
Research Article

Analysis on Supply Chain Challenges in Steven Construction & Supply

Sheina Agao Bajaro

University of Saint Anthony, Philippines

Article history:

Submission June 2026

Revised July 2026

Accepted August 2026

**Corresponding author:*

E-mail:

sheinabajaro@gmail.com

ABSTRACT

This study determined the supply chain challenges across the areas of customer, cost, communication, coordination, collaboration, control and continuous improvement and assessed the effects of these challenges on operational performance and determined whether a significant relationship exists between them. The study utilized a descriptive research design and employed a survey questionnaire as the primary data-gathering instrument. The respondents consisted of employees of Steven Construction and Supply. Statistical tools such as frequency counts, weighted means, rankings, and Spearman's Rank Correlation were used to analyze the collected data. The findings revealed that the company highly encountered supply chain challenges across all dimensions. Likewise, the effects of these challenges on operational performance were evident across various aspects of the organization's operations. The results further indicated that cost/pricing-related concerns were among the most prominent challenges the company faced. In addition, communication, coordination, collaboration, control, and continuous improvement were identified as important factors influencing operational performance. The test of the relationship showed that supply chain challenges are significantly associated with operational performance. This implies that effective management of supply chain challenges improves operational outcomes and overall organizational efficiency. Based on the findings, an operational enhancement plan was proposed to address the identified supply chain challenges and strengthen the company's operational performance. In conclusion, the study highlighted the importance of effectively managing supply chain challenges to maintain and improve the operational performance of Steven Construction and Supply. While various challenges were identified across different supply chain dimensions, the findings emphasized the need for continuous improvement initiatives and strategic interventions to address operational concerns. The proposed operational enhancement plan, developed from the study's findings, provides practical guidance to strengthen supply chain management practices, improve organizational efficiency, and support sustainable operational performance.

How to cite:

Bajaro, S. A. (2026). Analysis on Supply Chain Challenges in Steven Construction & Supply. *The Advanced Social Science In Research Journal*. 1(4), 969 – 985. doi: 10.11594/assrj.01.04.11

Keywords: *Construction, Operational Performance, Supply Chain Challenges, Supply Chain Management*

Introduction

The construction industry remains a vital pillar of economic growth and infrastructure development worldwide. Its operations rely heavily on effective supply chain management to ensure the timely availability of materials, equipment, and services required for project completion. As construction projects grow increasingly complex, organizations frequently face challenges related to procurement, logistics, supplier coordination, rising material costs, and resource availability. These concerns emphasize the importance of establishing efficient, resilient supply chain systems that can sustain operational performance and organizational competitiveness.

The importance of efficient supply chain management is also recognized in global development initiatives. This study supports the objectives of the United Nations Sustainable Development Goal (SDG) 8: Decent Work and Economic Growth, which promotes sustained economic growth, productivity, and efficient business operations. Likewise, it aligns with SDG 9: Industry, Innovation and Infrastructure, which promotes resilient infrastructure, sustainable industrialization, and innovation.

By addressing supply chain challenges and improving operational efficiency, organizations can help achieve these global goals by enhancing productivity, fostering innovation, and adopting sustainable business practices. In the Philippines, the construction sector plays a crucial role in national development through various infrastructure programs and projects. The industry significantly contributes to employment generation and economic activity. However, local construction firms persistently encounter supply chain bottlenecks, including fluctuating material prices, transportation delays, supplier reliability issues, inventory management challenges, and regulatory requirements. These disruptions frequently jeopardize project schedules, operational costs, and overall organizational performance.

The significance of efficient business operations is further supported by Republic Act No. 11032, otherwise known as the Ease of Doing Business and Efficient Government Service

Delivery Act of 2018, which promotes efficiency, accountability, and streamlined processes among organizations. The principles embodied in this law highlight the importance of improving operational systems and reducing delays that may hinder organizational productivity. In construction firms, effective supply chain management helps achieve these objectives by ensuring the smooth flow of resources and business processes.

As an active participant in this industry, Steven Construction and Supply faces various supply chain management challenges that affect its operational efficiency. Like many of its peers, the company relies on effective procurement practices, logistics coordination, inventory management, and supplier relationships to ensure the successful completion of projects. The increasing complexity of construction operations further underscores the need for adaptable, efficient supply chain strategies that can mitigate both internal and external disruptions.

Through direct observation within Steven Construction and Supply, the researcher identified several supply chain management challenges affecting operational efficiency and overall organizational performance. Concerns related to procurement delays, communication gaps, coordination difficulties, and resource management issues were evident in daily operations. These observations prompted an examination of the company's existing supply chain conditions to determine how these challenges influence operational efficiency. Understanding these concerns will provide valuable insights for improving organizational processes and strengthening supply chain practices.

With the above issues, the researcher decided to conduct this study which aims to assess the supply chain challenges encountered by Steven Construction and Supply and determine their effects on operational efficiency. Specifically, it seeks to identify the company's supply chain challenges, evaluate its operational efficiency, determine the relationship between these two variables, and propose recommendations to improve supply chain

management practices and overall organizational performance.

To provide a deeper understanding of this dynamic, the study is guided by relevant theories that explain how organizational constraints and supply chain practices influence overall business performance. With optimism, the result of this study will help enhance and sustain the operational efficiency of Steven Construction and Supply.

Materials and Methods

Research Design

This study utilized a descriptive-correlation research design. The descriptive research design was used to collect and analyze data from respondents to determine and describe the supply chain challenges experienced by Steven Construction and Supply. Meanwhile, the correlation research design was utilized to test if there's a significant relationship between the challenges and its effect on the operational performance.

Respondents

A total of 25 respondents participated in the study, selected from approximately 50 regular employees of Steven Construction and Supply. The respondents were chosen based on specific criteria, including active employment status, direct involvement in company operations, and willingness to participate during the data collection period.

