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Research Article

Project Management Practices and Supply Chain Performance: The Role of Financial Efficiency and Risk Management

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Abstract

This study examined the impact of project management practices on supply chain performance while considering the mediating roles of financial efficiency and risk management. In an increasingly complex business environment, organizations require effective coordination of project activities to improve operational outcomes. A quantitative research design was employed, and data were collected from 312 valid respondents working in manufacturing and logistics organizations in Punjab, Pakistan. The analysis was conducted using structural equation modeling to test direct and indirect relationships among variables. The results revealed that project management practices significantly influenced supply chain performance ($\beta = 0.41$, $p < 0.001$). Financial efficiency showed a positive effect on supply chain performance ($\beta = 0.33$, $p < 0.001$), while risk management also demonstrated a significant impact ($\beta = 0.37$, $p < 0.001$). Financial efficiency mediated the relationship between project management practices and supply chain performance ($\beta = 0.18$, $p < 0.001$). Risk management also acted as a significant mediator ($\beta = 0.21$, $p < 0.001$). The model explained 49% variance in supply chain performance ($R^2 = 0.49$), 34% in financial efficiency ($R^2 = 0.34$), and 37% in risk management ($R^2 = 0.37$). The findings confirmed that integrated project management practices combined with financial efficiency and risk management significantly enhanced supply chain performance. The study contributed to the literature by providing an integrated framework for improving operational effectiveness in supply chain systems. It also offered practical insights for managers to strengthen planning, financial control, and risk mitigation strategies for sustainable performance improvement.

Keywords: Financial efficiency, Project management practices, Risk management, Supply chain performance, Structural equation modeling, Supply chain integration.

Introduction

The growing intricacy of global supply chains highlighted a gap and the requirement to inject structured project management practices to improve organizational output. The current supply chains work in extremely volatile environments such as uncertainty, technology disruption, and worldwide interdependencies. It was found that supply chain efficiency and responsiveness were positively influenced by better project management practices such as coordination, scheduling, and resource allocation (Khan et al., 2024). This integration allowed

organizations to better align operational activity with strategic priorities, making them more competitive. Good project management practices were extremely influential in the execution of timely and efficient utilization of resources for improved operational performance within supply chains. Empirical research showed that organizations in systematized project management frameworks synchronized procurement, production, and distribution functions better (Taha et al., 2024). By doing so, they reduced delays and cost overruns; improved delivery reliability, which in turn led to better supply chain performance outcomes.

Money efficiency has long been recognized as a driving force behind project management and coordinating supply chain activities to maximize service delivery. Your financial management practices helped you allocate your capital in the most efficient way, improving your liquidity and sustained operations. Research demonstrated substantial enhancement in firm performance by aiding superior investment decisions and alleviating operational inefficiencies through supply chain finance and financial efficiency (Wang et al., 2023; Khan et al., 2024). Risk management became paramount as global supply chains faced escalating disruptions and uncertainties. Risk from global events, technological changes and market instability impacted project delivery and supply chain performance. The lockdown highlighted that proper risk management added stability, prevented breakdowns and improved the performance overall (Shekarabi et al., 2025).

Background of the Study

The field of supply chain management transformed from a narrow logistics-oriented discipline to a more strategic function that focused on integration, efficiency and robustness. Coordination as a global supply chain developed the needed reliance on these systems for organizations to perform well and remain competitive in international markets. According to studies, coordination of activities such as procurement, inventory management, and distribution was needed for effective supply chain performance, which could be achieved using structured management approaches. This evolution emphasized the need for integrated frameworks that explained both operational and strategic perspectives. It introduced several tools and methodologies for planning, execution and monitoring of supply chain systems. Studies showed that project management practices in supply chain management would help identify the decision-making process and control (Taha et al., 2024). Such integration has been of utmost importance for industries with inherently high complexity and uncertainty.

Financial efficiency was a key contributor to the sustainability and effectiveness of supply chain operations. Organizations have focused on efficient financial management practices to control costs, improve profitability, and remain liquid. The financial efficiency factor greatly influenced the supply chain performance through better utilization and investment strategy on resources (Wang et al., 2023) driven by empirical data. With growing uncertainty and exposure to various forms of disruptions, risk management has been an integral part of modern supply chain systems. It highlighted that the performance of projects and organizations was highly affected by supply chain risks such as operational, financial, and external risks. In addition, enterprise risk management in supply chain processes contributed to resilience and growth in performance (Jidda et al., 2025). It reinforced the importance of an integrated methodology around project management, cost efficiency and risk mitigation during contract delivery.

