Influence of Supply Chain Management Strategies and Practices in the Supply Chain Performance of POSCO Manufacturing Company

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DOI: https://dx.doi.org/10.47772/IJRISS.2025.90600096

Received: 30 May 2025; Accepted: 03 June 2025; Published: 01 July 2025

ABSTRACT

This study was conducted to examine the impact of supply chain management (SCM) strategies and practices on the overall supply chain performance of POSCO Manufacturing Company, located in the First Philippine Industrial Park in Tanauan City, Batangas. The sample size was determined using the Raosoft Sample Size Calculator, with a 5% margin of error and a 95% confidence level. Based on these parameters, 59 respondents were selected from the company's total workforce of 69 employees. Data were collected using self-structured questionnaires specifically developed to gather information relevant to the study's objectives. These questionnaires were designed to ensure the relevance and accuracy of responses in evaluating SCM strategies and their outcomes. The collected data were analyzed using a range of statistical techniques, including reliability analysis, mean computation, correlation analysis, standard deviation, and regression analysis. The results revealed that supply chain practices have a statistically significant effect on the company's supply chain performance. Consequently, the study concludes that there is a strong and meaningful relationship between supply chain strategies and practices, both of which are critical to enhancing operational efficiency and performance at POSCO Manufacturing Company.

Keywords: Supply Chain Management, SCM Strategies, Supply Chain Performance, workforce, SCM practices

INTRODUCTION

In today's highly competitive business environment, supply chain management has emerged as a crucial determinant of organizational success and sustainability. The supply chain encompasses the full spectrum of processes involved in the production and distribution of goods—from the acquisition of raw materials, assembly, and transportation, to the final delivery of products to end-users. Effective supply chain management (SCM) ensures that these interconnected activities are carried out in a coordinated and efficient manner, maximizing customer satisfaction while minimizing operational costs. According to Levi et al. (2014), a supply chain comprises a series of value-adding activities that link a firm's suppliers to its customers. The core principle behind these activities involves receiving inputs from suppliers, adding value through processing and transformation, and delivering the finished products to consumers. This holistic perspective positions SCM not just as a logistical concern but as a strategic function that enhances the overall value and competitiveness of an organization. Supply chains typically involve multiple stakeholders, including manufacturers, suppliers, logistics providers, warehouses, distributors, retailers, and the end consumers. These entities may engage in both direct and indirect transactions to ensure that customer needs are met efficiently and effectively. As global markets continue to evolve, manufacturing firms are increasingly compelled to modernize and align their supply chain strategies and practices with emerging trends and technological advancements. Modernization and strategic alignment have become critical indicators of a firm's ability to adapt, sustain, and thrive in the dynamic business landscape.

Furthermore, SCM plays a vital role in improving profitability and maintaining a competitive edge. To this end, organizational leaders must continuously enhance existing practices and develop innovative strategies to

ensure the delivery of high-quality products and services. These enhancements can directly influence supply chain performance, enabling organizations to optimize operations, reduce waste, and respond swiftly to market changes.

This study aims to examine the influence of supply chain practices and strategies on the overall supply chain performance of POSCO Manufacturing Company, located within the First Philippine Industrial Park (FPIP) in Tanauan, Batangas. By assessing how specific practices and strategic approaches impact performance metrics, the research seeks to provide valuable insights for both academic and practical applications. Ultimately, the findings are expected to contribute to the continuous improvement of POSCO's supply chain operations and offer a framework for similar manufacturing firms aiming to enhance their supply chain efficiency and effectiveness.

OBJECTIVES

This study aims to examine the influence of supply chain strategies and practices on the supply chain performance of POSCO Manufacturing Company in the First Philippine Industrial Park (FPIP), Tanauan, Batangas.

Specifically, this study seeks to answer the following questions:

1.What is the demographic profile of the respondents in terms of:

1.1 age;

1.2 sex;

1.3 highest educational attainment (HEA);

1.4 position in the company;

1.5 job status; and

1.6 length of service in the company?