Data Sources/Research Instrument

The study made use of a variety of research strategies, including library procedures, informal interviews, and internet searches. The questionnaire was divided into three sections. The first section focused on the respondents' demographic profile, including relevant work-related characteristics. The second section identified the supply chain management challenges faced by Steven Construction and Supply in procurement, inventory management, logistics, and supplier-related issues. The third section assessed the effects of supply chain management challenges on project performance, including project completion, operational efficiency, and overall implementation. The questionnaire employed a Likert Scale to

measure respondents' perceptions and experiences regarding the variables included in the study.

Data Gathering Procedures

The dean of the Graduate Studies and Research and the researcher's thesis adviser evaluated the suggested questionnaire. After the suggestions for improvement have been taken into account, final copies were ready for a dry run. The researcher conducted a dry run or pilot testing with ten (10) employees from other construction company. The trial run identified several issues such as unclear wording, vague instructions and repetitive questions. A formal request to conduct the study was sought from the owner of Steven Construction and Supply to allow the researcher to conduct the study among the target respondents. The researcher personally distributed the questionnaires to the respondents who are involved in the present study. The gathered data were tabulated, organized, analysed and interpreted. To protect intellectual property rights, all data acquired was kept strictly confidential.

Data Analysis

In quantifying the responses, a Likert scale with corresponding range of means and verbal interpretations was utilized and the data collected were encoded using Microsoft Excel and Jamovi for analysis. Weighted Mean was used to determine the degree of Supply Chain Challenges and its effect on the on the company's operational performance. According to Gravetter and Wallnau (2017) the weighted mean is an appropriate statistical tool for determining the average response or participants using Likert scale to allow researchers to identify the overall tendency of respondent's perceptions. Spearman Rank Correlation Coefficient was used to determine the significant relationship between the supply chain challenges and its effect on the operational performance of the company. Spearman (1904) introduced Spearman's rho as a nonparametric measure used to determine the strength of the relationship between two variables.

Compliance with Ethical Standards

The study was conducted in accordance to the ethical standards for research involving human participants. Before collecting the data, consent was secured from all respondents after clearly explaining the purpose of the study. Participation in the study was voluntary and informed of their right to decline from the

study without any consequences. Furthermore, the confidentiality of the participants was strictly maintained to ensure personal information and responses were treated with utmost privacy and solely for research purposed only.

Result and Discussion

Table 1

Degree of Challenges Encountered along Customer

Indicators	WM	VI	Rank
1. Delays in customer approval	4.00	HE	8
2. Frequent changes in customer requirements	4.24	VHE	1
3. Unclear project specifications from customers	4.04	HE	7
4. Unrealistic customer expectations	4.20	HE	2
5. Late confirmations of project requirements	4.08	HE	6
6. Difficulty in managing multiple clients' demands	4.12	HE	4.5
7. High volume of customer complaints	4.12	HE	4.5
8. Poor communication with customers	4.16	HE	3
Average Weighted Mean	4.12	HE	

Legend: 4.21-5.00 Very Highly Encountered (Vie) 3.41-4.20 Highly Encountered (He) 2.61-3.4 Moderately Encountered (Me) 1.81-2.60 Slightly Encountered (Se) 1.00-1.80 Not Encountered at All (Nea)

The table presents the extent of the challenges Steven Construction and Supply faces regarding customer factors. The highest-ranked indicator, with a weighted mean (WM) of 4.24, is Frequent Changes in Customer Requirements. This finding suggests that customer demand variability is a prevalent challenge the company faces, significantly impacting project schedules, procurement processes, and resource allocation.

Table 1 presents the degree of challenges Steven Construction and Supply encountered related to customer factors. The overall weighted mean of 4.12, interpreted as Highly Encountered, indicates that customer-related issues are frequently encountered across the company's supply chain operations. Among the indicators, Frequent Changes in Customer Requirements had the highest weighted mean of 4.24, indicating Very Highly Encountered. This

was followed by Unrealistic Customer Expectations (4.20), Poor Communication with Customers (4.16), and both Difficulty in Managing Multiple Clients' Demands and High Volume of Customer Complaints (4.12).

The findings support the study of Mentzer et al. (2001), who emphasized that customer satisfaction is a fundamental objective of supply chain management. The authors explained that understanding customer requirements and maintaining effective customer relationships contribute significantly to organizational performance and supply chain effectiveness. The study further highlighted that customer-related concerns and communication issues may negatively affect service quality and operational responsiveness. These findings affirm that customer-related challenges directly influence the efficiency and effectiveness of supply chain operations.

Table 2*Degree of Challenges Encountered along Cost/Pricing*

Indicators	WM	VI	Rank
1. Fluctuation in material prices	4.56	VHE	1.5
2. High transportation costs	4.32	VHE	8
3. Unexpected procurement costs	4.44	VHE	4.5
4. Frequent changes in supplier pricing	4.36	VHE	7
5. Inaccurate cost estimation	4.52	VHE	3
6. Delays in client payments	4.40	VHE	6
7. Difficulty in negotiating supplier prices	4.44	VHE	4.5
8. Sudden increases in construction material costs	4.56	VHE	1.5
Average Weighted Mean	4.45	VHE	

The table shows that Fluctuation in Material Prices and Sudden Increases in Construction Material Costs obtained the highest weighted mean of 4.56, interpreted as Very Highly Encountered and ranked 1.5. This was followed by Inaccurate Cost Estimation (WM: 4.52), ranked third. Meanwhile, Unexpected Procurement Costs and Difficulty in Negotiating Supplier Prices both had weighted means of 4.44, while Delays in Client Payments had a weighted mean of 4.40. The indicators Frequent Changes in Supplier Pricing and High Transportation Costs received weighted means of 4.36 and 4.32, respectively. All indicators were interpreted as Very Highly Encountered.

Overall, the Cost/Pricing dimension had an Average Weighted Mean of 4.45, indicating Very Highly Encountered. This implies that financial and pricing-related issues remain a major concern within the company's supply chain operations. The results suggest that managing

costs effectively is essential to maintaining project efficiency, controlling expenditures, and ensuring the successful completion of construction projects.

