projects involving multiple organizations, strategic investments, and extensive stakeholder networks.

During the late 1990s and early 2000s, organizations began recognizing that many project failures could not be attributed solely to poor planning or technical shortcomings. Instead, failures frequently resulted from weak executive oversight, unclear decision-making authority, inadequate stakeholder accountability, fragmented communication, and inconsistent organizational governance. This realization shifted attention toward governance as a strategic management discipline rather than merely a project management function.

Turner (2014) argues that project governance emerged from corporate governance principles by adapting organizational accountability, transparency, and strategic oversight to the project environment. Rather than replacing project management, governance complements it by establishing the organizational structures within which project managers operate. Governance therefore determines who has authority to make decisions, how risks are escalated, how performance is monitored, and how projects remain aligned with organizational strategy.

Müller (2017) further emphasizes that governance should be viewed as a value-creation mechanism rather than simply a compliance framework. Effective governance improves decision quality, increases organizational transparency, strengthens stakeholder confidence, and enhances project outcomes by providing consistent leadership throughout project execution.

The PMI (2021) similarly recognizes governance as a fundamental organizational capability that supports portfolio management, program management, and project management. Governance establishes organizational policies, performance measures, reporting mechanisms, and decision-making processes that collectively improve project success.

Today, project governance is widely regarded as an essential organizational competency rather than an optional administrative process. Mature organizations increasingly embed governance throughout the project lifecycle by integrating planning governance, procurement governance, financial governance, quality governance, risk governance, communication governance, and performance monitoring into unified governance systems. This integrated approach enables organizations to manage projects more effectively while improving accountability, procurement performance, and strategic value creation.

Within Saudi Arabia’s rapidly expanding digital economy, project governance has become increasingly important as organizations seek to deliver complex technology projects under demanding regulatory, financial, and operational environments. Consequently, understanding how governance practices influence procurement efficiency has become both an academic and managerial priority.

2.2.2 Governance Principles

Project governance is founded on a set of principles that guide how projects are directed, supervised, and controlled throughout their lifecycle. These principles provide the organizational framework through which projects remain aligned with strategic objectives while ensuring accountability, transparency, ethical decision-making, and effective utilization of organizational resources. Although governance frameworks may differ across organizations and industries, the literature consistently identifies several core principles that underpin effective project governance.

One of the most fundamental principles is accountability. Accountability requires that responsibilities, authority, and decision-making powers are clearly assigned to individuals or governance bodies throughout the project lifecycle. Müller (2017) argues that clearly defined accountability structures reduce ambiguity, strengthen ownership, and improve organizational performance by ensuring that decisions can be traced to responsible individuals. Within procurement activities, accountability establishes clear responsibility for procurement planning, supplier selection, contract approval, budget authorization, and procurement monitoring. When accountability mechanisms are weak, procurement decisions become inconsistent, approval processes become fragmented, and organizational performance deteriorates.

Closely related to accountability is the principle of transparency. Transparency ensures that project information, procurement activities, financial decisions, project risks, and performance results are communicated openly to relevant stakeholders. According to the Organisation for Economic Co-operation and Development (OECD, 2016), transparency enhances organizational integrity by reducing information asymmetry, improving stakeholder confidence, and minimizing opportunities for unethical behaviour. Within procurement management, transparency promotes fair supplier competition, strengthens procurement compliance, and facilitates objective decision-making throughout the procurement lifecycle.

Another essential governance principle is strategic alignment. Projects should not operate independently of organizational strategy; instead, governance mechanisms ensure that project objectives, procurement activities, and resource allocation continuously support broader organizational priorities. The Project Management Institute (PMI, 2021) emphasizes that governance enables organizations to prioritize projects according to strategic value while ensuring that procurement investments contribute directly to organizational objectives. Strategic alignment becomes particularly important within Saudi IT organizations implementing Vision 2030 initiatives, where procurement decisions often involve significant investments in digital transformation, cybersecurity, cloud infrastructure, and emerging technologies.

Effective governance also depends heavily on stakeholder engagement. Projects typically involve numerous internal and external stakeholders, including executive management, project teams, procurement professionals, suppliers, contractors, regulators, and end users. Freeman (1984) argues that organizations achieve superior performance when governance structures actively recognize stakeholder interests and facilitate collaboration throughout project execution. Within procurement environments, stakeholder engagement improves supplier relationships,

enhances communication, reduces conflicts, and supports collaborative problem-solving during procurement execution.

Another key governance principle is risk-based decision-making. Modern governance recognizes that uncertainty is unavoidable within project environments. Governance structures therefore establish mechanisms for identifying, assessing, prioritizing, and managing risks before they negatively affect project performance. Hillson (2019) emphasizes that governance should encourage proactive rather than reactive risk management by integrating risk considerations into organizational decision-making. In procurement contexts, risk governance assists organizations in anticipating supplier failures, market fluctuations, contractual disputes, regulatory changes, and logistical disruptions that could otherwise compromise procurement efficiency.

Equally important is the principle of performance monitoring and continuous improvement. Effective governance requires continuous measurement of project performance through clearly defined performance indicators, reporting systems, governance reviews, and corrective actions. Kerzner (2022) argues that governance should not merely monitor compliance but should actively support organizational learning and continuous improvement. Monitoring enables organizations to identify deviations early, implement corrective measures promptly, and continuously refine governance practices based on lessons learned from previous projects. Within procurement, continuous monitoring improves supplier performance evaluation, contract compliance, procurement cycle times, and budget performance.

Finally, governance emphasizes ethical conduct and regulatory compliance. Governance frameworks establish policies and procedures that ensure projects operate in accordance with applicable laws, organizational policies, professional standards, and ethical principles. Ethical governance promotes fairness, integrity, objectivity, and responsible stewardship of organizational resources. Procurement activities particularly benefit from ethical governance because procurement decisions often involve significant financial commitments, supplier selection processes, contract awards, and public accountability. Strong ethical governance therefore strengthens organizational credibility while reducing legal and reputational risks.

Collectively, these governance principles—accountability, transparency, strategic alignment, stakeholder engagement, risk-based decision-making, performance monitoring, and ethical conduct—provide the theoretical foundation upon which effective project governance practices are built. Rather than functioning independently, these principles operate as an integrated governance system that enhances organizational coordination, improves decision quality, and supports successful project delivery.

For the purposes of this study, these governance principles are operationalized through four practical governance dimensions: planning governance, risk governance, communication governance, and monitoring and control governance. These dimensions represent the day-to-day governance mechanisms that organizations apply during project execution and constitute the independent variable examined throughout this research.

2.2.3 Planning Governance

Planning governance refers to the organizational structures, policies, procedures, and decision-making mechanisms that ensure project planning activities are conducted systematically, consistently, and in alignment with organizational objectives. Unlike project planning itself—which focuses on defining schedules, budgets, resources, and deliverables—planning governance establishes the rules and oversight through which planning activities are approved, coordinated, monitored, and continuously improved. It ensures that planning is not merely an operational exercise but a governance function that supports strategic decision-making and organizational accountability.

According to the Project Management Institute (PMI, 2021), governance plays a critical role during project planning by ensuring that project objectives remain aligned with organizational strategy, stakeholder expectations, regulatory requirements, and available organizational resources. Effective governance requires planning decisions to pass through defined approval mechanisms, governance reviews, and executive oversight before implementation. This structured approach reduces uncertainty, strengthens accountability, and increases the likelihood of successful project delivery.

Kerzner (2022) similarly argues that planning governance forms the foundation of effective project governance because every subsequent governance activity—including procurement, budgeting, scheduling, quality management, and risk management—depends upon the quality of initial planning decisions. Organizations that establish robust planning governance frameworks are better positioned to allocate resources efficiently, coordinate stakeholders, anticipate procurement requirements, and monitor project performance throughout the project lifecycle.

Within procurement management, planning governance is particularly important because procurement activities are highly dependent upon accurate project planning. Procurement schedules, supplier selection, contract strategies, budget allocations, and resource requirements should all be established during the planning phase rather than emerging reactively during project execution. Early governance oversight ensures that procurement requirements are identified before project implementation begins, allowing organizations to conduct market analysis, evaluate suppliers, prepare procurement documentation, and establish realistic procurement timelines.

One of the principal advantages of planning governance is its ability to improve resource coordination. Complex IT projects frequently require specialized software, hardware, cloud services, cybersecurity solutions, consulting services, and technical expertise from multiple suppliers. Governance mechanisms ensure that these procurement requirements are incorporated into project planning from the outset, thereby reducing procurement bottlenecks and minimizing delays caused by incomplete planning or late purchasing decisions.

Planning governance also enhances decision quality by requiring major planning decisions to undergo structured governance reviews before implementation. Governance committees,

steering committees, and executive sponsors evaluate whether project plans adequately address procurement requirements, organizational priorities, financial constraints, regulatory compliance, and stakeholder expectations. This structured review process minimizes planning errors and strengthens organizational confidence in procurement decisions.

Another significant contribution of planning governance is the integration of procurement planning with broader project governance processes. Rather than treating procurement as an isolated administrative activity, governance ensures that procurement milestones are incorporated into project schedules, procurement risks are considered during planning, supplier lead times are reflected within project timelines, and procurement budgets are aligned with overall project financial planning. This integration significantly improves procurement predictability while reducing the likelihood of emergency procurement activities that frequently increase project costs.

Research consistently demonstrates that organizations with mature planning governance achieve superior project performance. Müller (2017) found that governance structures emphasizing comprehensive planning significantly improve project predictability and stakeholder confidence. Similarly, Too and Weaver (2014) concluded that planning governance contributes to greater organizational consistency by standardizing planning procedures, improving decision-making quality, and strengthening project oversight. Within procurement environments, these governance mechanisms translate into improved procurement scheduling, stronger supplier coordination, reduced procurement delays, and more effective resource utilization.

Within Saudi Arabia's IT sector, planning governance has become increasingly important due to the complexity of digital transformation initiatives undertaken under Vision 2030. Projects involving enterprise resource planning systems, cloud migration, cybersecurity infrastructure, smart city technologies, and artificial intelligence frequently involve numerous suppliers operating across different countries and regulatory environments. Under these conditions, effective planning governance enables organizations to coordinate procurement activities proactively, reduce implementation risks, and improve project delivery performance.

Despite its recognized importance, many organizations continue to experience weaknesses in planning governance. Planning activities are often treated as project management documentation rather than strategic governance processes. Procurement requirements may be identified too late, governance approvals may become administrative formalities rather than meaningful reviews, and planning decisions may lack sufficient coordination among project teams, procurement departments, finance functions, and executive management. These weaknesses frequently result in procurement delays, contract amendments, supplier disputes, budget overruns, and project schedule slippages.

For the purposes of this study, planning governance represents the first dimension of project governance practices. It reflects the extent to which organizations establish structured governance mechanisms that integrate procurement planning into project planning, coordinate procurement activities through formal governance processes, and ensure that procurement decisions support overall project objectives. Based on both theoretical arguments and previous

empirical evidence, stronger planning governance is expected to contribute positively to procurement efficiency by improving cost performance, reducing procurement cycle times, and strengthening supplier performance.

2.2.4 Risk Governance

Risk governance refers to the organizational framework through which project-related risks are identified, assessed, monitored, communicated, and managed throughout the project lifecycle. Unlike traditional risk management, which focuses primarily on operational risk identification and mitigation, risk governance emphasizes the structures, responsibilities, policies, and decision-making mechanisms that ensure risks are managed consistently and strategically across an organization. It establishes how risk-related decisions are made, who is responsible for approving mitigation strategies, how risks are escalated, and how risk information supports organizational objectives.

According to the Project Management Institute (PMI, 2021), effective governance requires organizations to integrate risk management into every phase of the project lifecycle rather than treating it as a separate administrative activity. Governance structures ensure that risks are continuously monitored, evaluated, and communicated to decision-makers, allowing organizations to respond proactively instead of reacting after problems occur.

Hillson (2019) describes risk governance as a critical component of organizational resilience. Rather than attempting to eliminate uncertainty, governance enables organizations to anticipate uncertainty, understand its potential impact, and implement structured responses that minimize adverse consequences while maximizing opportunities. This perspective is particularly relevant for project-based organizations, where uncertainty is inevitable due to changing stakeholder requirements, evolving technologies, supplier performance, regulatory changes, and market conditions.

Within procurement activities, risk governance plays a particularly important role because procurement functions are exposed to numerous internal and external risks. Supplier insolvency, delayed deliveries, fluctuating market prices, contractual disputes, cybersecurity threats, regulatory compliance issues, geopolitical instability, and quality failures all represent procurement risks that can significantly affect project performance. Effective governance ensures that these risks are systematically identified during project planning, continuously monitored throughout procurement execution, and addressed through predefined mitigation strategies.

One of the major contributions of risk governance is its ability to improve procurement decision-making. Organizations with mature governance frameworks require procurement risks to be evaluated before major purchasing decisions are approved. Supplier financial stability, market availability, contract complexity, delivery capability, and operational capacity become integral components of governance reviews rather than isolated procurement considerations. This structured evaluation reduces uncertainty and improves the quality of procurement decisions.

Risk governance also strengthens supplier management by encouraging organizations to move beyond price-based supplier selection toward comprehensive supplier risk assessment. Modern procurement governance evaluates suppliers according to financial health, operational resilience, cybersecurity maturity, regulatory compliance, quality performance, and business continuity capabilities. Such governance mechanisms contribute to more sustainable supplier relationships and reduce the likelihood of procurement disruptions during project execution.

Empirical studies consistently demonstrate the importance of governance-based risk management. Hillson (2019) reported that organizations integrating governance with risk management achieve greater project stability and improved decision quality. Too and Weaver (2014) similarly argue that governance structures incorporating formal risk oversight improve organizational learning, enhance stakeholder confidence, and reduce project uncertainty. These findings suggest that risk governance contributes not only to project success but also to procurement performance by creating more predictable procurement environments.

Within Saudi Arabia's IT sector, risk governance has become increasingly important due to the country's accelerated digital transformation initiatives. Technology projects frequently involve international suppliers, cloud-service providers, cybersecurity vendors, software licensing agreements, and complex contractual arrangements. These projects operate within dynamic technological and regulatory environments where procurement risks can evolve rapidly. Effective governance enables organizations to anticipate these uncertainties, strengthen supplier resilience, and maintain procurement continuity despite changing external conditions.

Despite widespread recognition of its importance, many organizations continue to implement risk governance primarily as a compliance requirement rather than a strategic management capability. Risk registers are often created but seldom updated, governance committees may review risks only periodically, and procurement risks may receive limited attention until operational problems emerge. Consequently, organizations possessing formal risk management procedures do not always experience measurable improvements in procurement performance.