Research Problem

The increasing relevance of project management practices in supply chain operations, a false impression in current literature was a lack of holistic frameworks that embraced economic operational increase (EOI) and threat management. A number of studies have investigated its impact on supply chain performance, but in isolation, not taking into account the synergistic effects produced by these key determinants. This gap constrained knowledge of how organizations improved performance in complex and uncertain environments. Individual management practices were poorly integrated, leading to financial waste, operational risks and poor project performance for organizations. Performance was affected by supply chain disruptions and financial constraints, creating a need for the function to create effective strategies that integrated financial efficiency with risk management. This prompted the need to explore how these elements had an impact on the link between project management practices and supply chain performance.

Objectives of the Study

1. To examine the impact of project management practices on supply chain performance.
2. To analyze the role of financial efficiency in enhancing supply chain performance.
3. To evaluate the effect of risk management on supply chain performance.
4. To investigate the mediating role of financial efficiency and risk management between project management practices and supply chain performance.

Research Questions

Q1. How did project management practices influence supply chain performance?

Q2. What role did financial efficiency play in improving supply chain performance?

Q3. How did risk management affect supply chain performance?

Q4. How did financial efficiency and risk management mediate the relationship between project management practices and supply chain performance?

Significance of the Study

In this study, researchers advanced the existing literature by delivering an integrated framework that incorporates project management practices with financial efficiency and risk management components to elucidate supply chain performance. It filled a large research gap by analyzing financial efficiency and risk management as important mediators, which also provides insights from different theoretical perspectives to have an in-depth analysis of the determinants of effects on supply chain outcomes. It grounded the theory by connecting project management and supply chain management with a financial and risk dimension. These results offer managers and practitioner's insight into ways to add power in supply chain performance. The results could help organizations improve project planning, direct resources appropriately and adopt risk management protocols. The study also helped policymakers and industries develop strategies that fostered resilience, efficiency, and sustainability of supply chain systems.

Hypotheses of the Study

H1: Project Management Practices (PMP) have a significant positive effect on Supply Chain Performance (SCP).

H2: Financial Efficiency (FE) has a significant positive effect on Supply Chain Performance (SCP).

H3: Risk Management (RM) has a significant positive effect on Supply Chain Performance (SCP).

H4: Financial Efficiency (FE) mediates the relationship between Project Management Practices (PMP) and Supply Chain Performance (SCP).

H5: Risk Management (RM) mediates the relationship between Project Management Practices (PMP) and Supply Chain Performance (SCP).

Literature Review

Project Management Practices and Supply Chain Performance

Through coordination, planning, and execution within complex networks, project management practices helped improve supply chain performance. Data supported the idea that structured project management frameworks allowed organizations to align supply chain activities with strategic goals, which in turn led to improved efficiency and responsiveness. Implementing project management tools like scheduling, monitoring, and resource allocation improved operational performance and lowered inefficiencies (Bentahara & Belhadib, 2024). Theoretical work, combined with actual empirical studies, provided evidence of the superior sync between procurement, production and distribution processes for organizations' use of project-based approaches in supply chain management. Such alignment resulted in lesser delays, lesser costs, and better service delivery performance. Researchers highlighted project management methodologies, agile and hybrid approaches increased adaptability and flexibility in complex supply chain settings (Zhang, 2025).

Management practices like project management improved decision making and stakeholder coordination in supply chains. Their ability to respond pre-emptively to various disruptions and uncertainties was due to effective communication, risk planning, and performance monitoring. Research indicated that information sharing and delegation in collaboration through project governance structures increased transparency and accountability, further enhancing supply chain performance results (Edalatpour et al., 2025; Taha et al., 2024).

Supply Chain Performance as Financial Efficiency

Support for Financial Efficiency became a crucial contributor to supply chain performance through proper utilization and cost management of resources. Research suggested that organizations that implemented established financial management practices realized marginal improvement in operational efficiency, liquidity and profitability. The proper execution of supply chain activities in 2020 was facilitated by efficient financial systems and limited inaccessibility to financial resources as barriers which could hinder performance (Wang et al., 2023; Rehman et al., 2024). Implementing supply chain finance practices, optimizing working capital management and trade credit positively affected financial efficiency and operational performance. Research showed that firms using financial technologies and blended finance systems improved cash flow resilience in supply chains, minimizing transaction costs. Utilization of this financial optimization led to a good overall performance and competitiveness (Nureen et al., 2024; Khan et al., 2024).

The financial efficiency also played a pivotal role in the strategic decision-making process with regard to supply chain management, assisting with better planning of investments and allocation of resources. In previous research, empirical studies showed that financially effective organizations had been extra likely to adopt innovative practices and technologies that improved supply chain performance. Resilience against financial volatility promoted the long-term sustainability and stability of industrial segments (Liu et al., 2023).