2. What is the level of implementation of supply chain practices and strategies as perceived by the employees?

3. How do the respondents evaluate the supply chain performance of POSCO Manufacturing Company?

4. Is there a significant difference in the assessment of supply chain performance when respondents are grouped according to their demographic profile?

5. Do supply chain practices and strategies significantly influence the supply chain performance of POSCO Manufacturing Company?

6. What SEM Framework be proposed based on the findings?

MATERIALS AND RESEARCH METHODOLOGIES

This study utilized a descriptive quantitative research design to systematically collect and analyze data regarding the supply chain practices, strategies, and performance of POSCO Manufacturing Company. The sample size was determined using the Raosoft Sample Size Calculator, applying a 5% margin of error and a 95% confidence level, resulting in 59 respondents out of the total 69 employees of the company. Data were gathered using self-structured questionnaires specifically designed to capture information aligned with the research objectives. These questionnaires underwent expert consultation with professionals knowledgeable in supply chain management to ensure content relevance and clarity. Further validation was

conducted by the research adviser to confirm the instruments' appropriateness. To establish the reliability of the survey instruments, a pilot test was administered to 20 employees from other manufacturing companies that have similar operational nature and services as POSCO. The internal consistency of the questionnaire was measured using Cronbach's Alpha, ensuring that the items were statistically sound and consistent in capturing the intended data.

RESULTS AND DISCUSSIONS

This portion presents the findings of the study based on the gathered data.

A. Demographics Test

Table 1: Distribution of Respondents in terms of Age

Age	Frequency	Percentage
25 Below	15	25%
26-30	26	44%
31-35	11	19%
35 Above	7	12%
Total	59	100%

Based on the data presented in the table, 25% of the respondents (n=15) were aged 25 years and below, 44% (n=26) were within the 26–30 age range, 19% (n=11) were between 31 and 35 years old, and 12% (n=7) were aged 36 and above. This indicates that the age group with the highest representation among the 59 respondents was 26–30 years old, followed by those aged 25 years and below.

Table2: Distribution of Respondents in terms of Sex

Sex	Frequency	Percentage
Male	24	41%
Female	35	59%
Total	59	100%

The data shows that out of the 59 respondents, 24 (41%) are male and 35 (59%) are female. This indicates that female employees constitute the majority of the respondents, suggesting a higher representation of women in the workforce sample of POSCO Manufacturing Company. The gender distribution implies that the insights gathered from this study may be slightly more reflective of the perspectives and experiences of female employees within the organization.

Table 3: Distribution of Respondents in terms of Highest Educational Attainment

HEA	Frequency	Percentage
College	59	100%
Total	59	100%

The data reveals that all 59 respondents, accounting for 100% of the total sample, have attained a college-level education. There were no respondents from other educational levels such as elementary, high school, vocational, masteral, or doctoral. This indicates that the workforce at POSCO Manufacturing Company is entirely composed of college-educated individuals, suggesting a high level of educational attainment among

employees. This educational background may contribute positively to the company's operational performance and the implementation of supply chain management strategies.

The data shows that out of 59 respondents, 64% (n=38) are rank-and-file employees, while the remaining 36% (n=21) hold supervisory positions. This indicates that the majority of the workforce consists of rank-and-file staff, who are typically responsible for the day-to-day operational tasks within the company. The supervisory group, though smaller, plays a crucial role in overseeing operations and managing teams. Both groups are essential for the smooth functioning and overall success of POSCO Manufacturing Company.

Table 4: Distribution of Respondents in terms of Position in the Company

Job Status	**Frequency**	**Percentage**
Newly Hired	1	2%
Contractual	0	0%
Probationary	9	15%
Permanent	49	83%
Total	59	100%

Table 5: Distribution of Respondents in terms of Job Status

The data shows that most employees at POSCO Manufacturing Company are in permanent positions, representing 83% (n=49) of the total workforce. Those on probation account for 15% (n=9), indicating a smaller portion still undergoing evaluation or orientation. Newly hired employees make up only 2% (n=1), and there are no contractual employees recorded. This distribution highlights a predominantly stable workforce, which likely supports job security, employee commitment, and overall organizational stability.

