

# How the Supply Chain Management Practices influence on Operational Performance? A Case of Manufacturing Firms in Sri Lanka

H.M.P.S. Herath<sup>1</sup> and D.M. Endagamage<sup>2</sup>

<sup>1</sup>Synergen Health (Pvt) Ltd, SRI LANKA.

<sup>2</sup>University of Sri Jayewardenepura, SRI LANKA.

<sup>2</sup>Corresponding Author: [dileepaendagamage@sjp.ac.lk](mailto:dileepaendagamage@sjp.ac.lk)



[www.ijrah.com](http://www.ijrah.com) || Vol. 2 No. 5 (2022): September Issue

Date of Submission: 03-08-2022

Date of Acceptance: 24-08-2022

Date of Publication: 01-09-2022

## ABSTRACT

Most organisations in different sectors are implementing Supply Chain Management Practices (SCMPs) to create faster, more effective, and cost-beneficial relationships between business partners, to increase their Operational Performances. Even though the firms use SCMPs, their knowledge regarding the effectiveness of these practices is questionable. The aim of this study was to identify the most influential SCMPs on the Operational Performances of the Sri Lankan manufacturing industry. As to the literature and due to the high level of applicability in the manufacturing sector, five factors; Supply Relationship Management, Customer Relationship Management, Information Sharing, Logistics, and Outsourcing of Services were selected to conceptualize the current study. The Operational Performance of a Manufacturing organization has defined as the performance related to the quality, cost, delivery, and flexibility to change the volume. This was a cross-sectional questionnaire based survey which is quantitative in nature and primarily concerned with the testing of hypotheses. A set of 37 close-ended questions used to collect data from 200 randomly selected organizations. However, due to the difficulties faced in the pandemic environment, the success rate was 58.5%. Results of the Correlation Analysis confirmed the relationships hypothesized according to the theoretical behaviour with positive relationships significant at a 1% level. The strongest relationship shows between Logistics and Operational Performances (0.832). Regression Analysis showed significant impacts of Supplier Relationship Management ( $\beta=0.276$ ) and Logistics ( $\beta=0.261$ ) on the Operational Performance. Customer Relationship Management, Information Sharing, and outsourcing were not showed a significant impact on the Operational Performance at the 5% level. The adequacy of the fitted model is 67% and the RMSE is 0.236. The residual analysis also ensured the accuracy of the model with normally distributed residuals, free of Multi-collinearity, and having homoscedasticity which emphasises the constant variance of the residuals. The findings emphasise that if the SCMPs is running at a righteous level, an organization can keep their Operational Performances at a higher level. However, only the Supplier Relationship and Logistic activities are the factors significantly influencing the Operational Performances of the Manufacturing sector in Sri Lanka. Similar to the facts highlighted in the literature, the responses of the current study also showed a poor level of handling and utilizing customer feedback for the development of Sri Lankan organizations. Information sharing also showed a poor focus on integrating and enhancing the IT systems. The uncontrollable circumstances due to outsourcing the services lead to a poor level of operational performance at the finale. This research contributes to the existing Supply Chain Management literature by providing empirical evidence from the Sri Lankan manufacturing industry.

**Keywords-** Manufacturing Industry, Operational Performance, Supply Chain Management Practice.

## I. INTRODUCTION

Operational Performance (OP) supports to organizations to enhance their performances in all aspects. It can upturn the supplier competencies that help to build customer value and achieve cost reduction. In a

competitive world, leaders in any organization need to identify the different practices, which can improve the competitive advantage and gain profit for their organization and have to focus on investing to improve its OP. The poorly implemented performances will cost the organization by wasting resources (including time and

money), compensating clients, losing the customers, demotivating the employees and high turnover (Chapelle, 2018).

Supply Chain Management is a highly significant but not a new concept to all industries mainly manufacturing and service in developed and developing countries. Researchers have done several studies and identified the relationship between Supply Chain Management Practices (SCMPs) and OP (Adnan et al., 2016; Chesaro, 2016), Green Supply Chain Management and OP (Priyashani & Gunarathne, 2021) and Total Quality Management and OP (Aderaw, 2019) of different industries in different countries.