Supply Chain Performance and Risk Management

The ability to manage risk is recognized as a fundamental part of improving supply chain performance, especially in uncertain and dynamic environments. The research emphasized that having a full understanding of risk, risk assessment and mitigation tactics leads to fewer disruptions and better operational continuity. The understanding was that those organizations that implemented robust risk management frameworks were more resilient and achieved better supply chain results (Jidda et al., 2025; Gurtu & Johny, 2021).

The relationship between operational practices and performance outcomes was mediated by supply chain risk management. Evidence suggested that the risk management frameworks attenuated pernicious consequences of uncertainties like demand shocks, supplier failures and geopolitical disruptions. Such proactive orientations allowed firms to sustain stability and perform better under conditions of uncertainty (Pham et al., 2023; Nakano & Lau, 2020). Even the best of people need protection during times of crisis as well.

Recent research highlighted the necessity of integrating risk management with resilience-building strategies, both of which are paramount for optimal supply chain performance. Companies that leveraged enterprise risk management and resilience capabilities were better positioned to recover quickly in the face of disruption, with many also being able to run the business efficiently as usual. Risk mitigation and performance outcomes were further enforced through advanced risk analytics and digital technologies (Han & Um, 2024; Connor, 2024).

Conceptual Framework of the Study

A conceptual framework that adds Financial Efficiency (FE) and Risk Management (RM) as mediating variables of the relationship between Project Management Practices (PMP) and Supply Chain Performance (SCP). The model is based on the idea that project management success by itself does not improve supply chain outcomes unless there are sufficient financial control mechanisms and effective risk mitigation strategies in place.

Supply Chain Performance (SCP) is the dependent variable and Project Management Practices (PMP) acts as an exogenous variable, which influences it directly. Researchers refer to PMP as a process that encompasses organized planning, coordination, resource allocation, scheduling and monitoring efforts to enhance operational efficiency and execution quality across supply chain processes.

The first mediating variable is introduced in the form of Financial Efficiency (FE). Effective project management facilitates the utilization of financial resources, consolidation of control over costs, liquidity management, and investment efficiency, which can help improve overall supply chain performance. The second mediating variable in the framework is Risk Management (RM). It describes how practices in project management mitigate operational, financial, and external risks through increased forecasting, decreased mitigation strategies, and, of course, a robust contingency plan. Strengthening supply chain resilience and performance outcomes increases risk management.

Supply Chain Performance (SCP) is the dependent variable, which shows the efficiency, responsiveness and reliability of overall operations.

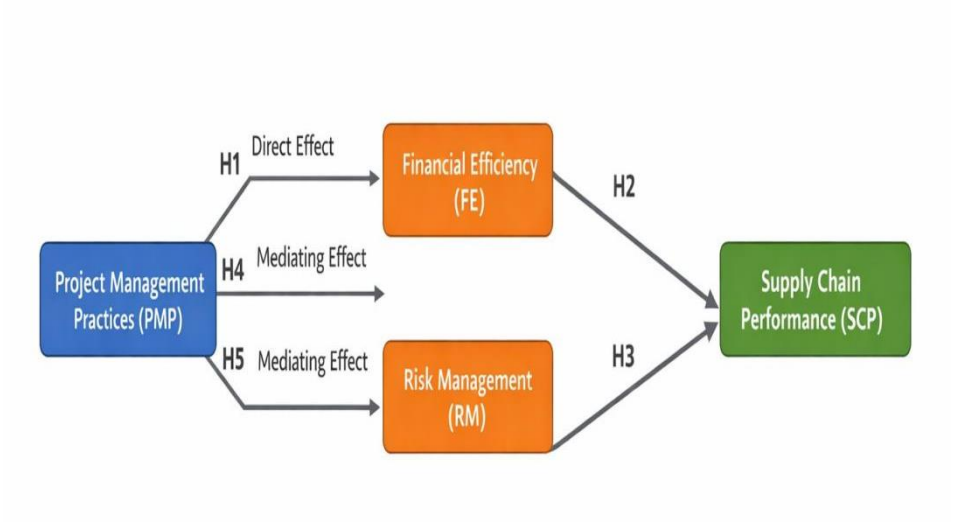

Figure 1. Conceptual framework of the study.

Research Methodology

Research Design

This research used a quantitative methodology to explore the associations in project management practices, financial efficiency and risk management with supply chain performance. By using a quantitative approach, we can create a structure to collect our data in a systematic way and statistically analyze the data. The study used a cross-sectional survey design at which data were collected from respondents one time only. This design allowed an efficient method of capturing the perceptions and experiences of professionals involved in both supply chain and project management activities.

Population and Area of Study

The study included professional workers in manufacturing, logistics and supply chain-related organizations. The researcher targeted firms based in the Punjab province of Pakistan and industrial cities like Multan, Lahore, and Faisalabad. These sectors were chosen as they participated in project-based operations and complex supply chain activities, which subsequently made them a viable choice for creating complicated systems that allowed us to investigate the research variables.