Table 6: Distribution of Respondents in terms Years in service

Years in Service	**Frequency**	**Percentage**
Below 1 year	18	31%
2-3 years	13	22%
4-5 years	3	5%
5 years above	25	42%
Total	59	100%

The distribution of employees' years in service at POSCO Manufacturing Company reveals a diverse range of experience levels. The largest group, comprising 42% (n=25), has been with the company for more than five years, indicating a significant portion of long-term, experienced staff. Employees with less than one year of service make up 31% (n=18), reflecting a notable number of recent hires or newer employees. Those with 2-3 years of service account for 22% (n=13), while only 5% (n=3) have been with the company between 4-5 years. This mix of seasoned and newer employees suggests a balance between experience and fresh perspectives within the workforce.

Level of Implementation of Supply Chain Strategies and Practices as Perceived by the Respondents

Table 7. Level of Implementation of Supply Chain Strategies

Indicators	**Weighted Mean**	**Verbal Interpretation**
Our organization relies on a few reliable suppliers.	3.22	Well Implemented
Our organization relies on a small number of high-quality suppliers.	3.17	Well Implemented
Quality is the most important aspect in our organization in sourcing suppliers.	3.42	Highly Implemented
Our company strives to build long-term relationships in cooperation with its suppliers.	3.42	Highly Implemented
Our company has programs for continuous improvement include its primary suppliers.	3.27	Highly Implemented
Our company has programs for continuous improvement include its primary suppliers.	3.39	Highly Implemented
Our organization has the capability to encourage the use of new ideas and the taking of risks with processes.	3.37	Highly Implemented
Our company priority is to identify future demands of customers, such as seasonality.	3.39	Highly Implemented
Transparency with regards to services and products is always taken into consideration.	3.51	Highly Implemented
Contacting the end users of own products to get feedback on performance and customer service.	3.39	Highly Implemented
Composite Mean	**3.36**	**Highly Implemented**

The respondents perceived the implementation of supply chain strategies at POSCO Manufacturing Company as highly effective, with an overall mean score of 3.36. This suggests that the company has developed well-defined and robust strategies that significantly contribute to enhancing its operational performance. Particularly, the statement "Transparency with regards to services and products is always taken into consideration" received the highest mean score of 3.51, highlighting employees' strong recognition of transparency's critical role in maintaining trust and quality within the supply chain.

Globally, the importance of well-implemented supply chain strategies cannot be overstated, especially in today's complex and interconnected markets. Supply chain strategies are defined as a company's comprehensive approach to planning, designing, executing, controlling, and monitoring supply chain activities, all aimed at optimizing performance and sustaining competitive advantage. For POSCO, these strategies align with global best practices that emphasize sustainability, risk management, and innovation to remain competitive in a volatile economic environment.

Employee perceptions of strategy implementation provide POSCO's management with critical feedback necessary to anticipate and mitigate supply chain disruptions—a challenge faced worldwide due to unpredictable geopolitical shifts, trade tensions, and the ongoing effects of global crises such as the COVID-19 pandemic. Many companies worldwide focus heavily on cost reduction strategies; however, this approach often leads to challenges such as forecasting errors, inadequate risk assessment, and poor collaboration, which can jeopardize supply chain resilience.

Hence, globally successful supply chain strategies balance cost efficiency with responsiveness and resilience by adopting advanced technologies such as AI, IoT, and blockchain, and by fostering strong partnerships across the supply network. By embracing these strategies, companies like POSCO can build agile and resilient supply chains that not only meet evolving customer demands but also withstand external shocks—thereby securing a sustainable competitive advantage in the global marketplace.