Sri Lanka is a developing country, and as to the Census Statistics in 2019 (Department of Census and Statistics, 2019), the largest proportion out of the four subsectors of the industries, is manufacturing and it represents 85.4 per cent of the total industrial establishments. This sector produces goods for use or for sale by transforming raw materials, goods, or substances into new products with the help of labour, machines, tools, and chemical or biological processing. Priyashani and Gunarathne (2018) studied all the SCMPs led to an increase in OP rather than other performance dimensions such as financial and environmental performance dimensions which related to the manufacturing industry in Sri Lanka. Many companies in the manufacturing industry are implementing SCMPs to create faster, more efficient, and lower costing relationships between business partners, then increase the Operational Performance.

There are few Sri Lankan studies also discussing the how the Green Supply Chain Management Practices influence on Organizational Performance (Priyashani & Gunarathne, 2021) and Financial performance (Jayarathna & Lasantha, 2018) in the manufacturing sector and SCMPs and Quality Management Practices in the Rubber industry (Jayalath et al., 2017). Sri Lankan manufacturing industries need to improve their OP to compete in both the local and global marketplace. In Sri Lanka, it is hard to find updated research information about how the SCMPs can be used to enhance the OP of the Manufacturing Organizations in Sri Lankan context. Therefore, this study attempts to identify and analyze the significance of SCMPs that influences the Performance of the Sri Lankan manufacturing Companies.

## II. RESEARCH PROBLEM AND OBJECTIVES

Though the Manufacturing sector is holding nearly 85% of the organizations in Sri Lanka, there is no clear and updated information on how these organizations use the SCMPs and how those practices can be incorporated with the enhancement of the OP of the Manufacturing sector in Sri Lanka. Therefore, the main objective of this research was to examine the impacts of

the selected SCMPs on the Operational Performance of the Sri Lankan Manufacturing Organizations.

The following specific objectives are also considered:

- Identify the level of various SCMPs used by Manufacturing Organizations
- Measure the strength and test the significance of the relationships between SCMPs and OP of Manufacturing Organizations
- Measure the size and test the significance of the impacts of SCMPs on OP of Manufacturing Organizations.

## III. LITERATURE REVIEW

### 3.1 Supply Chain Management Practices

Supply chain management is “the sum of all activities, information, knowledge and financial capabilities related to the movement and transformation of products and services produce from raw materials to final goods delivered to customers by suppliers, to meet or exceed their expectations” (Lysons & Farrington, 2020). Tan et al. (2002) recognized six aspects of SCMPs through factor analysis as, “supply chain integration, supply chain characteristics, customer service management, information sharing, JIT capability, and geographical proximity”. Some studies defined the SCMPs as a multi-dimensional concept (Chen & Paulraj, 2004; Qrunfleh, 2010; Wong et al., 2011) that includes the downstream and upstream (Li et al., 2006) but some others considered it as a unidimensional concept (Miguel & Brito, 2011; Wisner, 2003).

Kumar and Kushwaha (2018), confirmed that due to globalization, employing the SCMPs is essential to improve the operational performance of an organization. Within the globalized world, organizations realized that other than improving the efficiency within an organization, it is essential to be competitive in their own supply chain (Li et al., 2006). As to Jayalath et al. (2017, p. 34) “Business to Business customer relationship, strategic supplier partnership, information management and lean systems are” were found as success factors in OP of the Rubber Industry in Sri Lanka. Chesaro (2016) had found that multinational manufacturing firms in Kenya have adopted ‘future supplier relationships’ (Sukati et al., 2012), ‘customer relationships’ and ‘other practices’ mainly ‘IT system’, ‘logistics’ and ‘outsourcing’ activities massively to enhance their operational performance. Further, all the practices positively impacted the performance.

In reviewing and associating the literature, five distinctive dimensions, including ‘Supplier Relationship Management’ (Dubey et al., 2018; Forkmann et al., 2016; Teller et al., 2016), ‘Customer Relationship Management’ (Li et al., 2006; Vickery et al., 2003), ‘Information Sharing’ (Chen & Paulraj, 2004; Li et al., 2006), ‘Logistic’ (Chesaro, 2016; Cooper et al., 1997; Wisner, 2003), and ‘Outsourcing’ (Chesaro, 2016; Fontagné &

Harrison, 2017) are selected for measuring SCM practice in this study.