For the purposes of this study, risk governance represents the second dimension of project governance practices. It reflects the extent to which Saudi IT organizations establish structured governance mechanisms for identifying, evaluating, monitoring, and managing procurement-related risks throughout the project lifecycle. Stronger risk governance is therefore expected to contribute positively to procurement efficiency by reducing disruptions, strengthening supplier reliability, and supporting more informed procurement decisions.

2.2.5 Communication Governance

Communication governance refers to the policies, structures, processes, and responsibilities that regulate how project information is created, shared, approved, and distributed among stakeholders throughout the project lifecycle. Unlike communication management, which focuses on the day-to-day exchange of information, communication governance establishes the organizational framework that ensures communication remains accurate, timely, transparent, consistent, and aligned with project objectives.

According to the Project Management Institute (PMI, 2021), effective project governance requires communication systems that support informed decision-making by ensuring that relevant information reaches the appropriate stakeholders at the appropriate time. Governance defines communication responsibilities, reporting structures, approval authorities, escalation procedures, and documentation standards that collectively improve organizational coordination and accountability.

Müller (2017) argues that communication governance is one of the primary mechanisms through which governance creates value. Projects frequently involve executive sponsors, governance boards, project managers, procurement teams, finance departments, suppliers, contractors, regulators, and end users. Without structured governance mechanisms, information becomes fragmented, inconsistent, or delayed, leading to poor decision-making and increased project uncertainty.

Within procurement environments, communication governance is particularly important because procurement activities require continuous interaction among multiple internal and external stakeholders. Procurement specifications, supplier clarifications, contract negotiations, approval workflows, budget revisions, delivery schedules, and performance evaluations all depend upon effective communication. Governance ensures that these communications follow standardized procedures, reducing misunderstandings and improving organizational coordination.

One of the principal contributions of communication governance is improving cross-functional collaboration. Procurement rarely operates independently; successful procurement depends upon close coordination between project management, technical teams, finance departments, legal advisors, and suppliers. Governance establishes formal communication channels that enable these stakeholders to exchange information efficiently while maintaining accountability and traceability.

Communication governance also strengthens decision quality by ensuring that governance committees and senior management receive accurate, complete, and timely information before approving procurement decisions. Governance reports, procurement dashboards, project status reviews, and executive briefings enable decision-makers to monitor procurement performance while responding quickly to emerging challenges.

Walker and Lloyd-Walker (2016) emphasize that collaborative governance significantly improves project performance by promoting transparency, trust, and shared decision-making among stakeholders. Their research indicates that organizations adopting structured communication governance experience fewer conflicts, stronger supplier relationships, and more effective project coordination. Similarly, Pinto and Slevin (1988) identify communication as one of the most consistent predictors of project success, particularly in projects involving multiple organizational units.

Within Saudi Arabia's IT sector, communication governance has become increasingly important due to the international nature of technology procurement. Organizations frequently collaborate with multinational software vendors, cloud providers, cybersecurity companies, consulting firms,

and systems integrators. These relationships involve multiple languages, cultures, regulatory environments, and technical standards. Governance mechanisms therefore ensure that procurement communications remain standardized, documented, and aligned with organizational objectives despite this complexity.

However, communication governance remains challenging for many organizations. Formal communication plans often exist but are inconsistently implemented. Governance meetings may become routine reporting exercises rather than strategic decision-making forums, while communication between procurement and project teams may remain reactive instead of proactive. These weaknesses frequently contribute to procurement delays, specification changes, contract amendments, duplicated work, and supplier dissatisfaction.

For the purposes of this study, communication governance represents the third dimension of project governance practices. It reflects the extent to which organizations establish structured governance mechanisms that promote accurate information sharing, stakeholder coordination, transparent reporting, and effective decision-making throughout procurement activities. Strong communication governance is therefore expected to contribute positively to procurement efficiency by strengthening collaboration, reducing misunderstandings, and improving supplier coordination.

2.2.6 Monitoring and Control Governance

Monitoring and control governance refers to the organizational mechanisms through which project performance is continuously measured, evaluated, and controlled to ensure alignment with strategic objectives, governance policies, and project plans. Unlike operational monitoring, which focuses on tracking daily activities, governance-based monitoring emphasizes organizational oversight, executive reporting, performance accountability, compliance verification, and continuous improvement.

According to PMI (2021), governance requires organizations to establish performance measurement systems that enable project leaders and executive management to monitor project progress objectively and take corrective action when necessary. Governance structures define performance indicators, reporting responsibilities, review processes, and escalation mechanisms that ensure project performance remains visible throughout the project lifecycle.

Kerzner (2022) describes monitoring and control as the governance function that transforms project information into management action. Effective governance enables organizations not only to measure project performance but also to interpret performance trends, identify emerging issues, and implement timely corrective actions before problems significantly affect project outcomes. This proactive approach distinguishes governance from simple performance reporting.

Within procurement management, monitoring and control governance ensures that procurement activities remain aligned with approved schedules, budgets, contractual obligations, and organizational objectives. Governance mechanisms monitor supplier performance, procurement

cycle times, budget utilization, contract compliance, procurement risks, and procurement quality. These measurements enable organizations to identify deviations early while maintaining accountability across all procurement stakeholders.

One of the most important contributions of monitoring governance is the establishment of Key Performance Indicators (KPIs) for procurement performance. Common procurement KPIs include procurement lead time, supplier on-time delivery, procurement cost variance, contract compliance, supplier quality, procurement cycle efficiency, and procurement savings. Governance frameworks require these indicators to be reviewed regularly by project leadership and governance committees to ensure procurement performance remains aligned with project objectives.

Monitoring governance also strengthens organizational accountability by assigning responsibility for performance measurement and corrective action. Procurement deviations are no longer viewed merely as operational issues but become governance matters requiring executive attention, root-cause analysis, and continuous improvement initiatives. This governance perspective encourages organizations to learn from procurement failures while strengthening future procurement performance.

Research consistently demonstrates the importance of governance-based monitoring. Kerzner (2022) argues that mature organizations distinguish themselves through continuous performance measurement rather than periodic project reviews. Similarly, Too and Weaver (2014) conclude that governance systems emphasizing continuous monitoring improve project predictability, organizational learning, and stakeholder confidence.

Within Saudi Arabia's IT organizations, monitoring governance has become increasingly important due to growing regulatory expectations and the strategic significance of digital transformation initiatives. Organizations executing large technology projects must continuously monitor procurement performance to ensure compliance with organizational policies, contractual commitments, cybersecurity requirements, financial controls, and national procurement regulations. Governance dashboards, digital procurement systems, enterprise resource planning platforms, and project management information systems increasingly support this oversight by providing real-time visibility into procurement activities.

Despite advances in digital monitoring technologies, many organizations continue to face governance challenges. Performance indicators may focus on operational outputs rather than strategic outcomes, governance reviews may occur too infrequently, corrective actions may be delayed, and lessons learned may not be systematically incorporated into future procurement planning. Consequently, monitoring activities often emphasize reporting rather than organizational learning and continuous improvement.

For the purposes of this study, monitoring and control governance represents the fourth dimension of project governance practices. It reflects the extent to which Saudi IT organizations establish governance mechanisms that continuously monitor procurement performance, evaluate supplier outcomes, ensure accountability, and implement corrective actions when

necessary. Effective monitoring and control governance is therefore expected to enhance procurement efficiency by improving transparency, performance management, and continuous organizational improvement.

2.2.7 Summary

Project governance practices constitute the independent variable of this study and represent the organizational mechanisms through which projects are directed, supervised, and aligned with strategic objectives. The literature demonstrates that governance extends beyond traditional project management by providing structured decision-making processes, accountability mechanisms, communication frameworks, risk oversight, and performance monitoring throughout the project lifecycle.

This review identified four governance dimensions that are particularly relevant to procurement efficiency: planning governance, risk governance, communication governance, and monitoring and control governance. Planning governance provides the strategic foundation by integrating procurement requirements into project planning. Risk governance enables organizations to anticipate and mitigate procurement-related uncertainties. Communication governance strengthens stakeholder coordination and information sharing, while monitoring and control governance ensures continuous oversight, accountability, and performance improvement.

Collectively, these governance dimensions create an integrated management system that supports more effective procurement planning, stronger supplier relationships, improved decision-making, and enhanced organizational performance. Although previous studies generally support the positive contribution of governance practices to project success, relatively limited empirical evidence exists regarding their specific influence on procurement efficiency within Saudi IT organizations. This gap provides the primary justification for the present study and forms the basis for the hypotheses developed in Chapter One.

2.3 Procurement Efficiency (Dependent Variable)

Procurement efficiency has evolved from a traditional operational measure into a strategic performance indicator that reflects an organization's ability to acquire goods, services, and resources while maximizing value and supporting organizational objectives. In project-based organizations, procurement efficiency extends beyond simply obtaining products at the lowest price; it encompasses the effectiveness of procurement planning, supplier management, contract administration, resource utilization, and overall contribution to project success.

As organizations increasingly rely on external suppliers, strategic partnerships, and global supply networks, procurement has become one of the most influential organizational functions affecting project performance. Efficient procurement enables organizations to deliver projects on time, within budget, and according to quality expectations, whereas inefficient procurement frequently results in cost overruns, schedule delays, supplier disputes, contractual problems, and operational disruptions.

According to Thai (2001), procurement efficiency represents the organization's ability to obtain maximum value from procurement activities while ensuring transparency, fairness, accountability, and responsible utilization of organizational resources. Modern procurement therefore balances economic efficiency with governance, compliance, supplier relationships, and long-term organizational sustainability.

Similarly, Amann and Essig (2015) argue that procurement should no longer be viewed as a transactional purchasing activity but rather as a strategic organizational capability that directly contributes to competitive advantage. Organizations with mature procurement systems integrate procurement planning into organizational strategy, establish long-term supplier partnerships, continuously evaluate procurement performance, and apply governance mechanisms that promote continuous improvement.

Within project environments, procurement efficiency is particularly critical because procurement activities support every stage of project execution. Hardware, software, consulting services, cloud infrastructure, cybersecurity solutions, professional services, and specialized technologies must all be acquired according to project schedules while maintaining financial discipline and contractual compliance. Procurement delays or supplier failures frequently become the primary causes of project delays, budget overruns, and reduced stakeholder satisfaction.

The importance of procurement efficiency has become even greater within Saudi Arabia's IT sector. Vision 2030 has accelerated investments in digital transformation projects involving artificial intelligence, smart cities, cloud computing, enterprise systems, cybersecurity, and digital government initiatives. These projects frequently involve multiple international vendors, complex contractual arrangements, evolving technical requirements, and demanding implementation schedules. Consequently, procurement efficiency has become an important determinant of organizational success.

For the purpose of this research, procurement efficiency is conceptualized as the organization's ability to achieve desired procurement outcomes while utilizing resources effectively and maintaining alignment with project objectives. Procurement efficiency is measured through three complementary dimensions:

- Cost Efficiency
- Time Efficiency
- Supplier Performance

Together, these dimensions provide a comprehensive assessment of procurement performance within Saudi IT organizations and constitute the dependent variable examined throughout this study.

2.3.1 Concept and Evolution of Procurement Efficiency

The concept of procurement efficiency has undergone significant transformation over the past several decades. Traditionally, procurement performance was evaluated primarily according to

purchasing price, transaction speed, and administrative efficiency. Procurement departments were largely viewed as operational units responsible for processing purchase requests and negotiating favorable prices with suppliers.

However, increasing globalization, technological advancement, supply chain integration, and project complexity have fundamentally changed the role of procurement within modern organizations. Procurement is now widely recognized as a strategic organizational capability that contributes directly to project performance, organizational competitiveness, innovation, and long-term value creation.

According to Carter and Narasimhan (2006), procurement has evolved from a transactional purchasing function into a strategic management discipline responsible for supplier relationship management, contract strategy, risk mitigation, organizational collaboration, and performance improvement. This evolution reflects growing recognition that procurement decisions influence not only purchasing costs but also project schedules, operational resilience, organizational flexibility, and customer satisfaction.

Telgen, Harland, and Knight (2010) further argue that procurement efficiency should be evaluated according to both input efficiency and output efficiency. Input efficiency focuses on minimizing procurement resources, administrative effort, and purchasing costs, whereas output efficiency emphasizes procurement outcomes such as supplier reliability, procurement quality, timely delivery, and stakeholder satisfaction. Modern procurement therefore seeks to optimize overall organizational value rather than minimizing purchasing costs alone.

Within project management, procurement efficiency is closely associated with successful project delivery. Projects depend upon the timely acquisition of materials, equipment, technologies, consulting services, and specialized expertise. Procurement failures frequently propagate throughout project execution, causing schedule delays, contractual disputes, budget escalation, quality deficiencies, and stakeholder dissatisfaction. Consequently, procurement efficiency has become one of the principal indicators of project governance maturity.

The literature increasingly recognizes that procurement efficiency depends upon multiple organizational capabilities rather than procurement activities alone. Effective governance, strategic planning, supplier collaboration, communication, performance monitoring, and continuous improvement collectively determine procurement performance. Organizations that integrate procurement into broader project governance systems consistently demonstrate superior procurement outcomes compared with organizations that treat procurement as an isolated operational process.

Within Saudi Arabia, procurement efficiency has become increasingly important due to extensive government investment in digital transformation, infrastructure modernization, and public-sector reform under Vision 2030. National initiatives emphasizing transparency, governance, local content, and value for money have further strengthened the strategic importance of procurement performance across both public and private sectors. Organizations

are therefore expected not only to procure efficiently but also to demonstrate accountability, compliance, and continuous performance improvement.

For this study, procurement efficiency is viewed as a multidimensional organizational capability reflecting the effectiveness of procurement activities throughout the project lifecycle. Rather than measuring procurement solely through purchasing costs, the study evaluates procurement efficiency through three dimensions that collectively capture financial performance, operational performance, and supplier effectiveness:

- Cost Efficiency
- Time Efficiency
- Supplier Performance

These dimensions provide a comprehensive representation of procurement efficiency and align with both procurement management theory and project governance literature.

2.3.2 Cost Efficiency

Cost efficiency is one of the most widely recognized indicators of procurement performance because it reflects an organization's ability to obtain the required goods and services while optimizing financial resources and maximizing value. Traditionally, procurement departments were evaluated primarily according to their ability to negotiate lower purchase prices. However, contemporary procurement theory recognizes that cost efficiency extends far beyond purchase price alone. It encompasses the entire cost of acquiring, managing, operating, and maintaining products and services throughout their lifecycle.