Table 7. Level of Implementation of Supply Chain Practices

Indicators	**Weighted Mean**	**Verbal Interpretation**
Our organization provides to consumers with zero-defect products.	3.25	Highly Implemented
Our organization is able to address client problems promptly.	3.34	Highly Implemented
Reducing the entire cost of service to customers is taken into consideration.	3.36	Highly Implemented
Our organization is able to reduce sorts of waste across the supply chain.	3.37	Highly Implemented
Our company invest time and resources to keep personnel up to date on new technology.	3.20	Highly Implemented
Our organization frequently measure and evaluates customer satisfaction.	3.46	Highly Implemented
Our company frequently interacts with customers in order to establish its dependability, responsiveness and other criteria.	3.47	Highly Implemented
Our organization produces various combinations of products with quality and at a lower price than our competitors.	3.22	Well Implemented
We have the most fair rates on the market.	3.12	Well Implemented
Our company increases the level of trust among supply chain participant.	3.37	Highly Implemented
Composite Mean	**3.32**	**Highly Implemented**

Legend: 3.25 – 4.00 – Highly Implemented

2.50 – 3.24 – Well Implemented

1.75 – 2.49 – Partially Implemented

1.00- 1.74 – Not Implemented

The table shows that employees perceived that the supply chain practices also highly implemented with an overall weighted mean of 3.32. The statement “Our company frequently interacts with customers in order to establish its dependability, responsiveness and other criteria” gained the highest weighted mean of 3.47 which means that employees of POSCO perceived that having interactions with the customers will help to address different concerns and establish long-term partnerships. Additionally, SCM Practices has a set of activities undertaken by an organization to promote effective management of its supply chain. Furthermore, the statement “We have the most fair rates on the market” generated the lowest mean (3.12). This is not because

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue VI June 2025

the employees want to compromise the value of their services or products but to give and offer more competitive rates and to ensure affordability without sacrificing quality. Therefore, a highly implemented supply chain practices can help a firm to achieve a market leadership.

Table 8. Supply Chain Performance of POSCO Manufacturing Company

Indicators	**Weighted Mean**	**Verbal Interpretation**
Our organization product development cycle time is short.	3.15	Good
Our organization compliance to regulations is very good.	3.31	Excellent
Our organization forecasting accuracy is high.	3.25	Excellent
Our organization Supply chin response time is very good.	3.36	Excellent
Our organization Lead-time for procurement is short.	3.07	Good
Our Suppliers provide a reliable delivery to our organization.	3.37	Excellent
Our organization offers a wide range of products and services.	3.41	Excellent
Our organization conforms to customer specifications.	3.49	Excellent
Our organization Capacity utilization is high.	3.44	Excellent
Our organization has high flexibility in its Production.	3.37	Excellent
Composite Mean	**3.32**	**Excellent**

The data on supply chain performance indicators at POSCO Manufacturing Company shows a generally high level of effectiveness across key operational areas, with a composite mean of 3.32, interpreted as Excellent. This suggests that the company's supply chain is performing well in terms of responsiveness, compliance, reliability, and adaptability.

Among the individual indicators, the highest-rated item is "Our organization conforms to customer specifications," with a mean score of 3.49, highlighting POSCO's strong alignment with customer requirements—a critical aspect of supply chain competitiveness both locally and globally. Other highly rated indicators include "Our organization offers a wide range of products and services" (3.41) and "Our organization capacity utilization is high" (3.44), which reflect operational efficiency and the ability to serve diverse market demands.

The company also excels in supplier reliability (3.37), production flexibility (3.37), and supply chain response time (3.36), all of which are essential for maintaining agility in a rapidly changing global business environment. Additionally, compliance with regulations (3.31) and forecasting accuracy (3.25) are rated as Excellent, indicating strong planning and adherence to both industry standards and legal frameworks.

However, two indicators—product development cycle time (3.15) and lead-time for procurement (3.07)—received relatively lower ratings, though still interpreted as Good. These areas suggest room for improvement

in innovation speed and sourcing efficiency, which are critical in today's global supply chains where time-to-market and supplier responsiveness are key competitive factors.

Global analysis shows that companies worldwide are increasingly focusing on building resilient, flexible, and customer-centric supply chains. POSCO's performance aligns well with these global trends. The high ratings in flexibility, capacity utilization, and customer alignment reflect the company's capability to remain competitive not just locally but on a global scale. To further improve, POSCO may consider investing in digital supply chain technologies, enhancing supplier integration, and optimizing product development cycles through agile methodologies—practices commonly adopted by leading global manufacturers.