**3.2 Operational Performance**

Performance is measured in terms of how a specific request is handled, and performed and the way it's executed successfully using the specified required of doing it. It is the result of all of the organization's operations and methods. It is therefore a measure of how an organization or individual organizational units meets the planned targets (Chesaro, 2016). OP here is taken into account to be the performance indicator of the organization's performance. Generally, any manufacturing organization despite its scale of operation got to achieves success in its operation (H.Q. Truong et al., 2014; Huy Quang Truong et al., 2017; Vafaei-Zadeh et al., 2020).

As to Feng et al. (2008) OP means the organization's internal operations, which are measured using dimensions. As to Richard et al., (2009), OP is a multidimensional concept that encompasses aspects including financial performance and market performance. According to AlGhasawneh and Mahesha (2020), the main objective of operational performance within a firm is to boost production efficiency within the overall operation. Further to reinforce OP, firms also needed to line up barriers that make imitation difficult through continual investment to enhance the firm advantage, making this a long-run cyclical process (Vafaei-Zadeh et al., 2020).

There are few researchers who used different performance management tools to support their supply chain strategies because most organizations always aim at continuously improving their performance. Vesey (1991) identified price, quality, responsiveness, flexibility, time to market, and product innovation as the dimensions of operational performance. Also, D'Souza et al., (2001) suggested that cost and quality as a part of the operational performance element. Voss et al. (1997) explained OP as to aspects of an organization's process which can be quantified. Birech (2011) highlighted inventory measures, lead-time measures, quality measures, preventive maintenance measures, productivity measures, performance to schedule, and utilization measures which include the cost of quality, period expenses, variances, and safety. Further, Fawcett and Smith (2008; 1995) and White (1996) explained price/cost, quality, responsiveness, and time to market as dimensions of operational performance. Similarly, Wakchaure et al. (2014) suggested there are some ways of measuring manufacturing performance. The most predominant approach in the literature is to use flexibility, quality, cost, and delivery as the four basic dimensions of manufacturing performance (Mohammed et al., 2019).

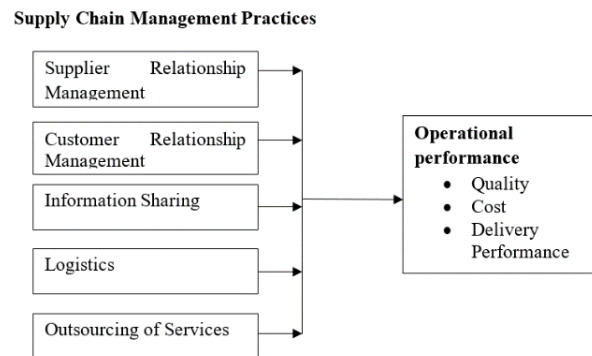
This study, therefore, followed the performance measurement tools as mentioned in studies of Fawcett and Smith (1995), Jayalath et al. (2017), Mohammed et al. (2019), Truong et al. (2017), Wakchaure et al. (2014), and White (1996).

**IV. METHODOLOGY**

This study followed the positivistic philosophy with a deductive approach which is mainly based on testing hypotheses. The population was the large size manufacturing organizations (by the size of the workforce) in Sri Lanka (Department of Census and Statistics, 2019) and it is 2258 and represents nearly 15% of the population. A cross-sectional questionnaire-based survey was used with 37 close-ended questions to collect data from 200 randomly selected organizations. However, due to the difficulties faced in the pandemic environment, the success rate was 58.5%. The sample covered a variety of sectors including textile, food and beverage, furniture, chemical, others etc. the unit of analysis in this study was either the Supply Chain Manager, Operation Manager, Procurement Manager or the person who does the work related to SCM of the organization.

The conceptual framework has been developed using Contingency Theory and the model suggested by Chesaro (2016). The concept that the greater the extent to which these SCMPs were present, the OP of a manufacturing company will be higher was tested. Based on the conceptual framework in figure 1, the following hypotheses were derived in order to investigate the impacts of SCMP on OP.