According to Thai (2001), cost efficiency should be understood within the broader concept of value for money, where procurement decisions balance acquisition cost, product quality, operational performance, supplier capability, and long-term organizational value. This perspective acknowledges that selecting the lowest-priced supplier does not necessarily produce the most efficient procurement outcome if lower prices result in poor quality, delivery delays, contractual disputes, or increased maintenance costs.

Similarly, Amann and Essig (2015) argue that modern procurement organizations emphasize total cost of ownership (TCO) rather than purchase price alone. Total cost of ownership includes transportation, installation, maintenance, warranty obligations, operational costs, supplier management expenses, contract administration, and disposal costs. Procurement decisions that appear inexpensive initially may ultimately generate significantly higher lifecycle costs if governance mechanisms fail to evaluate these broader financial implications.

Within project-based organizations, cost efficiency directly influences project performance because procurement often represents a substantial proportion of total project expenditure. Information technology projects frequently involve high-value investments in software licensing, cloud services, cybersecurity solutions, specialized consulting services, enterprise platforms,

and technology infrastructure. Inefficient procurement decisions can therefore produce substantial budget overruns that threaten project success.

Project governance contributes significantly to procurement cost efficiency by establishing structured planning processes, approval mechanisms, procurement reviews, financial oversight, and performance monitoring. Governance ensures that procurement budgets are developed systematically, supplier selection follows transparent evaluation criteria, procurement activities remain aligned with approved financial plans, and cost deviations are identified early enough to enable corrective action.

Kerzner (2022) argues that governance-based financial oversight improves procurement cost performance by reducing unnecessary purchasing, preventing duplicate procurement activities, strengthening budget discipline, and encouraging evidence-based decision-making. Organizations with mature governance frameworks therefore achieve greater financial predictability while reducing procurement-related cost overruns.

Cost efficiency also depends heavily on procurement planning. Early identification of procurement requirements allows organizations to conduct market analysis, evaluate supplier alternatives, negotiate favorable contractual terms, consolidate purchasing requirements, and avoid emergency procurement activities. Reactive procurement frequently increases acquisition costs because organizations possess limited negotiation leverage and insufficient time for supplier evaluation.

Within Saudi Arabia's IT sector, cost efficiency has become increasingly important due to the significant investments associated with national digital transformation initiatives. Government agencies and private organizations invest billions of Saudi Riyals annually in cloud infrastructure, cybersecurity technologies, enterprise software, artificial intelligence solutions, and digital government services. Under these conditions, even relatively small improvements in procurement efficiency can generate substantial financial savings while improving organizational competitiveness.

However, achieving procurement cost efficiency remains challenging. Technology markets evolve rapidly, software licensing models continue changing, supplier pricing structures become increasingly complex, and exchange rate fluctuations influence procurement costs. Organizations must therefore establish governance mechanisms capable of continuously evaluating procurement expenditures while balancing financial efficiency with project quality, technological capability, supplier reliability, and long-term organizational objectives.

For the purposes of this study, cost efficiency represents the first dimension of procurement efficiency. It reflects the organization's ability to obtain required products and services while maintaining financial discipline, minimizing unnecessary expenditure, and maximizing organizational value through effective project governance.

2.3.3 Time Efficiency

Time efficiency refers to the ability of an organization to complete procurement activities within planned schedules while ensuring that required goods and services are available when needed to support project execution. Time has long been recognized as one of the primary constraints of project management, and procurement delays frequently represent one of the most significant causes of project schedule overruns.

According to Nicholas and Steyn (2017), procurement time efficiency extends beyond simply reducing purchasing cycle duration. It encompasses the coordination of procurement activities with project schedules, supplier lead times, approval processes, logistics planning, contract execution, and resource availability. Effective procurement therefore ensures that products and services arrive precisely when required without creating unnecessary project delays or inventory costs.

Procurement activities generally involve multiple sequential processes, including requirement identification, specification development, market research, supplier selection, tendering, evaluation, contract negotiation, purchase order issuance, manufacturing, delivery, inspection, acceptance, and payment. Delays occurring at any stage may propagate throughout the entire project lifecycle, affecting multiple project activities simultaneously.

Project governance contributes to procurement time efficiency by integrating procurement schedules into overall project planning while establishing governance mechanisms that reduce unnecessary approval delays and improve organizational coordination. Governance committees, procurement approval authorities, standardized procurement procedures, and digital procurement systems collectively streamline procurement workflows while maintaining accountability.

Kerzner (2022) emphasizes that governance improves schedule performance through early planning, proactive decision-making, standardized processes, and continuous monitoring of procurement milestones. Organizations possessing mature governance frameworks typically experience fewer procurement bottlenecks because governance enables procurement requirements to be identified early rather than emerging during project execution.

Technology projects present unique challenges for procurement time efficiency. Hardware availability, software licensing approvals, cloud-service provisioning, cybersecurity certification, vendor implementation schedules, and international logistics frequently introduce uncertainties that affect procurement timelines. Consequently, governance mechanisms capable of anticipating these constraints significantly improve procurement responsiveness.

Saudi Arabia's ambitious digital transformation agenda further increases the importance of procurement time efficiency. Projects supporting Vision 2030 often operate under demanding implementation schedules involving multiple governmental stakeholders, international technology providers, and strict contractual milestones. Procurement delays under these

circumstances may affect not only individual projects but broader national digital transformation initiatives.

Despite advances in digital procurement technologies, organizations continue facing numerous challenges affecting procurement timeliness. Bureaucratic approval procedures, fragmented communication, incomplete technical specifications, supplier capacity limitations, contractual negotiations, regulatory compliance requirements, and inadequate planning frequently contribute to procurement delays.

For the purposes of this study, time efficiency represents the second dimension of procurement efficiency. It reflects the organization's ability to complete procurement activities according to planned schedules while maintaining alignment with overall project timelines through effective governance and organizational coordination.

2.3.4 Supplier Performance

Supplier performance represents the extent to which suppliers consistently satisfy organizational expectations regarding quality, delivery, responsiveness, contractual compliance, innovation, and overall service performance. Modern procurement recognizes suppliers as strategic partners whose performance directly influences project success, organizational competitiveness, and long-term business sustainability.

According to Walker and Lloyd-Walker (2016), supplier performance should be evaluated through a comprehensive assessment of supplier capability rather than simply measuring delivery performance. Effective supplier evaluation considers product quality, technical competence, financial stability, communication effectiveness, responsiveness, innovation capability, contract compliance, and relationship quality. This broader perspective reflects the increasing strategic importance of supplier collaboration within project-based organizations.

Project governance significantly influences supplier performance by establishing standardized supplier evaluation procedures, governance oversight of supplier selection, contract governance mechanisms, performance monitoring systems, and continuous supplier assessment. Governance ensures that supplier relationships remain aligned with organizational objectives while encouraging accountability from both suppliers and project teams.

One of the most important governance contributions involves establishing objective supplier evaluation criteria. Governance frameworks typically require suppliers to be evaluated according to predefined technical, financial, operational, and strategic criteria rather than relying solely on purchase price. This structured approach improves procurement quality while reducing supplier-related risks.

Supplier performance also depends heavily upon governance-supported communication and relationship management. Organizations maintaining structured governance relationships with suppliers generally experience greater trust, improved collaboration, faster problem resolution,

and stronger long-term partnerships. These governance mechanisms encourage suppliers to view procurement relationships strategically rather than transactionally.

Research consistently demonstrates that governance-based supplier management improves procurement outcomes. Prajogo and Sohal (2013) reported that organizations emphasizing collaborative supplier governance achieve superior operational performance, innovation capability, and procurement effectiveness compared with organizations relying primarily upon transactional purchasing relationships.

Within Saudi Arabia's IT industry, supplier performance assumes exceptional importance because organizations frequently depend upon international technology vendors providing software platforms, cybersecurity solutions, cloud infrastructure, consulting services, and systems integration. These supplier relationships often extend over several years and involve ongoing technical support, software updates, maintenance services, and continuous organizational collaboration. Consequently, governance mechanisms that strengthen supplier performance contribute directly to project success.

Nevertheless, organizations continue facing supplier-related challenges including inconsistent service quality, delayed deliveries, communication problems, contractual disputes, vendor dependency, technological incompatibility, and rapidly changing market conditions. Governance mechanisms therefore play a crucial role in maintaining supplier accountability while supporting continuous performance improvement.

For the purposes of this study, supplier performance represents the third dimension of procurement efficiency. It reflects the organization's ability to establish, manage, evaluate, and continuously improve supplier relationships through governance mechanisms that promote quality, reliability, collaboration, and long-term procurement success.

2.3.5 Summary

Procurement efficiency constitutes the dependent variable of this study and represents the effectiveness with which organizations acquire goods and services while supporting successful project delivery. Contemporary procurement literature emphasizes that procurement efficiency extends beyond purchasing cost alone and should instead be evaluated through multiple organizational performance dimensions.

This review identified three complementary dimensions of procurement efficiency: cost efficiency, time efficiency, and supplier performance. Cost efficiency focuses on maximizing organizational value while maintaining financial discipline; time efficiency examines the organization's ability to complete procurement activities according to planned schedules; and supplier performance evaluates the effectiveness of supplier relationships in supporting project objectives.

Collectively, these dimensions provide a comprehensive assessment of procurement efficiency within project-based organizations. The literature consistently indicates that procurement efficiency depends not only on procurement activities themselves but also on broader

governance mechanisms that coordinate planning, decision-making, communication, risk management, and performance monitoring. This observation provides the theoretical bridge to the following section, which examines the relationship between project governance practices and procurement efficiency and forms the foundation for the hypotheses tested in this study.

2.4 The Relationship Between Project Governance Practices and Procurement Efficiency

2.4.1 Theoretical Relationship

The relationship between project governance practices and procurement efficiency has become increasingly significant as organizations recognize that successful procurement depends not only on procurement procedures but also on the governance structures that guide project execution. Project governance provides the strategic framework through which projects are directed, monitored, and aligned with organizational objectives, while procurement efficiency reflects the organization's ability to acquire goods and services in a timely, cost-effective, and value-generating manner. The integration of these two concepts has therefore emerged as a critical determinant of project success, particularly in technology-intensive environments where procurement activities directly influence project delivery.

From a theoretical perspective, project governance influences procurement efficiency by establishing clear decision-making authority, structured planning mechanisms, accountability frameworks, communication systems, performance monitoring processes, and risk oversight. These governance mechanisms create organizational discipline that enables procurement activities to be planned proactively, executed consistently, and monitored continuously throughout the project lifecycle. Rather than functioning independently, procurement becomes an integral component of project governance, contributing directly to strategic objectives and organizational performance.

Planning governance represents one of the strongest theoretical links between governance and procurement efficiency. Effective governance requires procurement requirements to be incorporated into project planning from the earliest stages of project development. Procurement schedules, supplier lead times, contract strategies, and budget allocations are integrated into overall project plans, allowing organizations to anticipate procurement needs before implementation begins. This proactive approach reduces emergency purchasing, minimizes procurement delays, and improves financial planning. Consequently, organizations with stronger planning governance are expected to demonstrate higher levels of procurement efficiency.

Risk governance provides another important theoretical connection. Procurement activities are exposed to numerous uncertainties, including supplier failure, price fluctuations, contractual disputes, technological changes, cybersecurity threats, and regulatory requirements. Governance structures ensure that these risks are systematically identified, evaluated, and mitigated before they disrupt project execution. By integrating procurement risk into governance

decision-making, organizations improve procurement continuity while reducing operational uncertainty.

Communication governance also contributes significantly to procurement efficiency. Procurement activities require continuous interaction among project managers, procurement professionals, finance departments, legal advisors, suppliers, executive management, and technical specialists. Governance establishes standardized communication channels that improve information quality, reduce misunderstandings, accelerate approvals, and strengthen coordination throughout procurement execution. Effective communication governance therefore improves supplier collaboration while reducing administrative delays and procurement errors.

Monitoring and control governance completes the governance-performance cycle by providing continuous oversight of procurement activities. Governance mechanisms establish procurement performance indicators, reporting systems, compliance reviews, supplier evaluations, and corrective action procedures that ensure procurement remains aligned with project objectives. Organizations capable of continuously monitoring procurement performance are better positioned to identify deviations early, respond proactively to emerging issues, and continuously improve procurement outcomes.

Collectively, these governance mechanisms demonstrate that procurement efficiency should not be viewed solely as the responsibility of procurement departments. Rather, procurement efficiency emerges as an organizational outcome influenced by the maturity and effectiveness of project governance practices implemented throughout the project lifecycle.

2.4.2 Empirical Evidence from Previous Studies

Previous empirical research generally supports the proposition that effective governance contributes positively to project and procurement performance, although the strength of this relationship varies across industries and organizational contexts.

Too and Weaver (2014) examined governance practices across multiple project-based organizations and concluded that organizations possessing mature governance structures consistently demonstrated higher levels of project performance, improved decision-making quality, stronger stakeholder engagement, and greater organizational accountability. Their findings suggest that governance provides the organizational discipline necessary for improving operational performance, including procurement-related activities.

Müller (2017) similarly reported that governance maturity positively influences project outcomes by improving strategic alignment, executive oversight, resource allocation, and organizational coordination. Organizations with stronger governance mechanisms experienced fewer project failures and demonstrated superior performance across multiple project success indicators. Although procurement efficiency was not examined directly, the study emphasized that governance improves organizational decision-making throughout the project lifecycle.

Within procurement research, Amann and Essig (2015) found that organizations integrating governance principles into procurement processes achieved greater transparency, stronger supplier relationships, and improved procurement performance. Their research highlighted the importance of governance in establishing procurement accountability, standardizing procurement procedures, and supporting continuous procurement improvement.

Walker and Lloyd-Walker (2016) investigated collaborative governance within complex projects and concluded that governance structures promoting transparency, stakeholder participation, and structured communication significantly improved supplier collaboration and procurement effectiveness. Their findings demonstrated that governance contributes not only to project performance but also to stronger procurement relationships and improved supplier outcomes.

Prajogo and Sohal (2013) examined supplier collaboration and governance mechanisms within supply chains and found that organizations adopting collaborative governance achieved superior procurement performance, greater supplier innovation, and improved operational efficiency. Their study emphasized that governance strengthens procurement through relationship management rather than transactional purchasing alone.

Research conducted within the Middle East provides additional support. Several regional studies examining project governance within infrastructure, construction, and public-sector projects reported positive associations between governance maturity and project performance. However, relatively few studies specifically examined procurement efficiency within technology organizations, leaving an important gap within the existing literature.

Collectively, these empirical findings suggest that governance contributes positively to organizational performance, supplier management, procurement coordination, and project success. Nevertheless, direct empirical evidence examining the influence of project governance practices on procurement efficiency remains limited, particularly within Saudi Arabia's information technology sector.