The findings are consistent with the study by Chopra and Meindl (2019), which emphasized that effective cost management is essential for achieving supply chain efficiency and organizational profitability. The authors explained that procurement costs, transportation expenses, and pricing decisions directly affect operational performance and resource utilization. They further noted that cost fluctuations and inefficient pricing strategies may lead to higher operational expenses and reduced organizational effectiveness. These findings suggest that cost-related challenges significantly influence the overall performance of supply chain operations.

Table 3*Degree of Challenges Encountered along Communication*

Indicators	WM	VI	Rank
1. Miscommunication between departments	3.96	HE	6.5
2. Lack of clear communication with suppliers	4.08	HE	4
3. Delayed information sharing	4.04	HE	5
4. Poor communication across project teams	4.20	HE	1.5
5. Incomplete documentations	3.92	HE	8
6. Communication gaps in operations	4.16	HE	3
7. Lack of real-time communication tools	3.96	HE	6.5
8. Ineffective communications between site and office staff	4.20	HE	1.5
Average Weighted Mean	4.07	HE	

The table shows that Poor Communication Across Project Teams and Ineffective

Communication Between Site and Office Staff obtained the highest weighted mean of 4.20,

interpreted as Highly Encountered and ranked 1.5. This was followed by Communication Gaps in Operations with a weighted mean of 4.16, ranked third. Lack of Clear Communication with Suppliers garnered a weighted mean of 4.08, ranked fourth, while Delayed Information Sharing obtained a weighted mean of 4.04, ranked fifth. Meanwhile, Miscommunication Between Departments and Lack of Real-Time Communication Tools both recorded a weighted mean of 3.96, ranked 6.5. Incomplete Documentation received the lowest weighted mean of 3.92, ranked eighth. Despite the differences in ranking, all indicators were interpreted as Highly Encountered.

Overall, the Communication dimension had an Average Weighted Mean of 4.07, indicating Highly Encountered. This implies that communication-related challenges are evident within the organization and may affect the

effectiveness of supply chain coordination and operational performance. Addressing these concerns can lead to better collaboration, faster information sharing, and improved decision-making across the organization's functions.

The findings support the study by Gunasekaran et al. (2017), which highlighted that effective communication and information sharing are critical to supply chain success. The authors explained that timely and accurate communication improves coordination, supports decision-making, and enhances operational efficiency. They further emphasized that communication gaps can lead to delays, misunderstandings, and reduced productivity. These findings affirm that communication-related challenges play a vital role in determining supply chain performance.

Table 4
Degree of Challenges Encountered along Coordination

Indicators	WM	VI	Rank
1. Poor coordination between departments	4.00	HE	3
2. Lack of coordination with suppliers	3.92	HE	5
3. Difficulty in aligning procurement and project schedules	3.96	HE	4
4. Inconsistent coordination among project teams	4.08	HE	1
5. Weak coordination between logistics and site operations	3.80	HE	8
6. Delays in coordinating supplier deliveries	4.04	HE	2
7. Poor coordination between warehouse and project teams	3.88	HE	6
8. Ineffective coordination across departments	3.84	HE	7
Average Weighted Mean	3.94	HE	

The table shows that Inconsistent Coordination Among Project Teams had the highest weighted mean of 4.08, indicating it is Highly Encountered and ranked first. This was followed by Delays in Coordinating Supplier Deliveries, with a weighted mean of 4.04, ranked second. Poor Coordination Between Departments garnered a weighted mean of 4.00, ranked third, while Difficulty in Aligning Procurement and Project Schedules obtained a weighted mean of 3.96, ranked fourth. Meanwhile, Lack of Coordination with Suppliers recorded a weighted mean of 3.92, ranked fifth, followed by Poor Coordination Between Warehouse and Project Teams with a weighted mean of 3.88, ranked sixth. Ineffective Coordination Across Departments obtained a

weighted mean of 3.84, ranked seventh, while Weak Coordination Between Logistics and Site Operations received the lowest weighted mean of 3.80, ranked eighth. Despite the differences in ranking, all indicators were interpreted as Highly Encountered.

The findings are supported by the study by Lambert and Cooper (2000), which emphasized that coordination among supply chain members is essential for achieving organizational objectives. The authors explained that effective coordination facilitates the smooth flow of materials, information, and resources across different organizational functions. They further noted that poor coordination may result in delays, inefficiencies, and operational disruptions. These findings indicate that

coordination is a critical factor influencing supply chain effectiveness and organizational performance.

Table 5
Degree of Challenges Encountered along Collaboration

Indicators	WM	VI	Rank
1. Limited collaboration between departments	3.92	HE	2.5
2. Lack of cooperation with suppliers	4.00	HE	1
3. Weak teamwork among staff	3.76	HE	6
4. Limited collaboration between project teams	3.64	HE	8
5. Poor working relationships with suppliers	3.68	HE	7
6. Lack of collaboration in problem-solving	3.92	HE	2.5
7. Limited information sharing between departments	3.80	HE	5
8. Poor collaboration among stakeholders	3.88	HE	4
Average Weighted Mean	3.83	HE	

The table presents the degree of challenges encountered by Steven Construction and Supply along the Collaboration dimension. The highest-ranked indicator is Lack of Cooperation with Suppliers, with a weighted mean of 4.00, interpreted as Highly Encountered.