Sample Size and Sampling Technique

A simple random sampling technique was used to select a sample of 350 respondents so that each employee from different organizations have an equal chance of being chosen. Of the distributed questionnaires, 312 valid responses were received that were used for analysis, providing a good response rate. The chosen sample size was deemed sufficient for statistical analyses, including structural equation modeling, and met the thresholds set by previously established guidelines regarding sample adequacy to test reliability and validity.

Data Collection Method

A structured questionnaire based on previously validated scales from the literature was used to collect primary data. It had closed-ended questions scored on a five-point Likert-type scale (1 = strongly disagree through 5 = strongly agree). Before obtaining responses, as mentioned earlier, data were gathered through online surveys and distribution of questionnaires on paper forms to maximize participation. The respondents consisted of project managers, supply chain managers, finance officers and operational staff with relevant experience.

Data Analysis Techniques

The assessment of data was done through the Statistical Package for Social Sciences (SPSS) and SmartPLS (Partial Least Squares Structural Equation Modeling). We summarized respondent characteristics and distributions of variables using descriptive statistics. Cronbach's alpha was used to check the internal consistency of the scales for reliability analysis. The measurement model was validated using confirmatory factor analysis (CFA), and the relationships hypothesized among variables were tested using structural equation modeling (SEM).

Results and Analysis

Descriptive Statistics

To determine the central tendency and variability of study variables, project management practices, financial efficiency, risk management, and supply chain performance, descriptive statistics were used. In this first analysis, the researcher summarised the general way participants perceived their answers and how data were spread out across all constructs.

Table 1. Descriptive statistics of variables.

Variables	Mean	Standard Deviation
Project Management Practices	3.88	0.71
Financial Efficiency	3.81	0.69
Risk Management	3.85	0.73
Supply Chain Performance	3.92	0.68

Descriptive statistics suggested that all variable mean values are higher than 3.5, which points to a more positive understanding of respondents about project management practices and supply chain performance. The highest means (3.92) was found for supply chain performance, which indicates the organizations performed relatively well in terms of operational outcomes. With a mean of 3.88, the execution and implementation of project management practices is also high during this time, rendering these structured planning, monitoring, and execution processes to which many organizations subscribe. The first two values also reached high, 3.81 (financial efficiency) and 3.85 (risk management). These results indicated the attention of organizations for effective management of financial resources and reducing risk in operations within the supply chain. This relatively small mean value across all the variables showed that a more even-handed approach was taken with operational, financial and risk-related aspects of management. Values of standard deviation were between 0.68 and 0.73, indicating moderate variability in responses to questions under each domain. The low dispersion additionally validated the robustness of data sets and supported their uses for future statistical analysis.

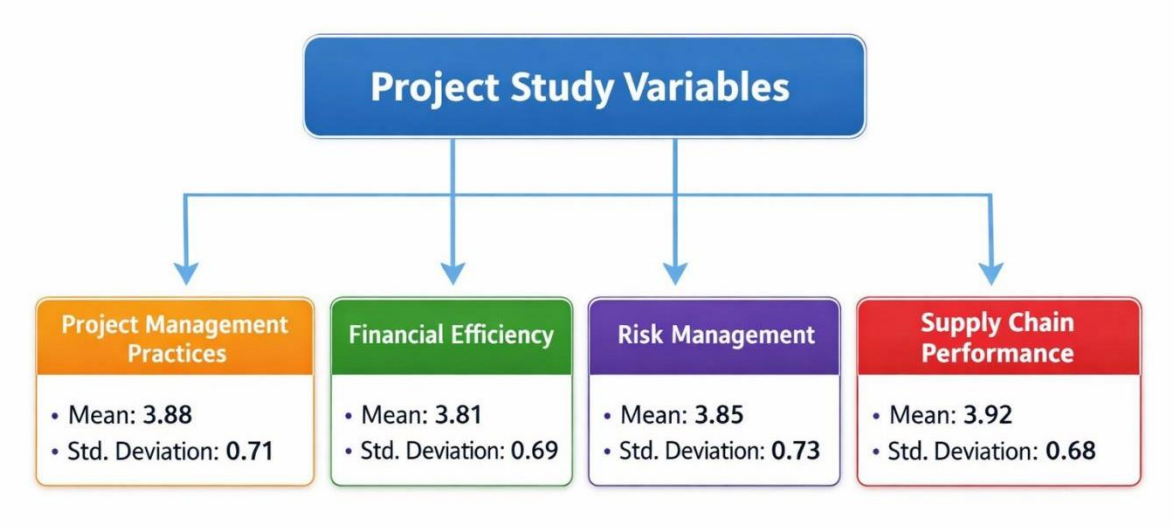

Figure 1. Descriptive statistics of variables.