2.4.3 Critical Analysis of the Literature

Although previous studies consistently recognize the importance of governance for project success, several important limitations remain within the existing literature.

First, many studies evaluate governance using broad organizational indicators without examining individual governance practices such as planning governance, risk governance, communication governance, and monitoring and control governance separately. Consequently, organizations understand that governance matters but receive limited guidance regarding which governance mechanisms contribute most strongly to procurement efficiency.

Second, procurement research frequently focuses on purchasing processes, supplier management, contract administration, or supply chain performance without explicitly considering project governance as an explanatory factor. Procurement efficiency is therefore often examined independently of the governance systems responsible for directing procurement activities.

Third, most empirical research has been conducted within construction, manufacturing, engineering, or public infrastructure sectors. These industries differ substantially from the information technology sector, where procurement frequently involves intangible products, software licensing, cloud services, cybersecurity technologies, subscription-based commercial models, and rapidly evolving technological requirements.

Fourth, relatively limited research has been conducted within Saudi Arabia despite the country's significant investment in digital transformation under Vision 2030. Saudi IT organizations operate within unique regulatory, cultural, technological, and procurement environments that differ considerably from Western contexts where most governance research has been undertaken.

Finally, relatively few studies have adopted integrated conceptual models linking governance dimensions directly to procurement efficiency using quantitative empirical evidence. Existing research therefore provides limited guidance regarding the specific governance mechanisms that organizations should strengthen to improve procurement performance.

2.4.4 Research Gap

The literature reviewed throughout this chapter clearly demonstrates that project governance and procurement efficiency are individually well-established research areas. However, several important gaps remain.

The first gap is theoretical. Existing studies rarely integrate project governance theory with procurement management theory within a single analytical framework. Governance and procurement continue to be investigated largely as independent organizational disciplines.

The second gap is empirical. Limited quantitative evidence exists examining how specific governance dimensions—planning governance, risk governance, communication governance, and monitoring and control governance—influence procurement efficiency directly.

The third gap is contextual. Most governance research has been conducted within Western countries or industries such as construction and manufacturing. Comparatively little evidence exists regarding Saudi IT organizations despite their increasing strategic importance and rapidly expanding digital transformation initiatives.

The fourth gap is methodological. Previous studies frequently evaluate governance maturity at the organizational level without measuring governance practices from the perspectives of professionals directly involved in project delivery and procurement operations.

Accordingly, the present study addresses these gaps by developing and empirically testing an integrated conceptual model that examines the influence of project governance practices on procurement efficiency within Saudi IT organizations using quantitative survey data collected from project management, procurement, contracts, and supply chain professionals.

2.5 Conclusion

This chapter critically reviewed the theoretical and empirical literature relating to the two principal constructs underpinning this study: project governance practices and procurement efficiency. The review established the conceptual foundations of each variable, examined their evolution within project management and procurement literature, and explored the relationship between them from both theoretical and empirical perspectives. Collectively, the literature demonstrates that project governance has evolved beyond its traditional oversight function into a strategic organizational capability that shapes project performance through structured decision-making, accountability, stakeholder coordination, performance monitoring, and risk oversight. Likewise, procurement efficiency has progressed from a narrow focus on purchasing cost toward a broader multidimensional concept encompassing financial performance, procurement timeliness, supplier effectiveness, governance, and long-term organizational value creation.

The review identified four governance dimensions that consistently appear throughout contemporary project governance literature: planning governance, risk governance, communication governance, and monitoring and control governance. These governance mechanisms collectively provide the organizational structure necessary to coordinate project activities, align procurement decisions with strategic objectives, improve transparency, strengthen accountability, and support continuous organizational improvement. The literature further suggests that organizations possessing mature governance systems generally experience stronger project performance, greater operational consistency, and improved organizational decision-making.

Similarly, procurement efficiency was conceptualized as a multidimensional construct comprising cost efficiency, time efficiency, and supplier performance. Rather than evaluating procurement solely through purchasing price or administrative speed, modern procurement literature emphasizes value creation, supplier collaboration, lifecycle cost optimization, operational responsiveness, and strategic contribution to project success. This broader perspective reflects the increasing strategic role of procurement within project-based organizations, particularly those operating in technology-intensive environments characterized by complex supplier ecosystems and rapidly changing business requirements.

The literature review further demonstrated that governance and procurement are theoretically interconnected. Effective governance establishes the planning discipline, communication structures, performance oversight, and risk management mechanisms that enable procurement functions to operate efficiently. Numerous international studies have reported positive associations between governance maturity and project success, while procurement research similarly highlights the importance of governance, supplier management, and organizational coordination in improving procurement outcomes. Nevertheless, despite broad agreement regarding the importance of governance, relatively few studies have examined the direct relationship between specific governance practices and procurement efficiency.

A critical evaluation of previous research revealed several important limitations within the existing body of knowledge. First, governance studies frequently examine governance as a broad organizational capability without distinguishing between individual governance dimensions. Second, procurement studies often investigate purchasing processes independently of project governance frameworks. Third, most empirical evidence originates from construction, manufacturing, engineering, or public infrastructure sectors, with comparatively limited attention given to information technology organizations. Finally, relatively little research has been conducted within Saudi Arabia despite the country's substantial investment in digital transformation and project-intensive technology initiatives under Vision 2030.

These observations establish a clear justification for the present research. By examining how planning governance, risk governance, communication governance, and monitoring and control governance influence procurement efficiency within Saudi IT organizations, this study seeks to address an important theoretical, empirical, contextual, and methodological gap identified in the literature. The proposed conceptual framework therefore integrates project governance theory with procurement management theory to provide empirical evidence regarding the governance mechanisms most strongly associated with procurement efficiency in Saudi project environments.

Having established the theoretical foundation for the study, the next chapter presents the research methodology adopted to investigate these relationships empirically. It explains the philosophical assumptions, research design, research approach, population and sampling procedures, data collection methods, questionnaire development, measurement of variables, reliability and validity assessment, and statistical techniques employed to test the proposed hypotheses. Together, these methodological procedures provide the framework through which the conceptual relationships identified in this chapter are examined using empirical evidence collected from professionals working within Saudi IT organizations.

Chapter 3 – Research Methodology

3.1 Introduction

Research methodology provides the systematic framework through which a research problem is investigated and research objectives are achieved. It defines the philosophical assumptions, research design, data collection procedures, sampling strategy, measurement methods, and analytical techniques that guide the entire research process. A well-designed methodology enhances the credibility, reliability, and validity of research findings by ensuring that data are collected and analyzed in a structured, transparent, and replicable manner (Saunders, Lewis, & Thornhill, 2019).

The purpose of this study is to examine the impact of project governance practices on procurement efficiency within Saudi IT organizations. Based on the literature reviewed in Chapter Two, the study investigates whether governance dimensions—including planning governance, risk governance, communication governance, and monitoring and control

governance—contribute to improving procurement efficiency measured through cost efficiency, time efficiency, and supplier performance.

Because the study seeks to empirically test relationships between clearly defined variables, a quantitative research methodology was adopted. The quantitative approach enables the researcher to collect standardized numerical data from a relatively large number of respondents and analyze those data using statistical techniques. This approach is appropriate because the research aims to evaluate the strength and significance of relationships between the independent and dependent variables rather than exploring individual experiences or developing new theoretical concepts.

The study follows a positivist research philosophy, which assumes that organizational phenomena can be objectively measured through observable data and analyzed using statistical methods. Guided by this philosophical perspective, the research adopts a deductive approach, whereby hypotheses derived from existing project governance and procurement literature are tested empirically using data collected from professionals working within Saudi IT organizations.

A cross-sectional survey design was selected because it allows the researcher to obtain data from respondents at a single point in time while capturing their perceptions regarding governance practices and procurement efficiency within their organizations. The survey method is particularly suitable for studies examining organizational practices across multiple institutions because it enables efficient collection of standardized data that can be compared statistically.

Primary data were collected through a structured questionnaire distributed electronically to professionals involved in project management, procurement, contracts, and supply chain activities within Saudi IT organizations. The questionnaire consists of demographic questions together with statements measuring project governance practices and procurement efficiency using a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5).

To ensure the quality of the research findings, appropriate statistical procedures were employed to assess the reliability and validity of the measurement instrument before testing the proposed hypotheses. Descriptive statistics were used to summarize respondent characteristics and variable distributions, while inferential statistical techniques, including correlation analysis, were employed to examine the relationships between project governance practices and procurement efficiency.

The remainder of this chapter explains the research methodology in detail. It describes the research philosophy, research approach, research strategy, population and sampling procedures, questionnaire design, data collection process, operationalization of variables, reliability and validity assessment, statistical analysis techniques, and ethical considerations adopted throughout the study. Together, these methodological components provide the foundation for the empirical analysis presented in Chapter Four and ensure that the research findings are both scientifically rigorous and practically meaningful.

3.2 Research Design

Research design provides the overall framework that guides the collection, measurement, and analysis of data in order to answer the research questions and achieve the study's objectives. It represents the blueprint that links the research problem with the empirical evidence required to address it. According to Saunders, Lewis, and Thornhill (2019), an appropriate research design ensures methodological consistency by aligning the research philosophy, research approach, research strategy, data collection methods, and analytical techniques with the objectives of the study.

Since the primary objective of this research is to examine the relationship between project governance practices and procurement efficiency within Saudi IT organizations, the study adopts a quantitative research design. Quantitative research is appropriate because it allows organizational practices to be measured objectively through numerical data and enables statistical examination of relationships among variables. Unlike qualitative research, which seeks to explore experiences and meanings, quantitative research focuses on hypothesis testing and empirical verification using measurable indicators.

The research design adopted in this study consists of several interrelated methodological components that collectively ensure the validity and reliability of the findings. These include the research philosophy, research approach, research strategy, research purpose, time horizon, and methodological justification. Each component is discussed in the following sections.

3.2.1 Research Philosophy

The philosophical foundation of this study is positivism. Positivist philosophy assumes that reality exists independently of the researcher and can be objectively measured through systematic observation and empirical analysis. Under this philosophy, organizational phenomena such as governance practices and procurement efficiency are viewed as measurable constructs that can be quantified using structured research instruments and analyzed statistically.

According to Creswell and Creswell (2018), positivist research emphasizes objectivity, measurement, hypothesis testing, and statistical inference. The role of the researcher is to observe and measure organizational reality without influencing participants or interpreting subjective meanings. Consequently, findings are expected to be generalizable, replicable, and supported by empirical evidence.

Within the context of this study, the positivist philosophy is appropriate because both major constructs—project governance practices and procurement efficiency—can be operationalized into measurable questionnaire items. Respondents evaluate governance practices and procurement outcomes using standardized Likert-scale statements, allowing numerical analysis of relationships between the variables. This approach minimizes researcher bias while strengthening the scientific credibility of the study.

Furthermore, positivism aligns with the objective of determining whether statistically significant relationships exist between governance practices and procurement efficiency. Rather than developing new theories, the study seeks to test theoretical propositions derived from the literature reviewed in Chapter Two. Therefore, the positivist philosophy provides the most appropriate foundation for achieving the study's objectives.

3.2.2 Research Approach

This study adopts a deductive research approach. Deductive research begins with existing theories and conceptual frameworks before formulating hypotheses that are tested empirically using collected data. According to Saunders et al. (2019), deduction proceeds from general theory toward specific empirical observation, allowing researchers to evaluate whether theoretical expectations are supported by evidence.

The deductive approach is particularly appropriate for this study because the hypotheses were developed from established project governance and procurement management literature. Previous studies suggest that planning governance, risk governance, communication governance, and monitoring and control governance positively influence procurement efficiency. The present research therefore examines whether these theoretical relationships also exist within Saudi IT organizations.

The deductive process followed in this study consists of several sequential stages. First, an extensive literature review established the theoretical foundations of project governance and procurement efficiency. Second, research objectives, research questions, and hypotheses were formulated based on gaps identified within previous studies. Third, these constructs were operationalized through a structured questionnaire. Finally, statistical analysis was conducted to determine whether the collected evidence supports the proposed hypotheses.

By adopting deduction rather than induction, the study contributes to the validation of existing governance theories within a new organizational and geographical context. The findings therefore strengthen understanding of project governance practices while extending existing knowledge to Saudi Arabia's rapidly developing information technology sector.

3.2.3 Research Method

The study employs a quantitative research method. Quantitative research emphasizes numerical measurement, standardized data collection, and statistical analysis to examine relationships between variables. Hair et al. (2019) argue that quantitative methods are particularly suitable for studies investigating causal or correlational relationships because they allow researchers to evaluate both the direction and strength of relationships objectively.

In this research, quantitative data were collected using a structured questionnaire containing statements measuring project governance practices and procurement efficiency. Respondents expressed their level of agreement using a five-point Likert scale, enabling numerical representation of organizational perceptions. The collected data were subsequently analyzed

using descriptive statistics, reliability analysis, and correlation analysis to evaluate the research hypotheses.

The quantitative method offers several advantages for this study. First, it allows responses from multiple organizations to be collected using identical measurement criteria, thereby improving comparability across respondents. Second, standardized measurement enhances reliability and reduces researcher subjectivity. Third, statistical techniques provide objective evidence regarding the significance of relationships between governance practices and procurement efficiency.

Given the objective of producing empirical evidence capable of supporting organizational decision-making, the quantitative method represents the most appropriate methodological choice for this research.

3.2.4 Research Purpose

The research serves both descriptive and explanatory purposes.

The descriptive component seeks to identify the current level of project governance practices and procurement efficiency within Saudi IT organizations. Descriptive analysis summarizes respondent characteristics, organizational practices, and perceptions regarding governance and procurement performance. This provides an overview of existing organizational conditions before examining relationships among variables.

The explanatory component investigates whether project governance practices influence procurement efficiency. Specifically, the study examines whether planning governance, risk governance, communication governance, and monitoring and control governance demonstrate statistically significant relationships with procurement efficiency. Explanatory research therefore extends beyond describing organizational practices by identifying relationships capable of informing managerial decision-making.

Combining descriptive and explanatory purposes allows the study not only to describe current governance maturity within Saudi IT organizations but also to explain how governance contributes to procurement performance. This combination aligns closely with the study's objectives and research questions.

3.2.5 Research Strategy

The research strategy defines the overall plan through which data are collected to answer the research questions and test the proposed hypotheses. According to Saunders, Lewis, and Thornhill (2019), the choice of research strategy depends on the research objectives, available resources, time constraints, and the nature of the variables under investigation.

This study adopts the survey strategy, which is one of the most widely used approaches in quantitative business and management research. Survey research enables standardized data to

be collected from a relatively large number of respondents using structured questionnaires, making it particularly suitable for examining organizational practices, employee perceptions, and relationships among measurable variables.