This indicates that the organization experiences collaboration-related challenges, particularly in maintaining cooperative relationships and effective partnerships with suppliers and other stakeholders. The table shows that Lack of Cooperation with Suppliers had the highest weighted mean of 4.00, indicating it is Highly Encountered and ranked first. This was followed by Limited Collaboration Between Departments and Lack of Collaboration in Problem-Solving, both of which obtained a weighted mean of 3.92 and ranked 2.5. Poor Collaboration Among Stakeholders had a weighted mean of 3.88, ranking fourth, while Limited Information Sharing Between Departments had a weighted mean of 3.80, ranking fifth. Meanwhile, Weak Teamwork Among Staff

recorded a weighted mean of 3.76, ranking sixth, followed by Poor Working Relationships with Suppliers, with a weighted mean of 3.68, ranking seventh. Limited Collaboration Between Project Teams received the lowest weighted mean of 3.64, ranked eighth. Despite the differences in ranking, all indicators were interpreted as Highly Encountered.

The findings support the study of Simatupang and Sridharan (2002), who explained that collaboration among supply chain partners enhances organizational performance through information sharing, joint decision-making, and cooperative problem-solving. The authors emphasized that strong collaboration contributes to improved efficiency, stronger stakeholder relationships, and increased supply chain responsiveness. These findings suggest that collaborative practices are essential in addressing operational challenges and improving supply chain performance.

Table 6
Degree of Challenges Encountered along Control

Indicators	WM	VI	Rank
1. Lack of proper inventory monitoring	3.88	HE	1
2. Weak material tracking systems	3.60	HE	6
3. Inadequate supervision	3.80	HE	2
4. Poor quality control practices	3.72	HE	4
5. Lack of standardized procedures	3.52	HE	7
6. Ineffective monitoring of supplier performance	3.76	HE	3
7. Weak internal control systems	3.48	HE	8

Indicators	WM	VI	Rank
8. Limited auditing and monitoring	3.64	HE	5
Average Weighted Mean	3.68	HE	

The table presents the degree of challenges encountered by Steven Construction and Supply along the Control dimension. The highest-ranked indicator is Lack of Proper Inventory Monitoring, with a weighted mean of 3.88, indicating Highly Encountered. This indicates that the organization experiences control-related challenges, particularly in monitoring inventory, supervising operations, and ensuring compliance with established procedures.

Ineffective Monitoring of Supplier Performance had a weighted mean of 3.76, ranking third, while Poor Quality Control Practices had a weighted mean of 3.72, ranking fourth. Limited Auditing and Monitoring recorded a weighted mean of 3.64, ranking fifth, followed by Weak Material Tracking Systems, with a weighted mean of 3.60, ranking sixth. Lack of Standardized Procedures obtained a weighted

mean of 3.52, ranked seventh, while Weak Internal Control Systems received the lowest weighted mean of 3.48, ranked eighth. Despite the differences in ranking, all indicators were interpreted as Highly Encountered.

The findings are consistent with the Theory of Constraints proposed by Goldratt (1990), which emphasizes the identification and management of operational bottlenecks that hinder organizational performance. The author explained that effective control mechanisms enable organizations to monitor operations, address constraints, and improve overall efficiency. Furthermore, inadequate monitoring and weak control systems may contribute to operational inefficiencies and performance issues. These findings indicate that effective control practices are necessary to ensure efficient supply chain operations.

Table 7

Degree of Challenges Encountered along Continuous Improvement

Indicators	WM	VI	Rank
1. Lack of regular evaluation of supply chain processes	3.84	HE	7
2. Limited training programs for employees	4.04	HE	2
3. Failure to adopt new technologies	3.80	HE	8
4. Lack of feedback mechanisms	3.96	HE	4
5. Resistance to change	3.92	HE	5
6. Limited benchmarking practices	4.00	HE	3
7. Lack of management support for improvement initiatives	4.12	HE	1
8. Absence of continuous monitoring systems	3.88	HE	6
Average Weighted Mean	3.95	HE	

The table shows that Lack of Management Support for Improvement Initiatives had the highest weighted mean of 4.12, indicating it was Highly Encountered and ranked first. This was followed by Limited Training Programs for Employees with a weighted mean of 4.04, ranked second. Limited Benchmarking Practices garnered a weighted mean of 4.00, ranked third, while Lack of Feedback Mechanisms obtained a weighted mean of 3.96, ranked fourth. Meanwhile, Resistance to Change recorded a weighted mean of 3.92, ranking fifth, followed by Absence of Continuous Monitoring Systems,

with a weighted mean of 3.88, ranking sixth. Lack of Regular Evaluation of Supply Chain Processes obtained a weighted mean of 3.84, ranked seventh, while Failure to Adopt New Technologies received the lowest weighted mean of 3.80, ranked eighth. Despite the differences in ranking, all indicators were interpreted as Highly Encountered.

Overall, the Continuous Improvement dimension had an Average Weighted Mean of 3.95, indicating it is Highly Encountered. This implies that challenges related to continuous improvement are present within the

organization and may affect its ability to sustain operational excellence and long-term development. Strengthening management support, providing training opportunities, and implementing effective monitoring and feedback systems may contribute to continuous organizational improvement.

According to Deming (1986), who emphasized that continuous improvement is essential for achieving long-term organizational success. The author explained that regular evaluation and enhancement of processes contribute to improved quality, efficiency, and productivity. Deming further noted that organizations that continuously seek improvement opportunities are better able to adapt to changing business

environments and maintain competitiveness. These findings suggest that continuous improvement practices play a significant role in enhancing supply chain performance and operational effectiveness.

Summary of the Degree of Challenges along the 7Cs of Supply Chain Management

The summary table shows that Cost/Pricing had the highest average weighted mean of 4.45, interpreted as Very Highly Encountered, while Control had the lowest average weighted mean of 3.68, interpreted as Highly Encountered.

Table 8

Summary Table of Results in Degree of Challenges

Dimension	Average WM	Interpretation	Rank
Customer	4.12	HE	2
Cost/Pricing	4.45	VHE	1
Communication	4.07	HE	3
Coordination	3.94	HE	5
Collaboration	3.83	HE	6
Control	3.68	HE	7
Continuous Improvement	3.95	HE	4
AWM	4.01	Highly Encountered	

The findings signify that financial and pricing-related concerns are the most common supply chain challenges experienced by Steven Construction and Supply. It also shows that fluctuating material prices, unexpected procurement expenses, and increasing construction costs directly affect budgeting, profitability, and project implementation.