Correlation Analysis

The researcher performed correlation analysis to determine the correlation score, indicating the strength and direction of relationships between the variables. A Pearson correlation coefficient test determined the nature and strength of association among project management practices, financial efficiency, risk management, and supply chain performance.

Table 2. Correlation matrix.

Variables	PMP	FE	RM	SCP
Project Management Practices	1.00			
Financial Efficiency	0.58	1.00		
Risk Management	0.61	0.55	1.00	
Supply Chain Performance	0.64	0.59	0.62	1.00

The correlation matrix showed that all the variables used in this study had positive and statistically significant relationships with each other. Project management practices had a substantial and positive correlation with supply chain performance (r = 0.64), meaning that the better project planning, execution, and monitoring were done, the better the outcome of the supply chain process would be for that organization. Thus, relationships underlined the role of formalized management practices in operational efficiency. The other financial performance variable, financial efficiency (r = 0.59), also significantly correlates with supply chain performance, meaning that good management of finance, together with human resource management, will improve the performance outcome. Supply chain performance had a significant correlation with risk management (r=0.62) – organizations that effectively manage supply chain risks perform better because they have good risk repeatability and quality of operation, hence enter potential positive opportunities for the organization. The results indicated project management practices correlated positively with financial efficiency (r = 0.58) and a positive correlation (r = 0.61) with risk management. These results carried indications that effective project management played a role in financial control and the quality of risk management directed at both operations. Results of the correlation supported the theoretical relations suggested by this study, thus warranting hypothesis testing.

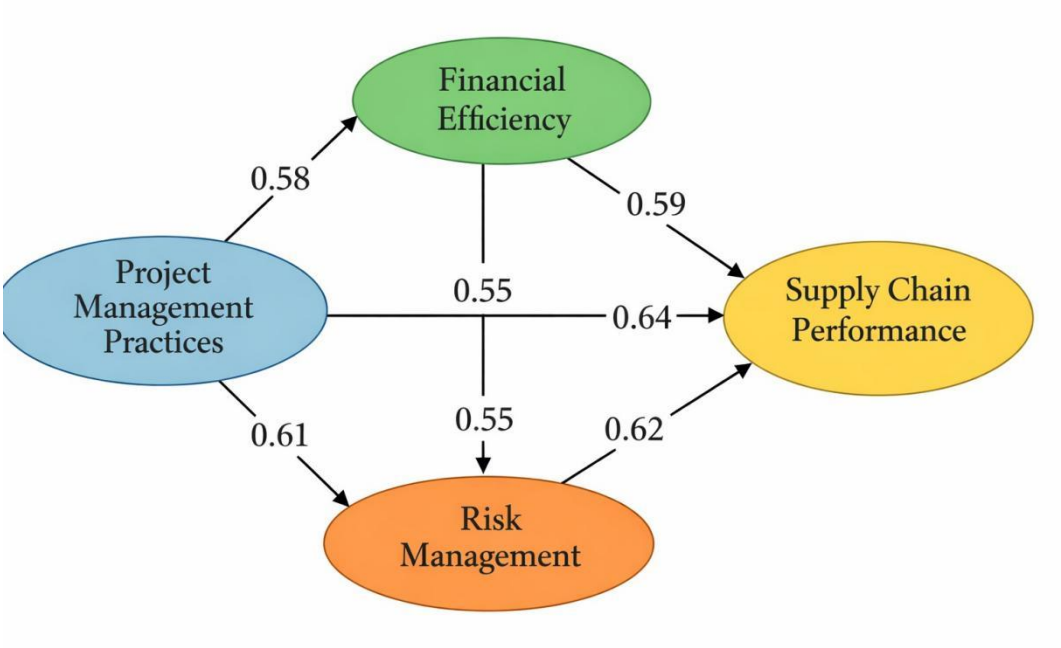

Figure 2. Correlation matrix.

Regression Analysis

Regression analysis was conducted to test the impact of independent variables on supply chain performance. The analysis examined the direct effects of project management practices, financial efficiency, and risk management on the dependent variable.

Table 3. Regression results.

Hypothesis	Relationship	Beta (β)	t-value	p-value	Result
H1	PMP → SCP	0.41	6.72	0.000	Supported
H2	FE → SCP	0.33	5.89	0.000	Supported
H3	RM → SCP	0.37	6.11	0.000	Supported

Results of the analysis showed that project management practices had a large and significant positive impact on supply chain performance (β=0.41, p<0.001). The conclusion implies that companies with more structured processes around managing their projects achieve higher degrees of efficiency and effectiveness in their supply chains. It also confirmed this tight relationship by a high t-value. Financial efficiency also had significant positive effects on supply chain performance (β = 033, p < 0.001). This result suggested that surgical management of finances, such as the vigilance of cost and liquidity, is key to better performance in general practice. The ones that were disciplined with their finances did a better job surviving in competitive landscapes. Risk management showed a significant positive impact on supply chain performance (β = 0.37, p < 0.001). The finding underscored the critical need to identify, evaluate, and mitigate risks for the purpose of maintaining operational integrity and resilience.