The survey strategy is appropriate for several reasons. First, the study investigates perceptions regarding project governance practices and procurement efficiency across multiple Saudi IT organizations. Because these constructs represent organizational practices experienced by employees rather than directly observable phenomena, surveying professionals provides an efficient method for obtaining reliable information from individuals directly involved in project governance and procurement activities.

Second, the survey approach supports statistical analysis by ensuring that all respondents answer the same set of standardized questions under identical measurement conditions. This standardization enhances the comparability of responses while reducing measurement bias and increasing the reliability of statistical findings.

Third, electronic surveys provide broad geographical coverage while minimizing the cost and time associated with data collection. Respondents from government, private, and semi-government organizations located across Saudi Arabia can participate conveniently without requiring face-to-face interviews. This flexibility increases participation while maintaining respondent anonymity.

The questionnaire was distributed electronically using Google Forms, allowing respondents to complete the survey voluntarily at their convenience. Responses were automatically recorded and exported into Microsoft Excel for coding and preparation before statistical analysis. The use of an online platform also reduced data-entry errors and improved the efficiency of data management.

Overall, the survey strategy provides a practical, reliable, and scientifically appropriate method for collecting quantitative data required to examine the relationship between project governance practices and procurement efficiency in Saudi IT organizations.

3.2.6 Time Horizon

The time horizon of a research study refers to the period over which data are collected. According to Saunders et al. (2019), quantitative studies generally adopt either a cross-sectional or longitudinal time horizon depending on the research objectives.

This study employs a cross-sectional time horizon, whereby data were collected from respondents at a single point in time. The purpose of the research is to examine the current relationship between project governance practices and procurement efficiency rather than to observe changes over an extended period.

The cross-sectional approach is appropriate because project governance practices and procurement efficiency represent organizational conditions that can be evaluated based on

respondents' current professional experience. Collecting data during one period allows meaningful comparisons among respondents while remaining consistent with the available timeframe for completing the research.

A longitudinal design, although capable of observing changes over multiple project phases or several years, was considered impractical due to time limitations and the academic schedule governing completion of the research project. Furthermore, the primary objective of the study is to establish whether relationships exist between governance practices and procurement efficiency rather than to investigate how those relationships evolve over time.

Consequently, the cross-sectional design provides an effective balance between methodological rigor, practical feasibility, and the research objectives.

3.2.7 Justification of the Research Design

The methodological choices adopted throughout this study were carefully selected to ensure consistency between the research objectives, theoretical framework, data collection methods, and statistical analysis techniques.

The positivist philosophy supports objective measurement of project governance practices and procurement efficiency through standardized questionnaire items. This philosophical perspective minimizes researcher subjectivity while allowing empirical relationships to be evaluated using statistical evidence.

The deductive research approach aligns with the study's objective of testing hypotheses derived from established project governance and procurement management literature. Rather than developing new theoretical concepts, the study seeks to validate existing theories within the context of Saudi IT organizations.

The quantitative research method provides numerical data suitable for descriptive and inferential statistical analysis. Standardized measurement enables objective comparison among respondents while supporting hypothesis testing and empirical generalization.

The survey strategy offers an efficient mechanism for collecting data from professionals working across different organizations and functional roles. It enables consistent measurement while ensuring anonymity and broad participation.

Finally, the cross-sectional time horizon is appropriate because it captures respondents' perceptions of current governance practices and procurement efficiency without requiring extended observation periods. This approach satisfies the objectives of the study while remaining practical within the available research timeframe.

Collectively, these methodological choices provide a coherent and scientifically rigorous research design. The integration of positivism, deduction, quantitative methods, survey strategy, and cross-sectional data collection ensures that the study can produce reliable and valid

evidence regarding the relationship between project governance practices and procurement efficiency in Saudi IT organizations.

3.3 Population and Sampling

3.3.1 Target Population

The target population comprises professionals working within Saudi Arabian information technology (IT) organizations who are directly involved in project governance, procurement, contract management, project management, or supply chain operations. These professionals possess the practical knowledge and experience necessary to evaluate governance practices and procurement performance within their respective organizations.

The population includes employees from government entities, private-sector companies, and semi-government organizations engaged in delivering IT projects, digital transformation initiatives, enterprise technology implementations, cloud computing services, cybersecurity programs, systems integration, and related technology activities.

The study focuses specifically on professionals occupying positions such as:

- Project Managers
- Procurement Officers
- Procurement Managers
- Contracts Specialists
- Supply Chain Specialists
- PMO Professionals
- Project Coordinators
- Department Managers involved in project governance

These respondents were selected because their responsibilities require regular interaction with project governance processes and procurement activities, enabling them to provide informed assessments of organizational practices.

3.3.2 Sampling Technique

Due to the absence of a comprehensive list of all professionals working in project governance and procurement across Saudi IT organizations, this study employed a non-probability convenience sampling technique.

Convenience sampling involves selecting respondents who are readily accessible and willing to participate in the research (Saunders et al., 2019). This technique is commonly used in organizational research where complete population sampling frames are unavailable.

The researcher distributed the questionnaire electronically through professional networks, LinkedIn contacts, WhatsApp groups, and direct communication with professionals working

within Saudi IT organizations. Participation was entirely voluntary, and only respondents with relevant project or procurement experience were encouraged to complete the questionnaire.

Although convenience sampling limits statistical generalization to the entire population, it remains appropriate for exploratory organizational studies where access to specialized professionals is restricted.

3.3.3 Sample Size

A total of 56 valid responses were obtained and included in the statistical analysis. Prior to analysis, responses were screened to ensure completeness and consistency. Questionnaires containing substantial missing data or incomplete responses were excluded from the final dataset.

The final sample included professionals representing multiple organizational sectors and functional positions, thereby providing a diverse perspective on project governance practices and procurement efficiency within Saudi IT organizations.

Although larger samples generally improve statistical power, Hair et al. (2019) indicate that sample sizes between 50 and 100 respondents are acceptable for exploratory quantitative studies employing descriptive statistics and correlation analysis, particularly when the research seeks to establish preliminary empirical relationships rather than develop highly complex predictive models.

Accordingly, the sample size is considered adequate for achieving the objectives of this study and conducting the statistical analyses presented in Chapter Four.

3.4 Research Instrument

3.4.1 Questionnaire Design

The primary instrument used for data collection in this study was a structured questionnaire developed to measure respondents' perceptions of project governance practices and procurement efficiency within Saudi IT organizations. A questionnaire was selected because it provides a standardized, reliable, and efficient method for collecting quantitative data from a relatively large number of respondents while ensuring consistency across all participants.

According to Creswell and Creswell (2018), structured questionnaires are among the most widely used instruments in quantitative research because they facilitate objective measurement of organizational phenomena and support statistical analysis. The use of standardized questions minimizes researcher bias, improves comparability of responses, and enhances the reliability of empirical findings.

The questionnaire used in this research was developed following an extensive review of project governance, project management, procurement management, and project performance

literature discussed in Chapter Two. Although the questionnaire was adapted from previously validated concepts within the literature, several items were modified to reflect the organizational context of Saudi IT organizations while maintaining consistency with the conceptual framework of the study.

The questionnaire was distributed electronically through Google Forms, allowing respondents to complete the survey conveniently while ensuring anonymity and confidentiality. Electronic distribution also reduced administrative effort, minimized data-entry errors, and facilitated efficient collection of responses from professionals located across different regions of Saudi Arabia.

3.4.2 Structure of the Questionnaire

The questionnaire consists of three sections designed to collect demographic information and measure both the independent and dependent variables of the study.

Section A: Demographic Information

The first section collects demographic information about respondents to describe the characteristics of the research sample. These variables include:

- Gender
- Age
- Educational Qualification
- Current Position
- Years of Professional Experience
- Organization Type

These variables are used solely for descriptive statistical purposes and are not included in hypothesis testing.

Section B: Project Governance Practices (Independent Variable)

The second section measures the independent variable, Project Governance Practices, through statements evaluating organizational governance practices relating to:

- Planning Governance
- Risk Governance
- Communication Governance
- Monitoring and Control Governance

These statements assess respondents' perceptions regarding governance structures, planning procedures, communication mechanisms, monitoring activities, and organizational oversight that support project execution and procurement activities.

Section C: Procurement Efficiency (Dependent Variable)

The final section measures the dependent variable, Procurement Efficiency, through statements assessing organizational procurement performance across three principal dimensions:

- Cost Efficiency
- Time Efficiency
- Supplier Performance

These items evaluate respondents' perceptions regarding procurement effectiveness within their organizations and serve as the primary outcome variable examined in this research.

3.4.3 Measurement Scale

All questionnaire items measuring the research variables employed a five-point Likert scale, which is one of the most frequently used measurement techniques in organizational and management research.

Respondents indicated their level of agreement with each statement using the following scale:

Scale	Interpretation
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

The Likert scale was selected because it enables respondents to express varying degrees of agreement while producing numerical data suitable for descriptive and inferential statistical analysis. According to Hair et al. (2019), five-point Likert scales provide sufficient sensitivity for measuring attitudes and perceptions while maintaining simplicity and reducing respondent fatigue.

The responses were subsequently coded numerically and analyzed using descriptive statistics, reliability analysis, and Pearson correlation analysis.

3.4.4 Operationalization of Variables

To ensure consistency between the conceptual framework and the research instrument, each variable was operationalized through measurable questionnaire items derived from the literature reviewed in Chapter Two.

Table 3.1 presents the operationalization of the study variables.

Table 3.1 Operationalization of Research Variables

Variable	Dimension	Number of Items	Source
Project Governance Practices	Planning Governance	3	PMI (2021); Kerzner (2022)
Risk Governance		2	Hillson (2019)
Communication Governance		2	Walker & Lloyd-Walker (2016)
Monitoring & Control Governance		3	Kerzner (2022); PMI (2021)
Procurement Efficiency	Cost Efficiency	2	Thai (2001); Amann & Essig (2015)
Time Efficiency		2	Carter & Narasimhan (2006)

The operationalization process ensures that each theoretical construct introduced in Chapter Two is represented by observable questionnaire items capable of being measured statistically. This alignment strengthens construct validity and supports meaningful interpretation of the empirical findings.

3.4.5 Administration of the Questionnaire

The questionnaire was administered electronically using Google Forms, allowing respondents to participate remotely and at their convenience. Prior to completing the questionnaire, participants were informed about the purpose of the study and assured that participation was entirely voluntary. They were also informed that all responses would remain anonymous and would be used exclusively for academic research purposes.

Data collection was conducted over a predefined period during which the questionnaire link was distributed through professional networks, social media platforms, and direct communication with professionals working in Saudi IT organizations. The researcher monitored response rates throughout the data collection period to ensure an adequate number of valid responses for statistical analysis.

Upon completion of the data collection process, responses were exported from Google Forms into Microsoft Excel, where the data were screened for completeness, coded numerically, and prepared for statistical analysis.

3.5 Reliability and Validity of the Research Instrument

The quality of any quantitative research depends largely on the reliability and validity of the measurement instrument. Reliability ensures that the questionnaire produces consistent and stable results, while validity determines whether the instrument accurately measures the constructs it is intended to measure. According to Creswell and Creswell (2018), establishing both reliability and validity enhances the credibility of empirical findings and strengthens confidence in the conclusions drawn from statistical analysis.

To ensure the research instrument was suitable for measuring project governance practices and procurement efficiency, several procedures were undertaken during questionnaire development and data analysis. These procedures included content validity assessment, construct validity through theoretical alignment, and internal consistency reliability using Cronbach's Alpha.

3.5.1 Content Validity

Content validity refers to the extent to which the questionnaire adequately represents all dimensions of the constructs being measured. According to Hair et al. (2019), an instrument possesses content validity when its items sufficiently cover the theoretical concepts identified through the literature review.

For this study, questionnaire items were developed following an extensive review of internationally recognized literature relating to project governance, project management, procurement management, and procurement performance. The instrument was constructed using concepts derived primarily from the Project Management Institute (PMI, 2021), Kerzner (2022), Hillson (2019), Walker and Lloyd-Walker (2016), Thai (2001), Carter and Narasimhan (2006), and Amann and Essig (2015).

Following its initial development, the questionnaire was reviewed by the academic supervisor to evaluate its clarity, relevance, and consistency with the research objectives and conceptual framework. Minor revisions were made to improve wording and ensure that individual statements accurately reflected the constructs under investigation.

This review process provided reasonable assurance that the questionnaire adequately represents both the independent variable (Project Governance Practices) and the dependent variable (Procurement Efficiency).

3.5.2 Construct Validity

Construct validity refers to the degree to which questionnaire items accurately measure the theoretical constructs they are intended to represent.

In this study, construct validity was established through the direct alignment between:

- the conceptual framework presented in Chapter One,
- the theoretical foundations discussed in Chapter Two,
- the research hypotheses,
- and the questionnaire items.

Each questionnaire statement was developed to measure one of the theoretical dimensions identified during the literature review. The independent variable represents project governance practices through planning, risk management, communication, and monitoring and control, while the dependent variable represents procurement efficiency through cost efficiency, time efficiency, and supplier performance.

Because each questionnaire item corresponds directly to an established theoretical construct, the instrument demonstrates satisfactory construct validity for the purposes of this research.

Although advanced statistical procedures such as Exploratory Factor Analysis (EFA) or Confirmatory Factor Analysis (CFA) can provide additional evidence of construct validity, these

techniques generally require substantially larger sample sizes. Given the exploratory nature of this study and the available sample size, theoretical alignment provides an appropriate basis for establishing construct validity.

3.5.3 Reliability Analysis

Reliability refers to the consistency with which an instrument measures a particular construct. A reliable questionnaire should produce similar results when administered under comparable conditions and should demonstrate internal consistency among items measuring the same variable.

The internal consistency of the questionnaire was assessed using Cronbach's Alpha (α), one of the most widely accepted reliability statistics in social science research. According to Hair et al. (2019), Cronbach's Alpha values may generally be interpreted as follows:

Table 3.2 Interpretation of Cronbach's Alpha

Cronbach's Alpha	Interpretation
0.90 and above	Excellent reliability
0.80 – 0.89	High reliability
0.70 – 0.79	Acceptable reliability
0.60 – 0.69	Moderate reliability
Below 0.60	Low reliability

Following data collection, Cronbach's Alpha coefficients were calculated for both research variables.

The results are presented in Chapter Four because reliability analysis forms part of the statistical analysis conducted using the collected data.

The findings indicate that the Project Governance Practices scale demonstrated high internal consistency, while the Procurement Efficiency scale demonstrated moderate internal consistency, which is considered acceptable for exploratory quantitative research.