This implies that cost management is very important in maintaining the efficiency and stability of supply chain operations. If it's not properly managed, pricing uncertainties may lead to budget overruns, delays in procurement activities, and reduced organizational performance.

The study of Wamba et al. (2020) stresses that effective management of cost and supply chain is very important to organizational efficiency, profitability, and operational performance. The authors explained that organizations that effectively manage procurement costs and operational expenses are better positioned to achieve improved business outcomes and maintain competitive advantage.

Effects of the Supply Chain challenges on the operational performance of Steven Construction & Supply

Table 9

Effects of the Supply Chain challenges on the operational performance along Customer

Indicators	WM	VI	Rank
1. Customer-related challenges affect project completion time	4.04	GE	3
2. Customer issues affect service quality	4.08	GE	2
3. Changes in customer requirements affect operational efficiency	4.00	GE	4.5
4. Customer delays affect resource allocation	3.88	GE	7
5. Customer-related challenges affect project scheduling	4.12	GE	1
6. Customer issues affect employee workload	4.00	GE	4.5
7. Customer-related problems affect the project's success rate	3.96	GE	6
8. Customer challenges affect overall client satisfaction	3.84	GE	8
Average Weighted Mean	3.99	GE	

Legend: 4.21 – 5.00 Very Great Effect (VGE) 3.41 – 4.20 Great Effect (GE) 2.61 – 3.40 Moderate Effect (ME) 1.81 – 2.60 Less Effect (LE) 1.00 – 1.80 No Effect (NE)

The Table 9 shows that Customer-Related Challenges Affect Project Scheduling had the highest weighted mean of 4.12, indicating a Great Effect and ranking first. This was followed by Customer Issues Affecting Service Quality, with a weighted mean of 4.08 and ranked second. Customer-Related Challenges Affect Project Completion Time garnered a weighted mean of 4.04, ranked third. Meanwhile, Changes in Customer Requirements Affect Operational Efficiency and Customer Issues Affect Employee Workload both obtained a weighted mean of 4.00, ranked 4.5. Customer-Related Problems Affect Project Success Rate recorded a weighted mean of 3.96, ranking sixth, while Customer Delays Affect Resource Allocation recorded a weighted mean of 3.88, ranking seventh. Customer Challenges Affect Overall Client Satisfaction received the lowest weighted mean of 3.84, ranked eighth. Despite differences in ranking, all indicators were interpreted as having a Great Effect.

Overall, the Customer dimension had an Average Weighted Mean of 3.99, indicating a Great Effect. This implies that customer-related supply chain challenges moderately affect the company's operational performance. Addressing customer concerns promptly, improving communication with clients, and establishing clear project requirements may help minimize disruptions and improve overall operational effectiveness.

The findings support the study of Kotler and Keller (2016), who emphasized that customer satisfaction and customer relationship management are essential factors affecting organizational performance. The authors explained that organizations that effectively address customer needs and expectations are more likely to achieve improved service quality, customer loyalty, and operational effectiveness. These findings suggest that customer-related factors significantly influence operational performance.

Table 10

Effects of the Supply Chain challenges on the operational performance along Cost/Pricing

Indicators	WM	VI	Rank
1. Cost fluctuations affect project profitability.	4.36	VGE	5
2. High operational costs affect financial stability.	4.48	VGE	1.5
3. Pricing challenges affect budgeting accuracy.	4.04	GE	8
4. Supplier price increases affect project planning.	4.08	GE	7
5. Cost issues affect the company's cash flow management.	4.48	VGE	1.5
6. Pricing challenges affect financial decision-making.	4.44	VGE	3.5
7. Cost overruns affect project completion.	4.44	VGE	3.5
8. Pricing instability affects the company's competitiveness.	4.20	GE	6
Average Weighted Mean	4.31	VGE	

Cost Fluctuations Affect Project Profitability garnered a weighted mean of 4.36, ranked fifth. Meanwhile, Pricing Instability Affects the Company's Competitiveness obtained a weighted mean of 4.20, ranked sixth, followed by Supplier Price Increases Affect Project Planning with 4.08, ranked seventh, and Pricing Challenges Affect Budgeting Accuracy with 4.04, ranked eighth.

Overall, the Cost/Pricing dimension had an Average Weighted Mean of 4.31, indicating a Very Great Effect. This implies that cost-related supply chain challenges significantly affect the company's operational performance. Addressing issues related to pricing

fluctuations, operational costs, and financial management can help improve organizational stability, project efficiency, and overall business performance.

The findings support the study of Heizer et al. (2020), who emphasized that effective cost management contributes to improved operational efficiency and organizational productivity. The authors explained that controlling operational expenses and efficiently allocating resources enable organizations to enhance performance while maintaining profitability. These findings indicate that cost-related factors directly influence operational performance.

Table 11

Effects of the Supply Chain challenges on the operational performance along Communication

Indicators	WM	VI	Rank
1. Communication challenges affect operational coordination.	4.12	GE	2.5
2. Miscommunication causes project delays.	4.00	GE	6
3. Poor communication affects productivity levels.	4.12	GE	2.5
4. Communication gaps affect supplier relationships.	4.16	GE	1
5. Delayed information sharing affects response time.	3.96	GE	7
6. Communication issues increase operational errors.	3.80	GE	8
7. Poor communication affects teamwork.	4.04	GE	5
8. Communication problems affect project execution.	4.08	GE	4
Average Weighted Mean	4.04	GE	

The table shows that Communication Gaps Affect Supplier Relationships had the highest weighted mean of 4.16, indicating a Great Effect and ranking first. This was followed by Communication Challenges Affect Operational Coordination and Poor Communication Affects Productivity Levels, both with a weighted mean of 4.12 and ranked 2.5. Communication Problems Affect Project Execution garnered a weighted mean of 4.08, ranked fourth, while Poor Communication Affects Teamwork obtained a weighted mean of 4.04, ranked fifth.