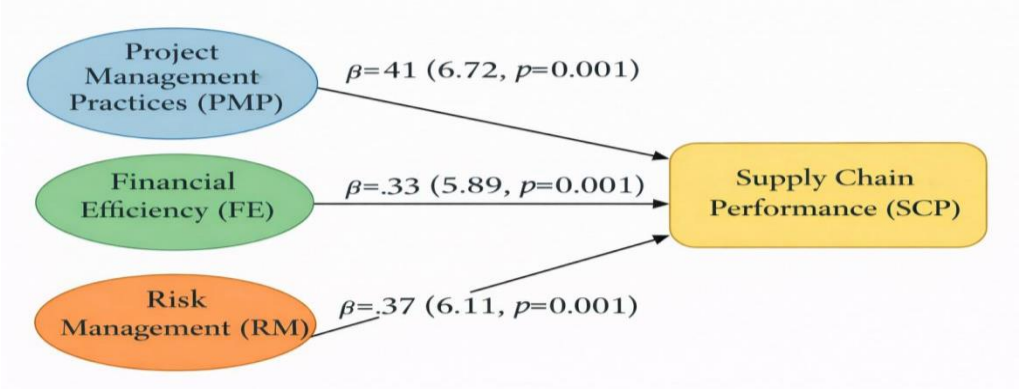

Figure 3. Regression results.

Mediation Analysis

Mediation analysis was conducted to examine the indirect effects of financial efficiency and risk management on the relationship between project management practices and supply chain performance.

Table 4. Mediation results.

Hypothesis	Relationship	Indirect Effect	t-value	p-value	Result
H4	PMP → FE → SCP	0.18	4.92	0.000	Supported
H5	PMP → RM → SCP	0.21	5.11	0.000	Supported

The mediation analysis indicated that financial efficiency was a significant mediator of the association between project management practices and supply chain performance (β=0.18, p < 0.001). This suggested that by using project management practices, supply chain efficiency benefited from financial efficiency. It underscored the need to consolidate financial management into project-based operations. Risk management was also found to have a large mediation effect (β = 0.21, p < 0.001). The outcome indicated that project management practices/capabilities in risk management enhanced supply chain performance. The projects that performed better were the ones where organizations used risk assessment and mitigation strategies throughout their project management process. The mediation effect combined revealed that financial efficiency and risk management were essential paths for project management practices to influence supply chain performance. These results provided solid empirical validation of the conceptual framework and supported the need for a holistic management perspective.

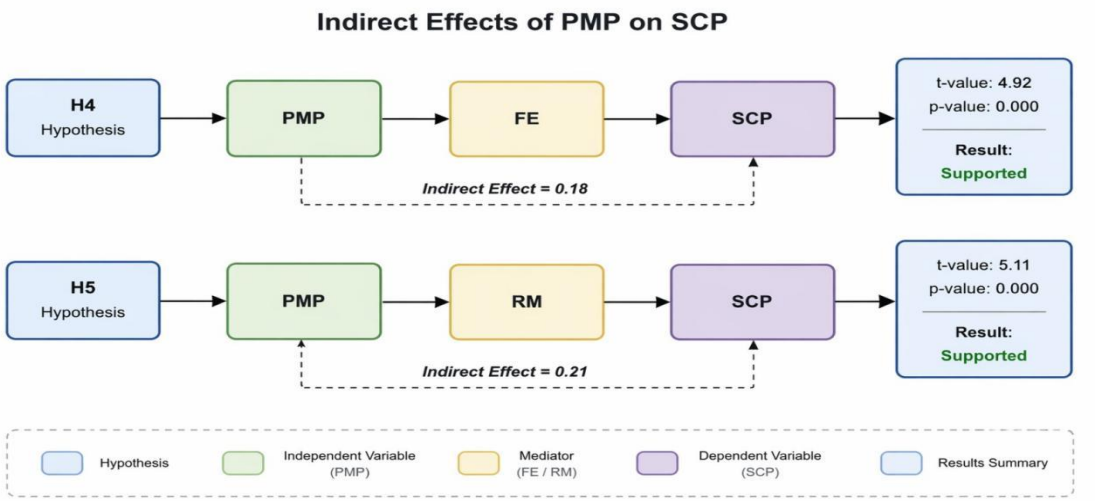

Figure 4. Mediation results.