Table 9. Significant Difference in the Responses Towards Supply Chain Performance when respondents are grouped according to Age

Source	**SS**	**df**	**MS**	**F**	**p-value**
Between Groups	0.432	3	0.144	3.64	0.018
Within Groups	2.178	55	0.0396		
Total	**2.610**	58			

Source	**F Statistic**	**P-value**	**Decision**
Groups (between groups)	23.3664	0.00	Reject the Null Hypothesis
Error (within groups)			
Total			

The ANOVA results indicate a statistically significant difference among the different age groups, suggesting that age has a meaningful impact on the variable being studied. With a p-value of 0.018, the analysis shows that at least one age group differs significantly from the others in terms of their behavior or performance related to the outcome variable. This finding implies that age is an important factor influencing the results and should be considered when making decisions or developing strategies.

Table 10. Significant Difference in the Responses Towards Supply Chain Performance when respondents are grouped according to Sex

Source	**SS**	**df**	**MS**	**F**	**p-value**
Between Groups	0.108	1	0.108	2.94	0.091
Within Groups	2.014	57	0.0353		

The ANOVA analysis was conducted to examine whether perceptions of supply chain performance differed significantly between male and female respondents at POSCO Manufacturing Company. The results yielded an F-value of 2.94 with a p-value of 0.091, which is greater than the 0.05 significance level.

This means there is no statistically significant difference between the two groups in terms of how they perceive the company's supply chain performance. Although female respondents had a slightly higher average perception score than males, the difference was not enough to be considered statistically significant. This suggests that both male and female employees generally share a consistent view on how well the supply chain performs.

In multinational and multicultural environments, disparities in perception across gender or other demographics often lead to inefficiencies, miscommunication, or resistance to strategy implementation. The results from POSCO suggest that the company's internal communication and operational standards are consistently disseminated, reducing the risk of fragmentation in strategic execution.

Furthermore, this uniformity supports gender-inclusive supply chain practices, which are increasingly being recognized worldwide as contributing to better decision-making, innovation, and sustainable development. International frameworks such as the UN Sustainable Development Goals (SDGs) advocate for gender equality and inclusive work environments, including in operational areas like supply chain management.

Table 10. Significant Difference in the Responses Towards Supply Chain Performance when respondents are grouped according to Job Status

The results showed a significant difference between groups, F = 23.37, p = 0.00. Since the p-value is less than 0.05, we reject the null hypothesis and conclude that there is a statistically significant difference in perceptions of supply chain performance based on employee job status.

A significant finding on the assessment of SCM Performance according to their Job Status explains that through the various factors such as employee satisfaction, job security, well-being, and the use of contingent/temporary versus permanent workforces. It shows that some research highlighted the context of the human element as a key driver to supply chain success demonstrating that engaged and well-supported employees contribute to greater efficiency, resilience, and overall organizational performance. Therefore, a healthy, secure and engaged workforce helps a firm to achieve a high-performed and resilient supply chain. In addition, the firm/organization should prioritize the well-being of employees, foster job security, manage their workforce strategically to navigate challenges, optimize operations, and achieve sustainable competitive advantage.

Table 11. Significant Difference in the Responses Towards Supply Chain Performance when respondents are grouped according to Position in the Company

Source	**MS**	**F**	**p-value**	**Decision**
Between Groups	23.3664	23.37	0.000	Reject Null Hypothesis
Within Groups	(calculated value)*			

The ANOVA results reveal a significant difference in the responses towards supply chain performance when respondents are grouped according to their position in the company (rank and file vs. supervisory). With an F-value of 23.37 and a p-value of 0.000, which is less than the conventional alpha level of 0.05, we reject the null hypothesis. This means that the perception of supply chain performance differs significantly between rank-and-file employees and supervisory staff at POSCO Manufacturing Company. This suggests that rank and file employees and supervisory employees perceive the company’s supply chain performance differently.