These results suggest that the questionnaire provides a sufficiently reliable basis for examining the relationship between project governance practices and procurement efficiency.

3.6 Data Collection Procedure

Primary data for this study were collected using a structured online questionnaire administered through Google Forms. Online data collection was selected because it enables efficient distribution of questionnaires to geographically dispersed respondents while ensuring anonymity, reducing administrative costs, and minimizing data-entry errors.

Prior to distributing the questionnaire, participants were informed about the purpose of the research and the voluntary nature of their participation. Respondents were assured that no personally identifiable information would be collected and that all responses would remain confidential and be used exclusively for academic research purposes.

The questionnaire link was distributed electronically through professional networks, LinkedIn, WhatsApp, and direct communication with professionals working within Saudi IT organizations. Respondents were selected based on their involvement in project management, procurement, contract management, supply chain management, or related organizational functions.

The data collection period remained open until an adequate number of valid responses had been obtained. Upon completion of the survey, responses were exported from Google Forms into Microsoft Excel for preliminary screening. The dataset was reviewed to identify incomplete responses, duplicate entries, or inconsistent data before being coded numerically for statistical analysis.

Following the screening process, 56 valid responses were retained for analysis. These responses constituted the final dataset used throughout the statistical analysis presented in Chapter Four.

3.7 Data Analysis Techniques

Following data collection and preliminary screening, the responses were prepared for statistical analysis. The analysis was conducted to address the research questions, achieve the research objectives, and test the hypotheses proposed in Chapter One. Quantitative data were coded numerically according to the five-point Likert scale and analyzed using Microsoft Excel.

The statistical analysis was conducted in two stages: descriptive statistics and inferential statistics.

The first stage involved descriptive statistical analysis to summarize the characteristics of the respondents and describe the distribution of the research variables. Frequency distributions and percentages were used to present demographic characteristics such as gender, age, educational qualification, current position, years of professional experience, and organization type. Means and standard deviations were calculated for the questionnaire items and for the overall research constructs to determine respondents' perceptions regarding project governance practices and procurement efficiency.

The second stage involved inferential statistical analysis to examine the relationships between the study variables. Pearson's Product-Moment Correlation Coefficient (r) was used to determine both the strength and direction of the relationship between project governance practices and procurement efficiency. Pearson correlation was selected because both variables were measured using interval-type Likert-scale data, and the objective of the study was to determine whether statistically significant relationships existed between them.

The strength of the correlation coefficients was interpreted using commonly accepted guidelines, where values close to zero indicate weak relationships and values approaching one indicate stronger positive relationships.

Statistical significance was evaluated using a 5% significance level ($\alpha = 0.05$). Relationships with p-values less than 0.05 were considered statistically significant, indicating sufficient evidence to support the corresponding research hypothesis. Conversely, p-values greater than 0.05 indicated insufficient evidence to conclude that a statistically significant relationship existed.

To evaluate the internal consistency of the questionnaire, Cronbach's Alpha coefficients were calculated for both research variables. Reliability analysis provided evidence regarding the consistency of responses across questionnaire items measuring the same construct.

Collectively, these statistical procedures provided a comprehensive evaluation of the research objectives by describing the characteristics of the sample, assessing the quality of the measurement instrument, and examining the relationship between project governance practices and procurement efficiency.

3.8 Ethical Considerations

Ethical considerations are fundamental to ensuring that research is conducted responsibly while protecting the rights, dignity, and privacy of participants. This study was undertaken in accordance with accepted academic research ethics and the ethical guidelines prescribed by Midocean University.

Participation in the study was entirely voluntary. Before completing the questionnaire, respondents were informed about the purpose of the research, the academic nature of the study, and the intended use of the collected information. Participants were advised that they could discontinue their participation at any stage without any consequences.

To protect participant privacy, no personally identifiable information—including names, employee identification numbers, organizational identifiers, telephone numbers, or email addresses—was collected. All questionnaire responses remained anonymous throughout the research process.

Confidentiality was maintained by ensuring that the collected data were used exclusively for academic purposes. Access to the dataset was restricted to the researcher and the academic supervisor. The information obtained from respondents was analyzed only in aggregate form, ensuring that individual participants or organizations could not be identified in the final report.

Data integrity was maintained throughout the research process. Responses were reported accurately without manipulation, omission, or selective interpretation. Statistical analyses were conducted objectively, and the findings presented in Chapter Four reflect the actual responses obtained from participants.

The study also adhered to the principle of non-maleficence, meaning that participation in the research posed no physical, psychological, professional, or financial risk to respondents. Because the questionnaire focused solely on organizational practices and professional perceptions, participation involved minimal risk.

Finally, the researcher remained committed to the principles of academic integrity by properly acknowledging all published sources through appropriate citation and referencing in accordance with the APA (7th Edition) referencing style. Every effort was made to ensure originality, transparency, and honesty throughout the research process.

3.9 Chapter Summary

This chapter presented the methodological framework adopted to examine the relationship between project governance practices and procurement efficiency within Saudi IT organizations. The chapter explained the philosophical foundation, research approach, research design, sampling procedures, questionnaire development, data collection process, reliability and validity assessment, statistical analysis techniques, and ethical principles governing the study.

A positivist philosophy, deductive approach, quantitative methodology, survey strategy, and cross-sectional research design were selected because they align with the objectives of measuring organizational governance practices and evaluating their relationship with procurement efficiency through empirical evidence. Primary data were collected using a structured questionnaire distributed electronically to professionals working in project management, procurement, contracts, and supply chain functions within Saudi IT organizations.

The chapter also described the procedures used to ensure the quality of the research instrument through content validity, construct validity, and reliability assessment. Appropriate descriptive and inferential statistical techniques were identified to analyze the collected data and evaluate the proposed hypotheses.

Having established the methodological foundation of the study, the next chapter presents the statistical analysis of the collected data. It begins by describing the demographic characteristics of the respondents before examining the reliability of the research instrument, analyzing the research variables, testing the hypotheses, and discussing the findings in relation to the literature reviewed in Chapter Two.

CHAPTER 4: DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the statistical analysis and interpretation of the data collected to examine the relationship between project governance practices and procurement efficiency within Saudi IT organizations. The analysis is based on responses collected through the structured questionnaire described in Chapter Three and aims to answer the research questions while testing the hypotheses developed in Chapter One.

The chapter begins by presenting the demographic characteristics of the respondents to provide an overview of the research sample. It then evaluates the reliability of the research instrument before examining descriptive statistics for the independent and dependent variables. Subsequently, inferential statistical analysis is conducted using Pearson correlation analysis to determine the relationships between the dimensions of project governance practices and procurement efficiency. Finally, the findings are interpreted in relation to the literature reviewed in Chapter Two before concluding with a summary of the chapter.

The analysis presented in this chapter provides the empirical evidence upon which the study's conclusions and recommendations are based.

4.2 Demographic Characteristics of Respondents

Understanding the demographic characteristics of respondents is important because it provides context for interpreting the statistical findings and demonstrates that the research sample adequately represents professionals involved in project governance and procurement activities within Saudi IT organizations.

Following data screening, 56 valid questionnaires were retained for statistical analysis. The demographic profile of respondents includes gender, age, educational qualification, current position, years of professional experience, and organization type.

The detailed demographic distribution is presented in Table 4.1.

Table 4.1

Demographic Characteristics of Respondents (n = 56)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	41	73.2
	Female	10	17.9
	Prefer not to say	5	8.9
Age Group	20–30 years	30	53.6
	31–40 years	22	39.3
	41 years and above	4	7.1
Educational Qualification	Bachelor's Degree	21	37.5
	Master's Degree	24	42.9
	PhD	11	19.6
Current Position	Project Manager	21	37.5
	Procurement Officer	16	28.6

	Supply Chain Specialist	12	21.4
	Management	1	1.8
	Operations Director	1	1.8
	Procurement Manager	1	1.8
	Technical Manager	1	1.8
	Team Lead – Procurement	1	1.8
	Head of Contracts	1	1.8
	Other / Not Specified	1	1.8
Years of Professional Experience	Less than 5 years	26	46.4
	5–10 years	16	28.6
	More than 10 years	14	25.0
Organization Type	Private Sector	24	42.9

Government	19	33.9
Semi-Government	13	23.2

Interpretation

The research sample is predominantly composed of male respondents, representing approximately three-quarters of the total sample. This distribution generally reflects the current workforce composition within Saudi Arabia's IT and procurement sectors, where project management and procurement functions continue to be male dominated despite increasing workforce diversification.

The majority of respondents fall within the 20–30 years and 31–40 years age groups, indicating that the sample consists primarily of early-career and mid-career professionals actively engaged in project delivery and procurement activities. This demographic profile provides perspectives from professionals directly involved in implementing organizational governance practices.

Educational attainment among respondents is relatively high, with most participants holding Bachelor's or Master's degrees. This suggests that respondents possess the educational background necessary to understand organizational governance systems, procurement processes, and project management practices.

With respect to organizational roles, Project Managers, Procurement Officers, and Supply Chain Specialists constitute the largest respondent groups. These positions represent the primary stakeholders responsible for implementing project governance mechanisms and managing procurement activities, making them highly appropriate participants for this research.

Respondents also represent a broad range of professional experience, including both relatively new professionals and experienced practitioners. This diversity contributes to a balanced assessment of governance practices across different organizational perspectives.

Finally, the sample includes respondents from government, private, and semi-government organizations, thereby providing representation across the principal organizational sectors responsible for delivering IT projects within Saudi Arabia.

Overall, the demographic profile suggests that the research sample is sufficiently diverse to provide meaningful insight into project governance practices and procurement efficiency across Saudi IT organizations.

4.3 Reliability Analysis

Before testing the research hypotheses, the reliability of the questionnaire was evaluated to determine the internal consistency of the measurement scales. Internal consistency refers to the extent to which questionnaire items measuring the same construct produce consistent responses.

Reliability was assessed using Cronbach's Alpha, one of the most widely accepted indicators of internal consistency in quantitative research. According to Hair et al. (2019), Cronbach's Alpha values greater than 0.70 indicate acceptable reliability, while values above 0.80 indicate high reliability.

The reliability coefficients obtained for the research variables are presented in Table 4.2.

Table 4.2 Reliability Analysis of Research Variables

Variable	Number of Items	Cronbach's Alpha	Interpretation
Project Governance Practices	10	0.846	High Reliability
Procurement Efficiency	5	0.608	Moderate Reliability

Interpretation

The Project Governance Practices scale achieved a Cronbach's Alpha coefficient of 0.846, indicating a high level of internal consistency among the questionnaire items. This suggests that respondents evaluated governance practices consistently, providing confidence that the questionnaire effectively measures the intended construct.

The Procurement Efficiency scale produced a Cronbach's Alpha coefficient of 0.608, indicating moderate internal consistency. Although this value falls slightly below the conventional threshold of 0.70, it remains acceptable for exploratory organizational research, particularly where procurement efficiency is conceptualized as a multidimensional construct incorporating financial, operational, and supplier-related performance.

Overall, the reliability analysis demonstrates that the research instrument possesses sufficient internal consistency to support subsequent statistical analysis and hypothesis testing.

4.4 Descriptive Statistics for the Research Variables

Descriptive statistics were calculated to summarize respondents' perceptions regarding the two principal constructs investigated in this study: Project Governance Practices and Procurement Efficiency. The analysis includes the mean and standard deviation for each construct measured on a five-point Likert scale, where 1 = Strongly Disagree and 5 = Strongly Agree.

The mean score indicates the average level of respondents' agreement with the questionnaire statements, while the standard deviation reflects the degree of variation among responses. Higher mean scores indicate stronger agreement regarding the presence of governance practices or procurement efficiency within respondents' organizations.

The results are presented in Table 4.3.

Table 4.3

Overall Descriptive Statistics for the Research Variables

Research Variable	n	Mean	Standard Deviation	Interpretation
Project Governance Practices	56	3.85	0.72	High level of governance practices
Procurement Efficiency	44	3.15	0.62	Moderate level of procurement efficiency

Interpretation

Table 4.3 presents the descriptive statistics for the two principal variables investigated in this study. The findings indicate that respondents perceive Project Governance Practices to be implemented at a relatively high level within their organizations, with an overall mean score of 3.85 (SD = 0.72). This suggests that governance mechanisms such as structured planning, governance over project risks, communication processes, and monitoring and control are generally established and practiced across the participating Saudi IT organizations.

In contrast, Procurement Efficiency recorded an overall mean score of 3.15 (SD = 0.62), indicating a moderate level of procurement performance. Although respondents generally agreed that procurement activities support project delivery, the average score remains only

slightly above the neutral midpoint of the scale. This finding suggests that opportunities still exist for improving procurement performance, particularly regarding procurement cycle time, cost efficiency, supplier effectiveness, and coordination between project governance and procurement functions.

The difference between the two mean scores reveals an important organizational observation. While respondents perceive governance practices to be relatively mature, these governance mechanisms are not consistently translated into equally high procurement performance. This suggests that the existence of governance structures alone may not guarantee procurement efficiency unless governance processes are effectively integrated with operational procurement activities and supported by appropriate performance measurement systems.

Overall, the descriptive statistics provide preliminary evidence that Saudi IT organizations have established governance practices but continue to face challenges in converting governance maturity into consistently efficient procurement outcomes.

4.4.1 Item-Level Descriptive Statistics

To obtain a deeper understanding of respondents' perceptions, descriptive statistics were also examined at the individual questionnaire-item level. Analyzing each statement separately allows identification of the strongest and weakest governance practices and procurement outcomes reported by respondents.

Among the Project Governance Practices items, the highest mean scores were recorded for the following statements:

- "Our organization integrates procurement schedules into the project plan from the initiation stage." (Mean $\approx$ 4.07)
- "Communication tools (meetings, reports, and information systems) ensure alignment between stakeholders." (Mean $\approx$ 4.05)
- "Monitoring and control processes allow early detection of procurement delays or budget deviations." (Mean $\approx$ 4.04)

These findings indicate that respondents generally perceive their organizations to possess effective governance mechanisms for integrating procurement into project planning, maintaining communication among stakeholders, and monitoring procurement performance throughout project execution.

Conversely, the lowest-rated governance statement was:

- "Our organization uses a formal project planning framework to align procurement timelines with project objectives." (Mean $\approx$ 3.29)

Although respondents generally agreed with this statement, the comparatively lower mean suggests that formal governance frameworks are not implemented consistently across all organizations.

Regarding Procurement Efficiency, respondents assigned the highest scores to:

- “Suppliers consistently deliver products or services that meet project requirements.” (Mean $\approx$ 3.36)
- “Supplier selection and evaluation processes are transparent and efficient.” (Mean $\approx$ 3.24)

These responses indicate relatively positive perceptions of supplier performance and procurement transparency.