R-Square

Table 5. Coefficient of determination (R^2).

Dependent Variable	R^2 Value
Financial Efficiency	0.34
Risk Management	0.37
Supply Chain Performance	0.49

The additional information provided by the coefficients of determination (R^2) indicated how well the model explains the dependent variables. The proxy for financial efficiency obtained an R^2 of 0.34, meaning that project management practices explain 34% variation in financial efficiency. This showed a relatively low level of explanatory power; it indicated that planning, budgeting and resource allocation practices were essential tools for enhancing financial efficiency in organizations. For risk management, this resulted in an R^2 0.37 value indicating that 37% of the variance in risk management was explained by project management practices. This discovery emphasized that a good project management practice made it easier for the organization to spot, identify, evaluate and therefore eliminate the risks. The R^2 value was somewhat higher than financial efficiency, which suggested that project management practices were more responsible for risk management capabilities. Supply chain performance showed the highest R^2 value of 0.49, indicating that within a sample, project management practices, financial efficiency and risk management explained 49% of the variation in supply chain performance. This outcome indicated a high amount of explanatory power, meaning that the model reasonably represented the drivers behind supply chain outcomes.

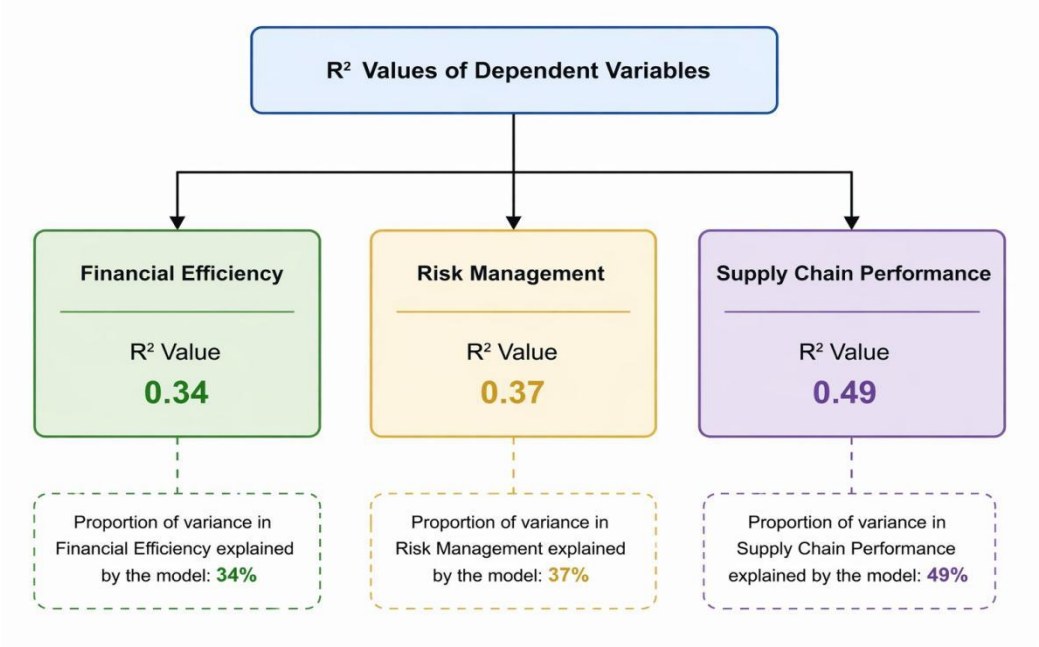

Figure 5. Coefficient of determination (R^2).

Discussion

The results of this study offered solid empirical evidence on the importance of project management practices for improving supply chain performance, especially through financial efficiency and risk management mechanisms. The results indicating a positive, practicable and relevant relationship between project management practices and supply chain performance were aligned with modern literature that highlights the necessity of structured planning, coordination and monitoring in complex operational surroundings. It has been argued by scholars that project-driven approaches to management created greater coordination of

activity surrounding the supply chain and provided better returns on resource deployment, ultimately leading to improved operational performance (Ali et al., 2024; Martins & Pato, 2023). With this observation, the outcomes of this study confirmed that organizations with formalized project management systems achieved more operational efficiency and responsiveness.

It was found that project planning and control improved cost management and resource allocation, hence financial effectiveness. This result was in line with recent empirical studies that emphasized the importance of financial prudence for supply chain efficiency and sustainability (Zhang & Li, 2023; Ahmed et al., 2024). Financial efficiency allowed companies to maximize working capital, minimize operational loss and optimize liquid assets, allowing the supply chain to function uninterrupted. This finding indicated that project management practices were not taken on their own and had financial systems built, which directly led to a performance improvement.