**Conceptual Framework and Hypotheses of the Study**



**Figure 1: Conceptual Frameworks of the study**

- H1:** SRM will have a positive impact on OP
- H2:** CRM will have a positive impact on OP
- H3:** IS will have a positive impact on OP
- H4:** Logistic will have a positive impact on OP
- H5:** Outsourcing will have a positive impact on OP

**Methods of Data Analysis**

Reliability and Validity tests were used to ensure the construct validity of the collected data. The Kaiser-Mayer-Olkin (KMO), and Bartlett's Tests, were used to explain the variation, and Cronbach's alpha was used to test the consistency. A descriptive was used to describe the relevant aspects of SCMP and OP of manufacturing firms in Sri Lanka. Correlation analysis was used to explore the direction and strength of the linear

relationship between the five SCMPs and OP while multiple regression analysis was used to examine the impacts of five SCMPs on the OP of manufacturing firms in Sri Lanka. The multiple linear regression model was designed as:

$$\text{Operational Performance} = \beta_0 + \beta_1\text{SRM} + \beta_2\text{CRM} + \beta_3\text{IS} + \beta_4\text{Logistics} + \beta_5\text{Outsourcing} + \epsilon$$

### V. DATA ANALYSIS AND PRESENTATION

The results of the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity ensured the validity and the Cronbach's Alpha values ensured the validity of the data. The majority (34.3%) of the respondents were from the Apparel industry and nearly 27% were from Food and Beverage industry. Nearly 39% of the organizations are having their turnover between Rs 16-250 million and nearly 22% are having is as above Rs. 750 million. All constructs were itemized by ranging from "very small extent" (weight =1) to "very high extent" (weight=7). The mean scores ranged between 3.82(±.63) and 3.87(±.55). The highest value is reported from the degree of change of OP 3.87(±.55) and the differences among the mean scores of the five independent variables were minimal.

The results of the tests were done by using the skewness and kurtosis, all the variables have ensured the

Normality and hence, the Pearson's Correlation test was performed to test the relationships among the variables. Results are in table 1. All five independent variables showed strong positive significant relationships with the OP. Logistics showed the strongest relationship with OP.

After identifying eight outliers in the database by using Cook's D and Leverage plots, the researcher removes all of these outliers and performed the Regression Analysis. In this study, regression analysis has been utilized to find out the significant impact of SCMPs on OP. There are many methods that can be used to analyse the regression analysis among them Multiple Linear Regression model has been selected to fit the data to the model. The adequacy of the best fit model was 67% (Adjusted R<sup>2</sup>=0.67.5) which indicates the explained variation of the OP with the significant independent variables in the model. Further, the Root Mean Square Error (RMSE) is as the value 0.236 (<0.5) ensured the appropriateness of the predicting power of the model (Schermelleh-Engel et al., 2003). As to these values, the overall model has good fitness. The ANOVA test was also significant at a 5% level and the coefficients of the fitted model are in table 2.

Beta values (β) represent the change of the OP as to the change of one unit of the independent variable. According to Table 1, there are two significant variables at the 5 % level. Logistics has the highest significant impact (Standardize β=0.402) and the SRM is the second significant variable. Further, both significant variables positively influenced OP.

**Table 1: Results of the Correlation Analysis**

Independent Variables	Correlation with Operational Performances
Logistics	.832**
Supply Relationship Management (SRM)	.775**
Information Sharing (IS)	.760**
Outsourcing of Services	.743**
Customer Relationship Management (CRM)	.671**

Dependent Variable: Operational Performance  
 \*\*. Pearson's Correlation is significant at the 0.01 level (2-tailed).

**Table 2: Results if the Regression Analysis**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.318	0.283		4.660	0.000
<i>Supply Relationship Mgt (SRM)</i>	<i>0.276</i>	<i>0.120</i>	<i>0.326</i>	<i>2.300</i>	<i>0.025</i>
Customer Relationship Mgt (CRM)	0.020	0.062	0.030	0.322	0.749
Information Sharing (IS)	0.051	0.093	0.080	0.553	0.583
<i>Logistics</i>	<i>0.261</i>	<i>0.081</i>	<i>0.402</i>	<i>3.208</i>	<i>0.002</i>
Outsourcing of Services	0.078	0.072	0.113	1.078	0.286

a. Dependent Variable: Operational Performance

Source: Survey data

The Multi-collinearity diagnostics to test the relationship between independent variables, residual analysis done with Durbin-Watson value to test the autocorrelation of the residuals, Scatter plot of residuals against the predicted values to test the Homoscedasticity, Cook's D and Leverage plots to identify the outliers and influential points, and the Normality of the residuals have ensured the accuracy of the best fit model.