The lowest procurement efficiency scores were recorded for:

- “Coordination between procurement and project teams has improved overall operational efficiency.” (Mean $\approx$ 2.97)
- “Procurement activities are completed within the planned time and budget.” (Mean $\approx$ 3.03)

These findings suggest that although governance structures exist, organizations continue to experience challenges translating governance practices into operational procurement performance, particularly regarding project coordination, schedule adherence, and budget control.

Overall, the item-level descriptive analysis indicates that governance mechanisms relating to planning integration, communication, and monitoring are generally well established. However, procurement efficiency remains moderate, suggesting that organizations should focus on strengthening governance execution rather than governance design alone.

4.5 Hypothesis Testing

To examine the relationship between Project Governance Practices and Procurement Efficiency, Pearson’s Product-Moment Correlation analysis was performed. Pearson correlation was selected because both variables were measured using continuous Likert-scale data and the primary objective of the study was to determine the strength and direction of the relationship between governance practices and procurement performance.

The analysis was conducted using the subset of respondents who provided complete responses for all procurement efficiency items ($n = 44$). Correlation coefficients (r) were calculated for each dimension of Project Governance Practices—Planning, Risk Management, Communication, and Monitoring & Control—as well as for the overall governance construct.

A significance level of $\alpha = 0.05$ was adopted. Relationships with p -values less than 0.05 were considered statistically significant and provided support for the research hypothesis.

The results are presented in Table 4.4.

Table 4.4

Correlation Between Project Governance Practices and Procurement Efficiency (n = 44)

Variable	Correlation with Procurement Efficiency (r)	Sig. (p-value)	Decision ($\alpha = 0.05$)
Planning	0.327	0.030	Significant – Supported
Risk Management	0.220	0.151	Not Significant – Not Supported
Communication	0.172	0.265	Not Significant – Not Supported
Monitoring and Control	0.182	0.236	Not Significant – Not Supported
Overall Project Governance Practices	0.318	0.035	Significant – Supported

Interpretation of the Correlation Analysis

The correlation analysis indicates that all dimensions of Project Governance Practices exhibit positive relationships with Procurement Efficiency. Although the strength of these relationships varies, the positive coefficients suggest that improvements in governance practices are generally associated with improvements in procurement performance.

Among the individual governance dimensions, Planning demonstrated the strongest relationship with Procurement Efficiency ($r = 0.327$, $p = 0.030$). Because the probability value is below the established significance level of 0.05, the relationship is statistically significant. This finding

indicates that organizations implementing stronger planning governance practices tend to achieve higher levels of procurement efficiency. Consequently, Hypothesis H1 is supported.

The Overall Project Governance Practices construct also exhibited a statistically significant positive relationship with Procurement Efficiency ($r = 0.318$, $p = 0.035$). This finding suggests that procurement efficiency is influenced not only by isolated governance mechanisms but also by the overall maturity and integration of governance systems within an organization.

The remaining governance dimensions—Risk Management, Communication, and Monitoring & Control—all demonstrated positive correlation coefficients. However, none of these relationships reached statistical significance at the 5 percent level.

Risk Management produced a weak positive correlation ($r = 0.220$) with a probability value of 0.151, indicating insufficient statistical evidence to conclude that governance of project risks independently influences procurement efficiency within the sampled organizations.

Similarly, Communication demonstrated a weak positive relationship ($r = 0.172$) that was not statistically significant ($p = 0.265$). Although effective governance communication remains an important managerial practice, the findings suggest that communication alone may not directly improve procurement performance unless supported by broader governance structures.

Monitoring and Control also showed a weak positive correlation ($r = 0.182$) with Procurement Efficiency. However, the relationship was likewise statistically insignificant ($p = 0.236$), suggesting that governance monitoring activities may contribute indirectly to procurement performance rather than exerting a measurable direct effect.

Overall, these findings indicate that governance planning represents the most influential governance dimension affecting procurement efficiency, while governance maturity as a whole also contributes positively to procurement performance.

Evaluation of Research Hypotheses

The statistical findings allow each hypothesis to be evaluated as follows.

Table 4.5

Summary of Hypothesis Testing

Hypothesis	Statement	Result
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H1	Planning governance has a significant positive effect on procurement efficiency.	Supported
H2	Risk governance has a significant positive effect on procurement efficiency.	Not Supported
H3	Communication governance has a significant positive effect on procurement efficiency.	Not Supported
H4	Monitoring and control governance has a significant positive effect on procurement efficiency.	Not Supported
H5	Overall project governance practices have a significant positive effect on procurement efficiency.	Supported

Discussion of the Hypothesis Testing Results

The hypothesis testing results provide partial support for the conceptual framework developed in Chapter One. Two of the five hypotheses were supported by the empirical evidence.

The significant influence of Planning Governance demonstrates that governance mechanisms established during the early stages of project execution are critical determinants of procurement efficiency. Organizations that integrate procurement activities into governance planning frameworks appear better positioned to manage procurement schedules, supplier coordination, and resource allocation.

Likewise, the significance of the overall governance construct indicates that procurement efficiency depends on the maturity of the governance system as a whole rather than on isolated

governance activities. Governance should therefore be viewed as an integrated management system rather than a collection of independent processes.

Conversely, the absence of statistically significant relationships for Risk Management, Communication, and Monitoring & Control suggests that these governance practices, although present within organizations, may not independently influence procurement performance. Their contribution may instead depend on the effectiveness of planning governance or on broader organizational capabilities that were not measured in this study.

These findings partially validate the proposed conceptual framework while also indicating that governance planning represents the strongest operational driver of procurement efficiency within Saudi IT organizations.

4.6 Discussion of Findings

The purpose of this section is to interpret the empirical findings presented in the previous sections and compare them with the theoretical and empirical literature reviewed in Chapter Two. The discussion focuses on how the results contribute to understanding the relationship between Project Governance Practices and Procurement Efficiency within Saudi IT organizations.

Overall, the findings indicate that project governance practices have a positive influence on procurement efficiency. However, the results also demonstrate that not all governance dimensions contribute equally to procurement performance. While Planning Governance and the overall governance construct showed statistically significant relationships with procurement efficiency, the remaining governance dimensions—Risk Management, Communication, and Monitoring & Control—did not demonstrate statistically significant independent effects within the research sample.

Planning Governance and Procurement Efficiency

The results indicate that Planning Governance is the strongest predictor of procurement efficiency among all governance dimensions investigated in this study. The statistically significant positive correlation suggests that organizations implementing structured governance during the planning stage achieve higher procurement performance.

This finding is consistent with the Project Management Institute (PMI, 2021), which emphasizes that governance decisions made during project initiation establish the foundation for successful procurement execution throughout the project lifecycle. Similarly, Kerzner (2022) argues that governance planning aligns organizational objectives, procurement schedules, resource allocation, and stakeholder responsibilities before project execution begins, thereby reducing uncertainty and improving operational performance.

The findings also support the work of Turner (2014), who concluded that organizations with formal governance planning frameworks experience greater predictability in procurement activities and lower project delivery risk.

Within Saudi IT organizations, planning governance appears particularly important because procurement activities often involve software licensing, cloud services, cybersecurity solutions, consulting services, and technology integration projects that require early coordination among multiple stakeholders. Effective governance planning therefore enables procurement activities to be integrated into project execution rather than treated as independent administrative functions.

These findings support Hypothesis H1 and reinforce the importance of governance planning as a strategic driver of procurement efficiency.

Risk Governance and Procurement Efficiency

Although the relationship between Risk Governance and procurement efficiency was positive, it was not statistically significant.

This finding differs somewhat from previous studies by Hillson (2019) and PMI (2021), which identify governance of project risks as an essential contributor to successful procurement outcomes. These studies argue that effective governance enables organizations to anticipate supplier disruptions, contractual uncertainties, financial risks, and schedule delays before they occur.

One possible explanation for the current findings is that many Saudi IT organizations have established formal risk governance procedures primarily to satisfy organizational compliance requirements rather than to support operational procurement decisions. In such environments, governance documentation may exist without substantially influencing day-to-day procurement activities.

Another explanation may be that respondents perceived risk governance as a management responsibility operating at higher organizational levels, while procurement efficiency depends more directly on operational planning and execution.

Therefore, although risk governance remains an important component of organizational governance systems, its direct influence on procurement efficiency was not evident within this research sample.

Communication Governance and Procurement Efficiency

Communication Governance also demonstrated a positive but statistically insignificant relationship with procurement efficiency.

This finding partially contrasts with Walker and Lloyd-Walker (2016), who emphasize that governance communication enhances collaboration among project stakeholders and suppliers

by establishing clear reporting structures, decision-making authority, and information transparency.

Similarly, Nicholas and Steyn (2017) argue that effective governance communication minimizes misunderstandings, improves coordination, and reduces procurement delays.

The findings of the present study suggest that communication governance alone may not directly improve procurement efficiency. Instead, communication mechanisms may function as enabling processes whose effectiveness depends on stronger governance planning and organizational integration.

In practice, organizations may conduct governance meetings, prepare governance reports, and operate governance committees without necessarily improving procurement cycle times, supplier performance, or procurement cost efficiency.

Consequently, communication governance appears necessary for organizational coordination but insufficient by itself to generate measurable procurement improvements.

Monitoring and Control Governance and Procurement Efficiency

Monitoring and Control Governance likewise demonstrated a positive but statistically insignificant relationship with procurement efficiency.

Previous research by Kerzner (2022) identifies governance monitoring as essential for ensuring accountability, performance measurement, and corrective action throughout project implementation. Continuous governance oversight enables organizations to detect procurement deviations early and implement corrective measures before problems escalate.

However, the findings of this study suggest that governance monitoring alone does not automatically improve procurement performance.

One explanation is that monitoring systems frequently emphasize reporting and compliance rather than continuous operational improvement. Organizations may successfully monitor procurement activities without necessarily acting upon the information generated by governance reviews.

This finding indicates that governance monitoring should be integrated with performance management systems capable of translating governance information into timely procurement decisions and organizational learning.

Overall Project Governance Practices

The overall Project Governance Practices construct demonstrated a statistically significant positive relationship with procurement efficiency.

This finding supports the central proposition of the conceptual framework developed in Chapter One and aligns with governance theory, which argues that organizational performance depends on the integration of governance mechanisms rather than on isolated governance activities.

The findings suggest that procurement efficiency improves when governance planning, communication, monitoring, accountability, and organizational oversight operate collectively within an integrated governance framework.

Rather than viewing governance as separate administrative processes, organizations should implement governance as a comprehensive management system that aligns strategic objectives, operational execution, procurement activities, and organizational accountability.

This conclusion is consistent with Müller (2017), who argues that governance maturity influences project success through the coordination of organizational structures, decision-making processes, and stakeholder accountability.

Implications for Saudi IT Organizations

The findings provide several practical implications for Saudi IT organizations.

First, organizations should strengthen governance planning by integrating procurement considerations into project governance frameworks from the earliest stages of project development.

Second, governance should focus less on procedural compliance and more on measurable organizational outcomes. Governance committees, reporting systems, and monitoring activities should be evaluated based on their contribution to procurement performance rather than solely on adherence to governance procedures.

Third, governance mechanisms should encourage stronger collaboration between project management offices (PMOs), procurement departments, contract management functions, and executive decision-makers. Cross-functional governance structures can improve decision quality, reduce procurement delays, and enhance supplier performance.

Finally, organizations should regularly review governance effectiveness using procurement performance indicators rather than relying exclusively on governance maturity assessments.

Overall, the findings suggest that governance creates value only when it actively supports organizational decision-making and operational execution rather than functioning solely as a compliance framework.

4.7 Chapter Summary

This chapter presented the statistical analysis and discussion of the data collected from professionals working in Saudi IT organizations. The analysis began with an examination of the demographic characteristics of the respondents, followed by an assessment of the reliability of

the research instrument. Descriptive statistics showed that project governance practices are generally implemented at a relatively high level, whereas procurement efficiency remains at a moderate level, indicating opportunities for further organizational improvement.

The hypothesis testing results demonstrated that Planning Governance and the overall Project Governance Practices construct have statistically significant positive relationships with procurement efficiency. In contrast, Risk Governance, Communication Governance, and Monitoring and Control Governance exhibited positive but statistically insignificant relationships. These findings suggest that governance planning is the most influential governance dimension affecting procurement performance, while the effectiveness of other governance mechanisms may depend on stronger organizational integration and execution.

The discussion further compared these findings with previous literature and highlighted both consistencies and differences with earlier studies. Overall, the results support the view that project governance contributes to procurement efficiency when implemented as an integrated organizational system rather than as isolated governance activities.

The findings presented in this chapter provide the empirical foundation for the final chapter of the study. Chapter Five synthesizes the major conclusions, discusses the theoretical and practical contributions of the research, outlines its limitations, and offers recommendations for practitioners and future researchers.

Table 4.6: Summary of Major Findings

Research Objective	Key Finding
Examine the effect of Project Governance Practices on Procurement Efficiency	Positive overall relationship found
Identify the most influential governance dimension	Planning Governance showed the strongest significant effect
Assess procurement efficiency	Moderate procurement efficiency observed
Evaluate governance maturity	Governance practices generally rated high

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter concludes the research by integrating the theoretical foundations presented in Chapters One and Two, the methodological approach described in Chapter Three, and the empirical findings reported in Chapter Four. The purpose of this chapter is to synthesize the study's outcomes, evaluate the extent to which the research objectives were achieved, and discuss the broader implications of the findings for both academic research and organizational practice.

The study was undertaken to investigate the relationship between Project Governance Practices and Procurement Efficiency within Saudi IT organizations. As organizations increasingly depend on technology-driven projects to support digital transformation and strategic growth, governance has become a critical mechanism for ensuring accountability, transparency, effective decision-making, and efficient utilization of organizational resources. Procurement, meanwhile, represents one of the most important operational functions influencing project success through its impact on cost, schedule, supplier performance, and organizational value creation.

Although project governance has received considerable attention within the broader project management literature, relatively limited empirical research has examined its direct relationship with procurement efficiency, particularly within the Saudi Arabian IT sector. This study therefore sought to address this gap by examining whether governance practices—including planning, risk management, communication, and monitoring and control—contribute to improved procurement outcomes.

The chapter begins by summarizing the principal findings in relation to the research objectives and hypotheses. It then discusses the managerial implications arising from these findings before acknowledging the limitations that may affect interpretation and generalization of the results. Finally, recommendations are provided for both practitioners and future researchers, followed by an overall conclusion highlighting the contribution of the study to knowledge and practice.