The positive influence of risk management on supply chain performance has informed the need for resilience in contemporary supply chains. The results also showed that the presence of solid project management frameworks enabled organizations to identify and mitigate risks, which in turn positively influenced organizational continuity throughout uncertain environmental conditions. This finding confirmed the arguments of recent literature, which highlighted that implementing risk management strategies in supply chain procedures is one of the key determinants for resilience and stabilization (Ivanov & Dolgui, 2023; Singh et al., 2024). The data confirmed that successful prior risk engagement activities helped decrease disruption and strengthen performance because of more resilient supply chain operations.

Through the joint mediating effects of financial efficiency and risk management, a better insight into the influence of project management practices on supply chain performance was provided. These outcomes also meant that project management provided both economic performance and risk management, which worked in tandem to fortify operational performance. This result validated a case made that integrated management strategies were required to navigate the complexities of global supply chains (Khan et al., 2025; Oliveira et al., 2023). Together, the processes of enhancement implied a chain mediation; organizations tended to achieve better performances when they optimized financial resources and reduced risk in project management practice.

The moderate explanatory strength of the model, especially regarding supply chain performance, indicated that the chosen variables explained important factors shaping how well organizations perform. Results indicated that almost 50 percent of the variability in supply chain performance was accounted for by project management practices, financial effectiveness, and risk management. The finding resonates with previous studies that underscored the multi-faceted nature of supply chain performance and highlighted the necessity of consolidating operations, financial, and risk-enabling relative factors into an all-in-one form (Rahman, 2024; Chen & Liu, 2023).

In addition to conceptual contributions, the study offered crucial managerial implications by demonstrating how project management, financial efficiency and risk management should be tackled through integrated strategies. Results indicate that project governance structures must be closely monitored, financial planning systems improved and effective risk management frameworks put in place to achieve family firm sustainable performance. This view echoed the previous studies on digital transformation and data-driven decision-making models for obtaining more efficient and resilient supply chains (Huang et al., 2023; Verma et al., 2024). Enhanced management practices with modern technologies reinforced organizational competencies and ensured future competitiveness.

The results mirrored the growing need for supply chain agility and flexibility. Organizations had to operate in extremely dynamic environments where uncertainties and disruptions were omnipresent, putting the operations at risk. The findings suggest that faster decision-making and better coordination among supply chain functions on account of project management practices, improve organizational agility. These findings support recent research emphasizing the importance of agile project management and adaptive supply chain strategies to better react to changes in the market and disruptions (Park & Kim, 2024; Santos, 20234).

Conclusions and Recommendations

The purpose of this study was to investigate the effect of project management practices on supply chain performance with the mediating role of financial efficiency and risk management. The results confirmed that project management practices improved supply chain performance through enhanced coordination, planning and execution of operational activities in a structured manner. The findings further showed that financial efficiency played a role in the allocation of resources, cost/price control and liquidity management, which ultimately led to better performance outcomes overall. Risk management contributed significantly to reducing uncertainties and providing operational stability, thus improving the sustainable performance of the supply chain. These variables, when viewed together, suggested that a coupled approach requiring alignment of project management with financial and risk strategies delivered better and more durable performance improvements. Based on the analysis of data, it could be concluded that organizations that have employed a comprehensive and structured set of management practices are more efficient, resilient, and competitive in their supply chain operations.

Based on the relevant conclusion of this study, there are some practical implications for how organizations can enhance their supply chain performance. Organizations can begin by implementing effective project management practices built around uniform frameworks, well-delineated planning procedures, and constant monitoring to facilitate an efficient supply chain function. Second, with the goal of financial efficiency, managers should focus on budget operation, budgeting effectively, cost control mechanisms, and working capital management activities. Third, institutions should create solid risk management systems that emphasize the identification, evaluation, and mitigation of risks to minimize operational disturbances and increase resilience. The usage of Digital technologies like Data Analytics, Artificial Intelligence, and Real-Time Monitoring systems should be promoted to enhance decision-making and operational efficiency. When combined, these steps can improve supply chain performance and drive organizational sustainability in the long run.

Future Directions

Future studies could build upon this work by investigating other factors that may impact supply chain performance, such as technology advancement, digital transformation, and organizational culture. Longitudinal studies can also be performed by researchers to study the changes (either positive or negative) in the project management practices and supply chain performance over a longer period, if so desired; this study will help provide more profound insights into causal relationships. A broader study of the scope with different industries and geographic areas will help to generalize its findings. The latter can also be addressed in future studies that mix methods by including both quantitative and qualitative data to better understand the relationships among variables. It can also explore the impact of Emerging Technologies like Blockchain, Big Data Analytics, and Artificial Intelligence in improving Financial Efficiency & Risk Management. Such directions may help to generate better and more comprehensive models for managing supply chain performance in even the most complex and dynamic environments.

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