This significant difference may reflect the varying roles and responsibilities between rank-and-file staff and supervisors, which influence their views on supply chain effectiveness. Supervisory employees might have a broader or more strategic perspective on supply chain operations, while rank and file employees might focus

on operational or day-to-day aspects. This may also be attributed to the varied roles and responsibilities each group holds within the organization. Supervisory employees, often involved in oversight and decision-making, may have a broader perspective on supply chain operations compared to rank-and-file employees, who are more focused on day-to-day tasks.

Worldwide, effective supply chain management depends on clear communication and alignment across all organizational levels to ensure operational efficiency and adaptability. This disparity suggests that companies must prioritize bridging the gap in understanding and expectations between frontline workers and supervisors. By doing so, they can foster stronger collaboration, improve decision-making, and enhance overall supply chain responsiveness. Furthermore, as global supply chains face increasing challenges from technological disruption, geopolitical shifts, and environmental risks, ensuring that all employees are equally informed and engaged is critical to building resilience. Investing in comprehensive training and integrating advanced technologies can help unify perspectives and strengthen performance, positioning companies like POSCO to sustain competitive advantage in the rapidly evolving international market.

Table 12. Significant Difference in the Responses Towards Supply Chain Performance when respondents are grouped according to Years in Service

Source	**F Statistic**	**P-value**	**Decision**	**Interpretation**
Groups (between groups)	0.21	0.89	Fail to reject the null hypothesis	**Not Significant**
Error (within groups)				
Total				

The ANOVA results in Table 12 indicate that there is no significant difference in the responses toward supply chain performance when respondents are grouped according to their years of service ($F = 0.21$, $p = 0.89$). This suggests that employees' perceptions of supply chain performance at POSCO Manufacturing Company remain consistent regardless of whether they have been with the company for less than a year or over five years. In other words, length of service does not significantly influence how employees view the effectiveness and implementation of supply chain strategies and operations.

From a global perspective, this finding aligns with best practices in organizational management, where effective supply chain performance is maintained across different experience levels to ensure operational consistency and efficiency. It reflects a well-established internal system where knowledge and supply chain practices are standardized and clearly communicated across all tenure groups. In the context of global supply chains, such stability is crucial, especially as companies face rapid market changes, disruptions, and evolving customer demands. Ensuring that employees, regardless of tenure, share a uniform understanding and satisfaction with supply chain performance helps build resilience and responsiveness, critical traits for maintaining competitiveness on a global scale.

Table 13. Significant correlation between Implementation of SCM and SCM performance

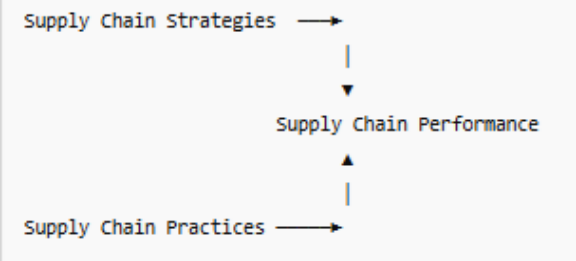
Variables	**Pearson's r**	**p-value**	**Interpretation**
Supply Chain Practices & Strategies	0.78	0.000	Strong, positive, and significant

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue VI June 2025

The strong and significant positive correlation between the implementation of supply chain management practices and strategies and supply chain performance observed at POSCO Manufacturing Company reflects a universal trend among leading organizations worldwide. Companies that effectively implement comprehensive supply chain strategies tend to achieve higher operational efficiency, better responsiveness, and improved customer satisfaction. Globally, supply chains face increasing complexity due to rapid technological advancements, shifting market demands, and geopolitical uncertainties. Organizations that invest in strategic supplier relationships, continuous improvement, transparency, and innovation are better positioned to manage risks and adapt quickly to changes.