Meanwhile, Miscommunication Causes Project Delays recorded a weighted mean of 4.00, ranked sixth, followed by Delayed Information Sharing Affects Response Time, with a weighted mean of 3.96, ranked seventh. The lowest-ranked indicator was Communication Issues Increase Operational Errors, with a weighted mean of 3.80 and a rank of eighth.

Overall, the Communication dimension had an Average Weighted Mean of 4.04,

indicating a Great Effect. This implies that communication-related supply chain challenges considerably affect the operational performance of Steven Construction and Supply. Strengthening communication channels, improving information-sharing processes, and enhancing coordination among departments, suppliers, and project teams may contribute to more efficient operations and improved organizational performance.

The findings are consistent with Daft's (2021) study, which emphasized that effective communication is essential for achieving organizational efficiency and coordination. The author explained that timely and accurate information sharing improves decision-making, reduces misunderstandings, and enhances overall operational performance. These findings affirm the importance of communication in organizational effectiveness.

Table 12*Effects of the Supply Chain challenges on the operational performance along Coordination*

Indicators	WM	VI	Rank
1. Coordination problems affect project timelines.	3.96	GE	5
2. Lack of coordination affects material delivery schedules.	4.04	GE	2.5
3. Coordination challenges affect workflow efficiency.	3.92	GE	7
4. Poor coordination affects resource utilization.	3.84	GE	8
5. Coordination issues affect collaboration among teams.	3.88	GE	6
6. Lack of coordination affects project implementation.	4.00	GE	4
7. Coordination problems affect operational productivity.	4.04	GE	2.5
8. Weak coordination affects overall project performance.	4.08	GE	1
Average Weighted Mean	3.97	GE	

The table shows that Weak Coordination Affects Overall Project Performance had the highest weighted mean of 4.08, indicating a Great Effect and ranking first. This was followed by Lack of Coordination Affects Material Delivery Schedules and Coordination Problems Affect Operational Productivity, both with a weighted mean of 4.04 and ranked 2.5. Lack of Coordination Affects Project Implementation garnered a weighted mean of 4.00, ranked fourth, while Coordination Problems Affect Project Timelines obtained a weighted mean of 3.96, ranked fifth.

Meanwhile, Coordination Issues Affect Collaboration Among Teams recorded a weighted mean of 3.88, ranked sixth, followed by Coordination Challenges Affect Workflow Efficiency, with a weighted mean of 3.92, ranked seventh. The lowest-ranked indicator was Poor Coordination Affects Resource Utilization, with a weighted mean of 3.84 and a rank

of 8. Despite the ranking differences, all indicators were interpreted as having a Great Effect.

Overall, the Coordination dimension had an Average Weighted Mean of 3.97, indicating a Great Effect. This implies that coordination-related challenges significantly affect the company's operational performance. Strengthening coordination mechanisms, improving inter-departmental collaboration, and enhancing project scheduling practices may improve operational efficiency and project outcomes.

The findings support the study by Robbins and Coulter (2021), which emphasized that coordination is necessary to ensure that organizational activities and resources are aligned with common objectives. The authors explained that effective coordination improves workflow efficiency, minimizes operational disruptions, and enhances overall performance. These findings suggest that coordination plays a vital role in operational success.

Table 13*Effects of the Supply Chain challenges on the operational performance along Collaboration*

Indicators	WM	VI	Rank
1. Lack of collaboration affects teamwork and productivity.	3.80	GE	4.5
2. Poor collaboration with suppliers affects material availability.	3.80	GE	4.5
3. Collaboration issues affect operational efficiency.	4.00	GE	2
4. Weak collaboration affects project decision-making.	3.64	GE	7.5
5. Limited collaboration affects project implementation.	4.04	GE	1
6. Collaboration problems affect workplace relationships.	3.64	GE	7.5
7. Poor collaboration affects project coordination.	3.68	GE	6
8. Collaboration challenges affect overall organizational performance.	3.88	GE	3
Average Weighted Mean	3.81	GE	

The table shows that Limited Collaboration Affects Project Implementation had the highest weighted mean of 4.04, indicating a Great Effect and ranking first. This was followed by Collaboration Issues Affect Operational Efficiency, with a weighted mean of 4.00 and ranked second. Collaboration Challenges Affect Overall Organizational Performance garnered a weighted mean of 3.88, ranked third. Meanwhile, Lack of Collaboration Affects Teamwork and Productivity, and Poor Collaboration with Suppliers Affects Material Availability both obtained a weighted mean of 3.80 and ranked 4.5. Poor Collaboration Affects Project Coordination recorded a weighted mean of 3.68, ranked sixth. The indicators Weak Collaboration Affects Project Decision-Making and Collaboration Problems Affect Workplace Relationships both obtained the lowest weighted mean of 3.64 and ranked 7.5.

Overall, the Collaboration dimension had an Average Weighted Mean of 3.81, indicating a Great Effect. This implies that collaboration-related supply chain challenges significantly affect Steven Construction and Supply's operational performance. Strengthening teamwork, improving supplier relationships, encouraging knowledge sharing, and promoting collaborative practices across departments may enhance project implementation and organizational effectiveness.

The findings support the study of Johnson et al. (2020), who emphasized that collaboration among organizational members and supply chain partners contributes to improved performance and operational effectiveness. The authors explained that collaborative relationships facilitate information sharing, problem-solving, and resource optimization. These findings indicate that collaboration positively influences operational performance.