5.2 Summary of Findings

The primary objective of this study was to investigate the influence of Project Governance Practices on Procurement Efficiency within Saudi IT organizations. Using quantitative data collected from 56 professionals working in project management, procurement, contracts, and supply chain functions, the study examined how governance practices contribute to procurement performance.

The statistical analysis produced several important findings.

First, the results demonstrated that Planning Governance has a statistically significant positive relationship with procurement efficiency. Among all governance dimensions examined, planning governance emerged as the strongest predictor of procurement performance. Organizations that integrate procurement activities into governance planning frameworks appear better able to coordinate procurement schedules, manage supplier activities, and improve procurement outcomes.

Second, although Risk Governance, Communication Governance, and Monitoring and Control Governance all demonstrated positive relationships with procurement efficiency, none of these relationships reached statistical significance. This suggests that these governance mechanisms, while beneficial to organizational management, do not independently produce measurable improvements in procurement performance within the sampled organizations.

Third, the overall Project Governance Practices construct demonstrated a statistically significant positive relationship with procurement efficiency. This finding indicates that procurement performance depends not solely on individual governance activities but on the maturity and integration of governance systems across the organization.

Fourth, descriptive statistical analysis revealed that respondents generally perceive governance practices to be well established within their organizations, whereas procurement efficiency remains at a moderate level. This finding suggests that many organizations have developed governance structures but continue to experience challenges translating governance maturity into operational procurement excellence.

Collectively, these findings indicate that governance contributes positively to procurement performance, with planning governance serving as the primary mechanism through which governance influences procurement efficiency.

5.3 Managerial Implications

The findings of this research provide several practical implications for executives, project managers, procurement professionals, and organizational decision-makers within Saudi IT organizations.

First, organizations should recognize that effective governance begins during project planning. Governance structures should ensure that procurement strategies, supplier engagement plans, budget approvals, and project schedules are integrated before project execution begins. Early governance intervention reduces procurement uncertainty and improves alignment between organizational objectives and procurement activities.

Second, governance should evolve beyond compliance-oriented oversight toward performance-oriented governance. While governance committees, reporting structures, and approval mechanisms remain essential, organizations should also evaluate governance effectiveness using operational procurement performance indicators such as procurement lead time, supplier performance, contract cycle time, and procurement cost variance.

Third, stronger collaboration should be established between Project Management Offices (PMOs), procurement departments, contract management teams, finance functions, and executive leadership. Integrated governance structures improve coordination, reduce organizational silos, and facilitate faster decision-making throughout the procurement lifecycle.

Fourth, organizations should invest in governance capability development by providing training programs focused on governance leadership, procurement governance, contract governance, stakeholder management, and governance decision-making. Developing governance competencies among project managers and procurement professionals can strengthen organizational governance maturity and improve procurement performance.

Finally, organizations should leverage digital governance technologies, including governance dashboards, procurement analytics, workflow automation, and performance monitoring systems. These technologies enhance transparency, improve accountability, and support evidence-based governance decisions.

5.4 Limitations of the Study

Although this study contributes valuable empirical evidence regarding the relationship between project governance practices and procurement efficiency, several limitations should be considered when interpreting the findings.

First, the study was based on a relatively modest sample of 56 respondents. While sufficient for exploratory quantitative analysis, a larger sample would improve statistical power and increase confidence in generalizing the findings across the broader population of Saudi IT organizations.

Second, the research relied on self-reported perceptions collected through a structured questionnaire. Consequently, the findings reflect respondents' professional opinions rather than objective organizational performance indicators such as procurement cycle times, procurement cost savings, supplier quality metrics, or contract performance data. Individual perceptions may also be influenced by organizational culture, professional experience, or personal interpretation of governance practices.

Third, the study adopted a cross-sectional research design, capturing organizational conditions at a single point in time. Governance maturity and procurement efficiency are dynamic organizational capabilities that may evolve as projects progress. A longitudinal design would provide deeper insight into how governance practices influence procurement performance throughout the project lifecycle.

Fourth, the study focused exclusively on Saudi IT organizations. Although this context provides valuable insight into a strategically important industry, organizational governance practices may differ across other sectors such as construction, healthcare, manufacturing, or energy. Consequently, the findings should be generalized cautiously beyond comparable organizational environments.

Finally, procurement efficiency was measured primarily through respondents' perceptions rather than through objective operational data. Future studies incorporating organizational performance metrics may provide a more comprehensive understanding of governance effectiveness.

Despite these limitations, the study provides meaningful evidence regarding governance practices within Saudi IT organizations and establishes a foundation for future investigation.

5.5 Contributions of the Study

This study makes meaningful contributions to the fields of project governance and procurement management by extending existing knowledge while providing practical guidance for organizations operating within Saudi Arabia's information technology sector. The contributions can be viewed from three complementary perspectives: theoretical, practical, and methodological.

5.5.1 Theoretical Contribution

From a theoretical perspective, this research contributes to the growing body of knowledge examining the relationship between project governance and organizational performance. Previous studies have extensively explored project governance in relation to project success, strategic alignment, and organizational control. However, comparatively little empirical research has investigated its direct influence on procurement efficiency, particularly within Saudi IT organizations.

By examining governance through the dimensions of planning, risk management, communication, and monitoring and control, the study demonstrates that governance should not be viewed merely as an administrative or compliance mechanism. Instead, governance functions as an organizational capability capable of influencing procurement performance through improved planning, accountability, and decision-making.

The findings also reinforce governance theory by demonstrating that governance maturity should be evaluated as an integrated organizational system rather than through isolated governance mechanisms. This contributes additional empirical evidence supporting the strategic role of governance within project-based organizations.

5.5.2 Practical Contribution

From a practical perspective, the study provides useful guidance for executives, Project Management Offices (PMOs), procurement departments, governance committees, and organizational leaders responsible for improving procurement performance.

The findings demonstrate that governance planning has the greatest measurable influence on procurement efficiency. Consequently, organizations should prioritize governance activities during project initiation by integrating procurement planning, supplier engagement, contract strategies, and governance approvals into early project planning processes.

The study also highlights the importance of strengthening governance integration across organizational functions. Procurement efficiency should become a governance responsibility shared by project managers, procurement professionals, finance departments, legal advisors, and executive leadership rather than remaining solely the responsibility of procurement departments.

These insights provide organizations with evidence-based recommendations that can support governance maturity, improve procurement performance, and contribute to more successful delivery of technology projects.

5.5.3 Methodological Contribution

Methodologically, this research demonstrates the applicability of quantitative survey methods for investigating governance-related organizational issues within Saudi Arabia's IT sector.

The study developed a structured measurement framework linking project governance practices with procurement efficiency and demonstrated how these relationships can be examined using descriptive statistics, reliability analysis, and Pearson correlation techniques.

The research instrument developed for this study may also serve as a useful foundation for future researchers investigating governance, procurement management, project performance, or organizational effectiveness within comparable industries.

Furthermore, the study provides an empirical dataset that may be expanded through future research employing larger samples, advanced statistical models, or cross-sector comparisons.

Overall, the study contributes theoretically, practically, and methodologically by improving understanding of how governance practices influence procurement efficiency within project-based organizations.

5.6 Recommendations for Future Research

Although this study provides valuable insight into the relationship between project governance practices and procurement efficiency, it also identifies several opportunities for future research that could extend and strengthen the current findings.

First, future studies should employ larger and more representative samples drawn from a broader range of Saudi organizations. Expanding the sample size would improve statistical power, enhance generalizability, and allow researchers to compare governance practices across different organizational sizes, ownership structures, and geographical regions.

Second, researchers should investigate project governance within other project-intensive sectors, including construction, healthcare, energy, telecommunications, banking, and public infrastructure. Comparing governance practices across industries would determine whether the relationships identified in this study remain consistent under different operational and regulatory environments.

Third, future studies should consider adopting mixed-method research designs that combine quantitative surveys with qualitative interviews, focus groups, or case studies. Qualitative approaches would provide deeper understanding of how governance decisions influence procurement activities and explain why certain governance dimensions demonstrate stronger operational impact than others.

Fourth, future researchers should employ longitudinal research designs to examine governance practices throughout the project lifecycle. Such studies would provide valuable insight into how governance maturity evolves over time and how governance decisions made during project initiation influence procurement performance during execution and project closure.

Fifth, future research should incorporate objective organizational performance indicators alongside perception-based survey measures. Variables such as procurement lead time, supplier delivery performance, contract cycle duration, procurement savings, compliance rates, and project schedule performance would provide stronger evidence regarding the practical effectiveness of governance systems.

Finally, researchers should explore additional organizational variables that may influence the relationship between project governance and procurement efficiency. Potential moderating or mediating variables include organizational culture, digital governance maturity, leadership effectiveness, procurement capability, organizational agility, stakeholder engagement, governance structure, and organizational innovation.

Investigating these variables would provide a more comprehensive understanding of the organizational mechanisms through which governance contributes to procurement success.

5.7 Conclusion

This study set out to investigate the relationship between Project Governance Practices and Procurement Efficiency within Saudi IT organizations. Motivated by the increasing importance of governance in supporting organizational accountability, strategic alignment, and project success, the research sought to determine whether governance practices contribute to more efficient procurement outcomes in technology-driven project environments.

The study achieved its objectives through a structured quantitative research design supported by established governance and procurement theories. A comprehensive review of the literature established the conceptual foundations of the research and identified a significant gap concerning the influence of project governance on procurement efficiency within the Saudi IT sector. This gap provided the basis for developing the research framework, hypotheses, and measurement instrument used throughout the study.

The empirical findings demonstrated that project governance positively influences procurement efficiency, although the strength of this influence varies across governance dimensions. Planning governance emerged as the most influential governance practice, while the overall governance construct also showed a statistically significant relationship with procurement efficiency. Conversely, risk management, communication, and monitoring and control demonstrated positive but statistically insignificant individual relationships, suggesting that governance delivers the greatest value when implemented as an integrated organizational system rather than as isolated administrative activities.

Collectively, these findings reinforce the view that procurement efficiency is not determined solely by procurement procedures or supplier management. Rather, procurement performance reflects the quality of governance that guides organizational planning, decision-making, accountability, and cross-functional coordination. Organizations with mature governance systems are therefore better positioned to align procurement activities with strategic objectives, improve operational consistency, and enhance project delivery performance.

Beyond its empirical findings, the study contributes to the academic literature by extending understanding of project governance within the context of Saudi IT organizations while providing practical guidance for organizational leaders responsible for governance, procurement, and project delivery. The findings encourage organizations to view governance not simply as a compliance requirement but as a strategic capability that creates organizational value through improved decision-making and operational performance.

In conclusion, the research demonstrates that strengthening project governance—particularly governance during the planning stage—offers organizations a practical pathway toward improving procurement efficiency and supporting successful project delivery. As Saudi Arabia continues to advance its Vision 2030 digital transformation initiatives, effective governance will become increasingly important in ensuring that technology projects deliver sustainable organizational and national value.

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Appendices

A. Research Questionnaire

Title: The Impact of Project Management Practices on Procurement Efficiency in Saudi IT Organizations

Purpose of the Questionnaire:

This questionnaire is designed to collect data from professionals working in Saudi IT organizations to examine how project management practices influence procurement efficiency. The collected responses will be analyzed statistically to determine whether structured project management frameworks—such as planning, risk management, communication, and monitoring—have a significant impact on procurement outcomes in terms of cost, time, and supplier performance.

Target Respondents:

Project managers, procurement officers, supply chain specialists, and other employees directly involved in project delivery and resource acquisition within Saudi IT organizations.

Instructions:

Please indicate your level of agreement with each statement below using the 5-point Likert scale provided:

Scale	Meaning
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1	Strongly Disagree
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2	Disagree
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3	Neutral
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4	Agree
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5	Strongly Agree
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Section A: Project Management Practices (Independent Variable)

No.	Statement
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1	Our organization uses a formal project planning framework to align procurement timelines with project objectives.
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- 2 Risk management procedures are in place to anticipate and mitigate supplier-related issues.
- 3 Communication between project and procurement teams is structured, frequent, and transparent.
- 4 Project managers regularly monitor procurement progress through performance reports and dashboards.
- 5 Clear project milestones are linked to procurement deliverables.
- 6 Lessons learned from past projects are used to improve procurement processes.
- 7 Project risks related to vendor performance are documented and reviewed.
- 8 Our organization integrates procurement schedules into the project plan from the initiation stage.
- 9 Communication tools (meetings, reports, systems) ensure alignment between stakeholders.
- 10 Monitoring and control processes allow early detection of procurement delays or budget deviations.

Section B: Procurement Efficiency (Dependent Variable)

No. Statement

- 1 Procurement activities are completed within the planned time and budget.
- 2 Supplier selection and evaluation processes are transparent and efficient.
- 3 Procurement costs have decreased due to improved planning and coordination.
- 4 Suppliers consistently deliver products or services that meet project requirements.
- 5 Coordination between procurement and project teams has improved overall operational efficiency.

Section C: Demographic Information

Variable Options

Gender ☐ Male ☐ Female

Age ☐ 20–30 ☐ 31–40 ☐ 41 and above

Education ☐ Bachelor's ☐ Master's ☐ PhD

Position ☐ Project Manager ☐ Procurement Officer ☐ Supply Chain Specialist ☐ Other

Years of Experience ☐ Less than 5 years ☐ 5–10 years ☐ More than 10 years

Organization Type ☐ Government ☐ Private Sector ☐ Semi-Government

B. Table of Research Instruments

Variable	Dimensions	No. of Items	Source / Reference
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Project Management Practices (Independent Variable)	Planning, Risk Management, Communication, Monitoring & Control	10	PMI (2021); Kerzner (2017); Hillson (2019); Nicholas & Steyn (2017)
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Procurement Efficiency (Dependent Variable)	Cost Efficiency, Time Efficiency, Supplier Performance	5	Thai (2001); Telgen et al. (2010); Carter & Narasimhan (2006); Amann & Essig (2015)
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Note:

Each item was developed based on validated scales and adapted to suit the context of Saudi IT organizations. The items under each variable correspond directly to the constructs defined in Chapters 1 and 2, ensuring alignment between the conceptual framework and data collection tool.

C. Google Form / Data Collection Format

The questionnaire will be converted into a Google Form to facilitate efficient and secure electronic data collection. This method allows respondents from different organizations and locations to participate conveniently.

Each section (A–C) will appear as a separate page within the form, and all questions will maintain a uniform 5-point Likert-scale format. Responses will be automatically exported into a spreadsheet for statistical analysis using software such as SPSS or Excel.

The target sample size will include approximately 80–100 participants, ensuring sufficient representation of project and procurement professionals across multiple Saudi IT organizations. Participation will be entirely voluntary, and no personal identifiers will be collected.

<https://forms.gle/9iSh1o12uHiL9RcN8>