## VI. DISCUSSION

In this study, five dimensions of SCMPs, namely; SRM, CRM, IS, Logistics, and Outsourcing of services were considered to assess their impacts on OP in the Sri Lankan manufacturing industry. The results highlighted that there are significant positive relationships between all five SCMPs and the OP. Hence, when the organizations have a high level of SCMPs their OP can be enhanced. Chesaro (2016) has focused on multinational manufacturing industries in Kenya and found a similar result. Further, among these five SCMPs, only SRM and Logistics factors were found as the significant influences on the OP of the Sri Lankan Manufacturing Industry.

While getting an insignificant impact of CRM on OP, Chesaro (2016) has found that partnerships with customers, managing customer feedback, and improving customer service as ways to build customer relationships. According to the study by Milner and Furnham (2017), managing customer feedback is the critical factor to increase the OP. However, as to the views of the respondents in the Sri Lankan context, most the organizations are not focusing on managing customer feedback properly which might be led to damage to the reputation of the organization, especially in the manufacturing industry.

This study revealed an insignificant impact of Information sharing on OP. But, Chesaro (2016) has found that if the organizations have adequacy of IT systems throughout the supply chain and automated ordering systems to major suppliers has been regarded as the vital aspect concerning conflict of Information sharing. When it comes to the Sri Lankan context, most companies do not have adequate IT systems for the organization and also do not focus to integrate the automated ordering systems for their organizations. Finally, it found an insignificant impact of Outsourcing of services on the OP of the Sri Lankan manufacturing industry.

According to the above findings, it had been established that a substantial range of a number of manufacturing firms have embraced and adopted to SCMPs to boost their OP by maintaining long term supplier relationships. They established supply relationship management as a key tool for rising their engagement with suppliers. Efficient Logistic systems are applied and that led to urge a competitive advantage by ensuring the movement of inputs and final products to the customer on time. Accordingly, the study ensured the

adoption of SCMPs in manufacturing firms in Sri Lanka has led to improved decisions making which has facilitated their survival in a dynamic environment.

This study has recommended that manufacturing firms ought to strengthen their supply chain management by putting more effort into the implementation of some vital best practices. This could be done by keeping some practices updated. Monitoring and further enhancements for specific practices that showed a moderate extent of application ought to be done to make sure full adoption and appreciation of those practices. The supply chain managers ought to so focus a lot on involving employees and managers within the design, implementation and enhancements of the SCMPs to expand service delivery.

This study is greatly important not only to Sri Lankan Manufacturing Industry but also to other industries. It gives further insight into the understanding of SCMP and, how such practices influence OP of the Manufacturing Industry in Sri Lanka. It helps managers to make more effective decisions about the company's operations. Finally, the findings of the study serve as a good source of information on empirical data pertaining to SCMP and it is expected to provide information to stimulate further research in this area for the academic community.

## REFERENCES

- [1] Aderaw, S. (2019). Effect of Total Quality Management (TQM) Dimensions on Operational Performance of Ethiopian Pharmaceutical Manufacturing Plants. In *IAddis Ababa University*. <https://doi.org/10.31033/ijemr.9.4.13>
- [2] Adnan, M., Naveed, R. T., Bhattarai, A., & Ahmad, N. (2016). The Impact of Supply Chain Management Practices towards Operational Performance at Fast Food Restaurants in Puchong ., *International Journal of Research in Business Studies and Management*, 3(8), 27–31.
- [3] AlGhasawneh, L. A. S., & Mahesha, M. (2020). The Effect of Supply Chain Management Practices on Operational Performance of Jordanian Pharmaceutical Companies. *Pramana Research Journal*, 10(9), 203–222.
- [4] Birech, K. W. (2011). *the Effect of Performance Contracting Strategy on the Performance of State Corporations in the Energy Sector in Kenya*.
- [5] Chapelle, A. (2018). Operational Risks in Cryptocurrencies. In *Operational Risk Management* (pp. 207–219). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119548997.ch19>
- [6] Chen, I. J., & Paulraj, A. (2004). Towards a theory of supply chain management: the constructs and measurements. *Journal of Operations Management*, 22, 119–150. <https://doi.org/10.1016/j.jom.2003.12.007>
- [7] Chesaro, R. C. (2016). *Supply Chain Management Practices and Operational Performance of Multinational Manufacturing Firms in Kenya*. <http://erepository.uonbi.ac.ke/bitstream/handle/11295/98>