Table 14

Effects of the Supply Chain challenges on the operational performance along Control

Indicators	WM	VI	Rank
1. Weak control systems affect inventory availability.	3.56	GE	6
2. Lack of monitoring affects project completion.	3.88	GE	1
3. Poor quality control increases operational costs.	3.72	GE	2.5
4. Weak supervision affects employee productivity.	3.60	GE	5
5. Control issues affect compliance with project standards.	3.52	GE	7
6. Inadequate monitoring affects operational efficiency.	3.72	GE	2.5
7. Weak internal control affects supply chain reliability.	3.64	GE	4
8. Control problems affect project outcomes.	3.48	GE	8
Average Weighted Mean	3.64	GE	

The table shows that "Lack of Monitoring Affects Project Completion" had the highest weighted mean of 3.88, indicating a Great Effect and ranking first. This was followed by Poor Quality Control Increases Operational Costs and Inadequate Monitoring Affects Operational Efficiency, both with a weighted mean of 3.72 and ranked 2.5. Weak Internal Control Affects Supply Chain Reliability garnered a weighted mean of 3.64, ranked fourth.

Meanwhile, Weak Supervision Affects Employee Productivity obtained a weighted mean of 3.60, ranked fifth, followed by Weak Control Systems Affect Inventory Availability with a weighted mean of 3.56, ranked sixth. Control

Issues Affect Compliance with Project Standards recorded a weighted mean of 3.52, ranked seventh, while Control Problems Affect Project Outcomes obtained the lowest weighted mean of 3.48 and ranked eighth.

Overall, the Control dimension had an Average Weighted Mean of 3.64, indicating a Great Effect. This implies that control-related supply chain challenges significantly affect Steven Construction and Supply's operational performance. Strengthening monitoring mechanisms, improving quality control practices, enhancing supervision, and implementing effective internal control systems may contribute to

more efficient operations and improved project outcomes.

The findings are consistent with the study of Weihrich et al. (2020), who emphasized that control is a fundamental management function that ensures organizational activities are aligned with established standards and

objectives. The authors explained that effective monitoring and evaluation help organizations identify deviations and implement corrective actions that improve performance. These findings suggest that control mechanisms are essential to operational effectiveness.

Table 15

Effects of the Supply Chain challenges on the operational performance along Continuous Improvement

Indicators	WM	VI	Rank
1. Lack of improvement initiatives affects operational growth.	3.92	GE	5
2. Limited innovation affects competitiveness.	3.96	GE	4
3. Weak evaluation systems affect performance improvement.	4.00	GE	2.5
4. Lack of training affects employee productivity.	4.04	GE	1
5. Failure to adopt new systems affects efficiency.	3.88	GE	6
6. Weak feedback mechanisms affect organizational learning.	3.80	GE	8
7. Lack of improvement programs affects operational performance.	4.00	GE	2.5
8. Limited improvement strategies affect long-term sustainability.	3.84	GE	7
Average Weighted Mean	3.93	ME	

The table shows that "Lack of Training Affects Employee Productivity" had the highest weighted mean of 4.04, indicating a Great Effect and ranking first. This was followed by Weak Evaluation Systems Affect Performance Improvement and Lack of Improvement Programs Affect Operational Performance, both with a weighted mean of 4.00 and ranked 2.5.

Limited Innovation Affects Competitiveness garnered a weighted mean of 3.96, ranked fourth, while Lack of Improvement Initiatives Affects Operational Growth obtained a weighted mean of 3.92, ranked fifth. Meanwhile, Failure to Adopt New Systems Affects Efficiency recorded a weighted mean of 3.88, ranked sixth, followed by Limited Improvement Strategies Affect Long-Term Sustainability with a weighted mean of 3.84, ranked seventh. The lowest-ranked indicator was Weak Feedback Mechanisms Affect Organizational Learning, which obtained a weighted mean of 3.80 and ranked eighth.

Overall, the Continuous Improvement dimension had an Average Weighted Mean of 3.93, indicating a Great Effect. This implies that challenges related to continuous improvement

significantly affect Steven Construction and Supply's operational performance. Strengthening training programs, enhancing evaluation systems, encouraging innovation initiatives, and implementing effective feedback mechanisms may improve productivity, operational efficiency, and long-term sustainability.

The findings support the study of Oakland (2014), who emphasized that continuous improvement is essential for achieving operational excellence and long-term organizational success. The author explained that regularly evaluating and improving processes enhances efficiency, quality, and productivity. These findings suggest that continuous improvement practices significantly improve operational performance.

Summary of the Results in Effect on Operational Performance

The summary table shows that Cost/Pricing had the highest average weighted mean of 4.31, interpreted as Very Highly Encountered, while Control had the lowest average weighted mean of 3.64, interpreted as Highly Encountered.

Table 16*Summary Table of Results in Effect on Operational Performance*

Variables	Average WM	Interpretation	Rank
Customer	3.99	Great Effect	3
Cost/Pricing	4.31	Great Effect	1
Communication	4.04	Great Effect	2
Coordination	3.97	Great Effect	4
Collaboration	3.81	Great Effect	6
Control	3.64	Great Effect	6
Continuous Improvement	3.93	Great Effect	5
AWM	3.96	Great Effect	

The results indicate that cost and pricing challenges have the greatest influence on the operational performance of the company. Rising material prices, operational costs, and cash flow concerns directly affect project profitability, financial stability, budgeting accuracy, and overall project execution. Communication and customer-related challenges also have substantial effects on operational activities because they influence coordination, service quality, project scheduling, and stakeholder relationships. Meanwhile, although control, collaboration, and continuous improvement challenges obtained relatively lower mean scores, they still significantly affect operational efficiency and organizational effectiveness.

This implies that operational performance is highly dependent on the organization's ability to manage supply chain challenges

effectively. Financial pressures, communication barriers, and customer-related concerns can disrupt project implementation, delay operations, and reduce organizational productivity. Therefore, addressing these challenges is necessary to improve operational efficiency, maintain profitability, and achieve successful project outcomes.

The findings support the study of Chopra and Meindl (2019), who emphasized that supply chain challenges significantly influence operational performance, particularly in areas such as cost management, service quality, resource utilization, and project execution. The authors explained that disruptions and inefficiencies within the supply chain can adversely affect organizational productivity and overall business performance.