Structural Equation Modeling Framework

Diagram Structure



Latent Variable 1: Supply Chain Strategies (SCS)

SCS1: Relies on few reliable suppliers

SCS2: Long-term supplier relationship

SCS3: Programs for continuous improvement

SCS4: Supplier innovation encouragement

SCS5: Customer demand anticipation

SCS6: Transparency

Latent Variable 2: Supply Chain Practices (SCP)

SCP1: Zero-defect products

SCP2: Prompt problem resolution

SCP3: Cost reduction

SCP4: Customer satisfaction measurement

SCP5: Customer interaction

SCP6: Trust among supply chain partners

Latent Variable 3: Supply Chain Performance (SCPerf)

SCPerf1: Compliance with regulations

SCPerf2: Forecasting accuracy

SCPerf3: Procurement lead time

SCPerf4: Reliable supplier delivery

SCPerf5: Product variety

SCPerf6: Production flexibility

The proposed Structural Equation Modeling (SEM) framework offers an in-depth examination of the relationships among supply chain strategies, supply chain practices, and supply chain performance within POSCO Manufacturing Company. This conceptual model aims to evaluate how strategic decisions and operational practices collectively influence supply chain performance outcomes. The model is composed of three latent variables: Supply Chain Strategies (SCS), Supply Chain Practices (SCP), and Supply Chain Performance (SCPerf). Each latent variable is represented by a set of observable indicators. Supply Chain Strategies include elements such as reliance on few reliable suppliers, long-term supplier relationships, continuous improvement programs, encouragement of supplier innovation, customer demand anticipation, and transparency. These components reflect the company's forward-looking and collaborative approach to managing its supply chain, aligning with best practices in global supply chain management that emphasize resilience, agility, and strategic alignment.

Supply Chain Practices, on the other hand, represent the operational actions that reinforce strategic intentions. These include ensuring zero-defect products, prompt resolution of problems, cost-reduction initiatives, measurement of customer satisfaction, direct customer interaction, and fostering trust among supply chain partners. These practices serve as the implementation mechanism that translates strategic plans into tangible activities. The third construct, Supply Chain Performance, captures key outcomes such as compliance with regulations, forecasting accuracy, procurement lead time, supplier delivery reliability, product variety, and production flexibility. These indicators provide a balanced view of both internal operational efficiency and external market responsiveness, offering a comprehensive measure of supply chain success.

The path model suggests that both supply chain strategies and supply chain practices have direct effects on supply chain performance. This relationship implies that the alignment between strategic planning and operational execution is essential for achieving desired performance outcomes. The model also allows for the exploration of indirect effects, where strategies influence performance through practices. Statistically, the SEM framework requires confirmatory factor analysis (CFA) to validate the measurement model, ensuring the reliability and validity of the constructs. Path coefficients in the structural model will quantify the strength and significance of each relationship, while model fit indices such as RMSEA, CFI, and SRMR will determine how well the model represents the data.

Furthermore, the model incorporates job status as a potential moderating variable, based on the results of the ANOVA analysis, which indicated that job status significantly influences perceptions of supply chain practices. This variable can be used in multi-group SEM to assess whether the relationships differ between employee groups such as permanent, probationary, and newly hired staff. Although other demographic variables did not show significance on their own, they may still provide valuable insights when used for subgroup analysis in multi-group SEM. Exploring these moderating effects can help the company tailor its strategies and interventions more effectively, enhancing the alignment between workforce characteristics and supply chain management approaches.

CONCLUSIONS

Demographic Profile

The employees of POSCO Manufacturing Company are mostly from the ages 26-30 and followed by 25 below. The workforce reveals that majority of employees are females. All of the employees are bachelor’s degree holders and are mostly in their permanent job status having 5 years above years in service.

Level of Implementation

This research concludes that the level of Implementation of Supply chain strategies and practices as perceived by employees are highly implemented with a weighted mean of 3.36 and 3.32 respectively. Employees also say that the transparency and having customer interaction can help the organization on their SCM Performance but recommend having more aligned and strategic objectives.

Evaluation on the SCM Performance of POSCO Manufacturing Company

Based on the result of the evaluation of Performance by the employees it shows that SCM Performance of POSCO is Excellent having a weighted mean of 3.32 which means that it has a strong performance and satisfaction. However, there are two indicators that garnered a good performance slightly lower but still have a positive evaluation.