771/Ronald Research Project Final pdf copy final.pdf?sequence=1&isAllowed=y

[8] Cooper, M. , Lambert, D. M., & Pagh, J. D. (1997). Supply chain management: more than a new name for logistics. *The International Journal of Logistics Management*, 8(1), 1–14. <https://doi.org/http://dx.doi.org/10.1108/09574099710805556> Downloaded

[9] D’Souza, J., Megginson, W. L., & Nash, R. C. (2001). Determinants of Performance Improvements in Privatized Firms: The Role of Restructuring and Corporate Governance. *SSRN Electronic Journal*, 405. <https://doi.org/10.2139/ssrn.243186>

[10] Department of Census and Statistics. (2019). *Annual Survey Report*. <http://www.statistics.gov.lk/Industry/StaticalInformation/AnnualSurveys>

[11] Dubey, R., Gunasekaran, A., Childe, S. J., Papadopoulos, T., & Helo, P. (2018). Supplier relationship management for circular economy: Influence of external pressures and top management commitment. *Management Decision*, 57(4), 767–790. <https://doi.org/10.1108/MD-04-2018-0396>

[12] Fawcett, S. E., Magnan, G. M., & McCarter, M. W. (2008). Benefits, barriers, and bridges to effective supply chain management. *Supply Chain Management: An International Journal*, 13(1), 35–48. <https://doi.org/10.1108/13598540810850300>

[13] Fawcett, S. E., & Smith, S. R. (1995). Logistics measurement and performance for United States-Mexican operations under NAFTA. *Transportation Journal*, 34(3), 25–34.

[14] Feng, M., Terziovski, M., & Samson, D. (2008). Relationship of ISO 9001:2000 quality system certification with operational and business performance: A survey in Australia and New Zealand-based manufacturing and service companies. *Journal of Manufacturing Technology Management*, 19(1), 22–37. <https://doi.org/10.1108/17410380810843435>

[15] Fontagné, L., & Harrison, A. (2017). *The Factory-Free Economy: Outsourcing, Servitization and the Future of Industry*. <https://doi.org/http://www.nber.org/papers/w23016>

[16] Forkmann, S., Henneberg, S. C., Naudé, P., & Mitrega, M. (2016). Supplier relationship management capability: a qualification and extension. *Industrial Marketing Management*, 185–200. <https://doi.org/10.1016/j.indmarman.2016.02.003>

[17] Jayalath, U., Samarasinghe, G. D., Kuruppu, G. N., Prasanna, R., & Perera, H. S. C. (2017). Quality Management and Supply Chain Management Practices towards Operational Performance: A Study of the Rubber Manufacturing Industry of Sri Lanka. *Colombo Business Journal*, 8(2), 19. <https://doi.org/10.4038/cbj.v8i2.16>

[18] Jayarathna, B. C. P., & Lasantha, S. A. R. (2018). Impact of GSCM Practices on Financial Performance: Special Reference to Manufacturing Companies in Sri Lanka. *Kelaniya Journal of Management*, 7(1), 40.

<https://doi.org/10.4038/kjm.v7i1.7553>

[19] Kumar, A., & Kushwaha, G. S. (2018). *LogForum*. 14(1), 85–99.

[20] Li, S., Ragu-Nathan, B., Ragu-Nathan, T. S., & Rao, S. S. (2006). The Impact of Supply Chain Management Practices on Competitive Advantage and Organizational Performance. *Omega*, 34, 107–124. <https://doi.org/10.1016/j.omega.2004.08.002>

[21] Lysons, K., & Farrington, B. (2020). *Procurement and Supply Chain* (10th ed.). Pearson Education Limited.

[22] Miguel, P. L. de S., & Brito, L. A. L. (2011). Supply Chain Management measurement and its influence on Operational Performance. *Journal of Operations and Supply Chain Management*, 4(2), 56. <https://doi.org/10.12660/joscmv4n2p56-70>

[23] Milner, R., & Furnham, A. (2017). Measuring Customer Feedback, Response and Satisfaction. *Psychology*, 08(03), 350–362. <https://doi.org/10.4236/psych.2017.83021>

[24] Mohammed, S., Brahma, G. J., & Aderaw, S. (2019). Impact of Total Quality Management (TQM) on Operational Performance of Ethiopian Pharmaceutical Manufacturing Plants. *International Journal of Engineering and Management Research*, 9(4), 78–86. <https://doi.org/10.31033/ijemr.9.4.13>

[25] Priyashani, L. ., & Gunarathne, C. C. . (2021). Impact of Green Supply Chain Management Practices on Organizational Performance of the Manufacturing Sector in Sri Lanka. *Vidyodaya Journal of Management*, 07(I), 1–25.