Table 17*Significant relationship between the Supply Chain Challenges and the effects on Operational Performance*

Variables	Challenges Encountered (WM)	Effects on Operational Performance (WM)	d	d	Decision	Interpretation
Customer	4.12	3.99	1	1	Reject Ho	Significant Relationship
Cost/Pricing	4.45	4.31	0	0	Reject Ho	Significant Relationship
Communication	4.07	4.04	1	1	Reject Ho	Significant Relationship
Coordination	3.94	3.97	1	1	Reject Ho	Significant Relationship
Collaboration	3.83	3.81	0	0	Reject Ho	Significant Relationship

Variables	Challenges Encountered (WM)	Effects on Operational Performance (WM)	d	d	Decision	Interpretation
Control	3.68	3.64	0	0	Reject Ho	Significant Relationship
Continuous Improvement	3.95	3.93	-1	1	Reject Ho	Significant Relationship
$\Sigma d^2 = 4$						
Spearman's rho (ρ)	0.93	p-value			Reject Ho	Significant Relationship

As shown in the table, the computed Spearman's rho of 0.93 indicates a very strong positive relationship between the supply chain challenges encountered and their effects on operational performance. The value of $\Sigma d^2 = 4$ indicates that the rankings of the variables are highly similar.

The findings suggest that the company's supply chain challenges are closely associated with their effects on operational performance. This means that dimensions with higher levels of challenges, such as Cost/Pricing and Customer-related concerns, also tend to have greater effects on operational performance. Conversely, areas with lower levels of challenges exhibit relatively lower effects. The strong positive relationship implies that changes in the severity of supply chain challenges are reflected in the organization's operational performance.

Based on the results, it can be inferred that supply chain challenges significantly influence the operational performance of Steven Construction and Supply. As challenges increase, their corresponding effects on operational performance also increase. This highlights the importance of addressing supply chain issues to minimize disruptions and maintain efficient project execution and organizational effectiveness.

The findings support the view of Martin Christopher that supply chain performance is highly dependent on the effective management of operational challenges and disruptions. Likewise, studies by Mentzer et al. emphasized that inefficiencies in supply chain processes can directly affect organizational performance, productivity, and service outcomes. The

present findings affirm that challenges within supply chain activities are strongly connected to operational performance, making effective supply chain management essential for organizational success.

Conclusion

Based on the findings of the study, the following conclusions were drawn:

1. Supply chain challenges along customer, cost/pricing, communication, coordination, collaboration, control, and continuous improvement were highly encountered by Steven Construction and Supply.
2. The supply chain challenges great effect on the operational performance of Steven Construction and Supply across all identified dimensions.
3. Among the dimensions, cost/pricing emerged as the most significant challenge encountered and likewise had the greatest effect on operational performance.
4. A very high positive relationship exists between supply chain challenges encountered and operational performance, indicating that changes in supply chain challenges are associated with corresponding changes in operational performance.

Acknowledgement

The researcher would like to sincerely thank everyone who helped and supported to complete this study. To University of Saint Anthony, her adviser, her panels, her family, for their unwavering support and encouragement throughout this journey.

References

- Ackah, D., et al. (2024). Information sharing's impact on supply chain management, logistics and organizational performance. https://www.researchgate.net/publication/384914615_Information_Sharing%27s_Impact_on_Supply_Chain_Management_Logistics_and_Organizational_Performance
- Akhavan, P., Omran, A., & Hosseini, S. M. (2023). Improving supply chain collaboration and performance: The mediating role of blockchain technology and supply chain resilience. *Journal of Knowledge Management*, 27(4). <https://link.springer.com/article/10.1007/s13132-022-01085-9>
- Anwar, U. A. A., et al. (2025). Supply chain integration as the implementation of strategic management: Effects on operational and financial performance. *Discover Sustainability* <https://link.springer.com/article/10.1007/s43621-025-00867-w>
- Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., & Zacharia, Z. G. (2001). Defining supply chain management. *Journal of Business Logistics*, 22(2), 1–25.
- Chopra, S., & Meindl, P. (2019). *Supply chain management: Strategy, planning, and operation* (7th ed.). Pearson Education.
- Gunasekaran, A., Subramanian, N., & Papadopoulos, T. (2017). Information technology for competitive advantage within logistics and supply chains: A review. *Transportation Research Part E: Logistics and Transportation Review*, 99, 14–33.
- Lambert, D. M., & Cooper, M. C. (2000). Issues in supply chain management. *Industrial Marketing Management*, 29(1), 65–83.
- Simatupang, T. M., & Sridharan, R. (2002). The collaborative supply chain. *The International Journal of Logistics Management*, 13(1), 15–30.
- Goldratt, E. M. (1990). *What is this thing called theory of constraints and how should it be implemented?* North River Press.
- Deming, W. E. (1986). *Out of the crisis*. Massachusetts Institute of Technology, Center for Advanced Engineering Study.
- Wamba, S. F., Dubey, R., Gunasekaran, A., & Akter, S. (2020). The performance effects of big data analytics and supply chain ambidexterity: The moderating effect of environmental dynamism. *International Journal of Production Economics*, 222.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- Heizer, J., Render, B., & Munson, C. (2020). *Operations management: Sustainability and supply chain management* (13th ed.). Pearson.
- Daft, R. L. (2021). *Organization theory and design* (13th ed.). Cengage Learning.
- Robbins, S. P., & Coulter, M. (2021). *Management* (15th ed.). Pearson.
- Johnson, P. F., Leenders, M. R., & Flynn, A. E. (2020). *Purchasing and supply management* (16th ed.). McGraw-Hill Education.
- Weihrich, H., Cannice, M. V., & Koontz, H. (2020). *Management: A global, innovative, and entrepreneurial perspective* (16th ed.). McGraw-Hill Education.
- Oakland, J. S. (2014). *Total quality management and operational excellence: Text with cases* (4th ed.). Routledge.