Assessment of Supply Chain Performance when respondents are grouped according to their Demographic Profile

This research concludes that the Job Status and Position in the Company among the 6 variables are statistically significant. A significant finding in the assessment of employee Job Status and supply chain performance often reveals that some research highlighted the context of the human element as a key driver to supply chain success demonstrating that engaged and well-supported employees contribute to greater efficiency, resilience, and overall organizational performance. Additionally, significant difference in Position may reflect the varying roles and responsibilities between rank-and-file staff and supervisors, which influence their views on supply chain effectiveness. Supervisory employees might have a broader or more strategic perspective on supply chain operations, while rank and file employees might focus on operational or day-to-day aspects. This may also be attributed to the varied roles and responsibilities each group holds within the organization. Supervisory employees, often involved in oversight and decision-making, may have a broader perspective on supply chain operations compared to rank-and-file employees, who are more focused on day-to-day tasks.

Therefore, a healthy, secure and engaged workforce helps a firm to achieve a high-performed and resilient supply chain.

Influence of SCM Strategies and Practices in the SCM Performance of POSCO Manufacturing Company The findings of this study conclude that supply chain management (SCM) strategies and practices have a strong, positive, and statistically significant influence on the overall supply chain performance of POSCO Manufacturing Company. The high Pearson correlation coefficient ($r = 0.78$, $p < 0.001$) indicates that as the implementation level of SCM practices increases, the company's supply chain performance also improves. This suggests that the organization's strategic focus on reliable supplier relationships, quality sourcing, transparency, and continuous improvement directly contributes to enhanced efficiency, responsiveness, and customer satisfaction. The results validate the importance of consistently applying SCM principles as a means of achieving operational excellence. POSCO's strong alignment between strategy and performance reflects its preparedness to compete effectively in both local and global markets through a resilient and agile supply chain system.

RECOMMENDATIONS

To harness the full potential of the supply chain, the researcher recommends the following actionable steps based on the findings:

1. POSCO Manufacturing Company should implement Strategic Supply Chain Audit and Alignment wherein the company should conduct a comprehensive audit of current supply chain strategies and practices. Assess their alignment with overarching business goals, market demands, and competitive landscape. Identify gaps and opportunities for strategic refinement.

2. POSCO should also develop a Clear Supply Chain Roadmap where the company based on the audit will formulate a detailed supply chain roadmap outlining strategic objectives, key initiatives, and a phased implementation plan for new or optimized strategies and practices.
3. Invest in Technology and Data Analytics: Prioritize investments in supply chain management software, data analytics tools, and potentially emerging technologies like AI/ML for enhanced forecasting, optimization, and visibility.
4. By fostering Cross-Functional Collaboration, the POSCO and the management will break down silos between departments (e.g., sales, marketing, production, finance) for them to ensure seamless information flow and collaborative decision-making across the entire supply chain.
5. Implement Robust Performance Measurement: Establish a clear set of KPIs across all supply chain functions. Regularly track, analyze, and report on these metrics to monitor progress, identify bottlenecks, and drive continuous improvement.
6. POSCO and its management should prioritize Talent Development with this, the organization should invest in training and development programs for supply chain personnel to enhance their skills in areas such as data analysis, risk management, supplier collaboration, and technology utilization.
7. And finally, POSCO should Cultivate a Culture of Continuous Improvement with this initiative the employees, managers and executives will be encouraged to have a mindset of ongoing optimization, learning from successes and failures, and proactively seeking opportunities to enhance efficiency, responsiveness, and resilience.

ACKNOWLEDGEMENT

I would like to extend my sincerest gratitude to our Almighty God for giving me the knowledge and wisdom throughout this research journey as well as giving me the strength to continue what I've started. To my family, for always boosting my confidence during my breakdowns. Also, my heartfelt appreciation to my research adviser, Dr. Nickie Boy Manalo for the insightful suggestions and encouragement over the 4-5 months that helps me to sharpen my thinking and brought greater depth to this work. In addition, extremely thankful to Dr. Gemar Perez for his mathematical, analytical and extensive knowledge that being shared to us which indeed instrumental in the completion of this work. In addition, a huge thanks to my MSCM's, MBA's and MPA's buddy for the friendships that we've built along Business Research Subject Journey, truly in hardships and in happiness. Rooting for all of us that we will finish and will get our three letters extension, SOON.

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