[26] Qrunfleh, S. M. (2010). *Alignment of Information Systems with Supply Chains: Impacts on Supply Chain Performance and Organizational Performance by*.

[27] Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of Management*, 35(3), 718–804. <https://doi.org/10.1177/0149206308330560>

[28] Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *MPR-Online*, 8(May), 23–74.

[29] Sukati, I., Hamid, A. B., Baharun, R., & Yusoff, R. M. (2012). The Study of Supply Chain Management Strategy and Practices on Supply Chain Performance. *Procedia - Social and Behavioral Sciences*, 40, 225–233. <https://doi.org/10.1016/j.sbspro.2012.03.185>

[30] Tan, K. C., Lyman, S. B., & Wisner, J. D. (2002). Supply chain management: A strategic perspective. *International Journal of Operations and Production Management*, 22(6), 614–631. <https://doi.org/10.1108/01443570210427659>

[31] Teller, C., Kotzab, H., Grant, D. B., & Holweg, C. (2016). The importance of key supplier relationship management in supply chains. *International Journal of Retail and Distribution Management*, 44(2), 109–123. <https://doi.org/10.1108/IJRDM-05-2015-0072>

[32] Truong, H.Q., Carvalho, M. do S., Fernandes, A. C.,

- Sampaio, P., Binh An, D. T., & Hiep, D. H. (2014). Supply Chain Management Practices and Firms' Operational Performance: An Empirical Study of Vietnam Garment Industry. *International Conference on Quality Engineering and Management*, 85–101. <https://doi.org/10.32508/stdj.v17i1.1263>
- [33] Truong, H.Q., Sameiro, M., Fernandes, A. C., Sampaio, P., Duong, B. A. T., Duong, H. H., & Vilhenac, E. (2017). Supply chain management practices and firms' operational performance. *International Journal of Quality & Reliability Management*, 34(2), 176–193.
- [34] Truong, Huy Quang, Sameiro, M., Fernandes, A. C., Sampaio, P., Duong, B. A. T., Duong, H. H., & Vilhenac, E. (2017). Supply chain management practices and firms' operational performance. *International Journal of Quality and Reliability Management*, 34(2), 176–193. <https://doi.org/10.1108/IJQRM-05-2015-0072>
- [35] Vafaei-Zadeh, A., Ramayah, T., Hanifah, H., Kurnia, S., & Mahmud, I. (2020). Supply chain information integration and its impact on the operational performance of manufacturing firms in Malaysia. *Information and Management*, 57(8), 103386. <https://doi.org/10.1016/j.im.2020.103386>
- [36] Vesey, J. T. (1991). The new competitors: thinking in terms of "speed-to-market". *Academy of Management Executive*, 5(2), 23–33.
- [37] Vickery, S. K., Jayaram, J., Droge, C., & Calantone, R. (2003). The effects of an integrative supply chain strategy on customer service and financial performance: An analysis of direct versus indirect relationships. *Journal of Operations Management*, 21(5), 523–539. <https://doi.org/10.1016/j.jom.2003.02.002>
- [38] Voss, C. A., Åhlström, P., & Blackmon, K. (1997). Benchmarking and operational performance: Some empirical results. *International Journal of Operations and Production Management*, 17(10), 1046–1058. <https://doi.org/10.1108/01443579710177059>
- [39] Wakchaure, V. D., Nandurkar, K. N., & Kallurkar, S. P. (2014). Relationship between Implementation of TQM, JIT, TPM and SCM and Manufacturing Performance: Empirical Evidences from Indian Context. *ASME 2014 International Manufacturing Science and Engineering Conference*, 1–10.
- [40] White, G. P. (1996). OPERATIONS A meta-analysis model of manufacturing capabilities. *Journal of Operations Management*, 14, 315–331.
- [41] Wisner, J. D. (2003). A Structural Equation Model of Supply Chain. *Journal of Business Logistics*, 24(1), 1–26.
- [42] Wong, C. Y., Arlbjorn, J. ., & Johansen, J. (2011). Supply chain management practices in toy supply chains. *Supply Chain Management: An International Journal*, 10(5), 367–378. <https://doi.org/10.1108/13598540510624197>