RESEARCH PAPER

Quantifying the influence of supplier relationship management and supply chain performance: an investigation of Bangladesh's manufacturing and service sectors

Md Mehedi Hasan Emon[1], Tahsina Khan[2], Saleh Ahmed Jalal Siam[1]

[1]American International University-Bangladesh (AIUB), Kuratoli, Bangladesh.
[2]Bangladesh University of Professionals (BUP), Mirpur Cantonment, Bangladesh.

ABSTRACT

Purpose: This study explores the impact of Supplier Relationship Management (SRM) practices on supply chain performance, with a focus on cost efficiency, within the dynamic context of Bangladesh. The purpose is to elucidate the relationships between SRM practices, specifically Supplier Collaboration, Supplier Development, Supplier Evaluation and Selection, and Long-Term Supplier Relationships, and their influence on cost efficiency within supply chains.

Design/Methodology/Approach: A quantitative research approach was employed, utilizing regression analysis and correlation analysis to analyze data collected through a structured survey from 270 Participants within Bangladesh's Manufacturing and Service Sectors. The research adopted a cross-sectional time horizon, providing a snapshot view of the relationships between SRM practices and cost efficiency.

Findings: The findings reveal that Supplier Collaboration and Long-Term Supplier Relationships significantly and positively influence cost efficiency within the supply chains of Bangladeshi organizations. These SRM practices collectively contribute to approximately 64.2% of the variance in cost efficiency, emphasizing their critical role in optimizing supply chain performance.

Research Limitations/Implications: Limitations of this study include its cross-sectional nature and the focus on a specific set of SRM practices. Future research can explore additional SRM dimensions and employ longitudinal approaches for deeper insights.

Practical Implications: Practitioners can leverage the study's findings to enhance supply chain performance by implementing holistic SRM strategies, fostering collaborative supplier relationships, and nurturing long-term partnerships with suppliers.

Social Implications: This research contributes to the broader economic landscape of Bangladesh by highlighting the importance of SRM practices in enhancing cost efficiency, which can ultimately lead to economic growth and competitiveness.

Originality/Value: This study extends the understanding of SRM practices by examining their applicability and significance in an emerging market like Bangladesh. It underscores the originality and value of SRM as a strategic imperative for organizations operating in diverse contexts.

Keywords: Supplier Relationship Management; SRM Practices; Supply Chain Performance; Cost Efficiency; Bangladesh; Emerging Markets.

1 INTRODUCTION

The efficacy of an organization's supply chain management relies on its capacity to preserve

robust and mutually advantageous relationships with its suppliers. Supplier Relationship Management (SRM) is widely recognized as a crucial method for achieving this goal, as evidenced by numerous studies conducted in well-established industrial settings, such as the United States (Farooque et al., 2022; Zhang et al., 2021) and Germany (Reu et al., 2019). These studies, conducted on a worldwide scale, have highlighted the positive influence of proficient SRM strategies on various aspects of supply chain performance, including supplier performance, cost effectiveness, product quality, and delivery punctuality. As global industries continue to evolve, emerging economies like Bangladesh have become prominent participants in the international marketplace.

In the specific context of Bangladesh, a country experiencing rapid economic growth and a flourishing industrial sector, the significance of efficient SRM cannot be emphasized enough. In recent years, Bangladesh has demonstrated significant progress in establishing itself as a prominent participant in the worldwide supply chain, with a particular focus on industries such textiles, ready-made clothing, and electronics (Fouji & Hoque, 2021). Due to its expanding industrial sector and extensive supplier network, the nation has emerged as an appealing destination for foreign enterprises in search of economically efficient manufacturing and sourcing alternatives. The observed evolution serves as evidence of Bangladesh's capacity inside the international marketplace. Nevertheless, it is crucial to examine the impact of SRM techniques on the performance of supply chains functioning in Bangladesh, as the country takes on its position in the global supply chain. Although there exists a considerable body of literature on SRM, a significant proportion of the study has mostly concentrated on industrialized economies. Consequently, there is a notable knowledge gap about the application and effectiveness of SRM in emerging economies such as Bangladesh. The distinctive environment of Bangladesh, characterized by its economic, cultural, and infrastructural intricacies, warrants a focused examination (Hossain et al., 2023).

The primary objective of the present study is to fill the existing research void by quantitatively examining the impact of SRM on enhancing supply chain performance in the context of Bangladesh. This investigation will build upon the knowledge gained from prior research conducted on a worldwide scale. For instance, research conducted in the United States by Farooque et al., (2022) and in Germany by Reuß et al., (2019) emphasized the favorable influence of proficient SRM strategies on various aspects, including supplier performance, cost effectiveness, product quality, and delivery punctuality. The conducted research, carried out in established industrial contexts, has yielded significant reference points for SRM procedures. Nevertheless, the specific economic, cultural, and infrastructural complexities of Bangladesh give rise to a separate framework that could potentially impact the dynamics of SRM in a distinct manner. The current study seeks to fill this void by particularly examining the Bangladeshi context, so adding a nuanced viewpoint to the existing pool of information. Through the analysis of SRM in an emerging country, this study aims to reveal unique perspectives that may diverge from findings in research undertaken in industrialized countries. A comprehensive comprehension of how SRM methods affect performance metrics is essential due to the unique difficulties and possibilities present in the supply chain ecosystem of Bangladesh. The study offers a fresh viewpoint by examining the utilization and efficacy of SRM in a distinctive and ever-changing economic environment, providing valuable insights that might enhance both theoretical understanding and practical implementation in the worldwide domain of supply chain management. Although several studies have investigated the concept of SRM in developed economies, there is a notable scarcity of study that focuses on examining this phenomenon within the unique context of Bangladesh. Prior studies conducted in this domain have yielded significant findings pertaining to the correlations between SRM methods and key performance indicators (KPIs) within supply chain management. For example, research done in the United States (Farooque et al., 2019) and Germany (Reuß et al., 2019) has emphasized the favorable influence of proficient SRM strategies on supplier performance, cost effectiveness, product quality, and delivery punctuality. The studies highlight the significance of SRM in improving many facets of supply chain performance. Moreover, scholarly investigations conducted in developing nations, such as India, have provided evidence of the significance of SRM strategies in enhancing cost effectiveness (Queiroz & Wamba, 2019). Numerous studies undertaken in various international settings have continuously underscored the significance of collaboration, information sharing, and trust-building between buyers and suppliers as pivotal elements of effective SRM (Hoang et al., 2023).

As Bangladesh strives to establish itself as a significant participant in the global supply chain, it is imperative to thoroughly investigate the suitability and efficacy of SRM approaches in this distinct setting, as shown by previous study findings. Therefore, the present study aims to expand upon the existing body of research by directing its attention towards the supply chains of Bangladesh. This study seeks to give significant insights for practitioners and policymakers acting within the Bangladeshi context by examining the correlation between SRM techniques and key supply chain performance indicators, including Supplier Collaboration, Supplier Development, Supplier

Evaluation and Selection, Long-Term Supplier Relationships.

Previous research has provided valuable insights into the impact of SRM on supply chain performance at a global level. However, this study seeks to expand this knowledge by examining the specific context of Bangladesh. By doing so, it aims to contribute to a more comprehensive understanding of how SRM influences supply chain dynamics in emerging economies. Despite the increasing significance of SRM, there exists a dearth of empirical studies examining its influence on supply chain performance within the context of Bangladesh. The objective of this study is to address the existing research gap by investigating the precise connections between SRM methods and measures of supply chain performance. The value of this study is derived from its contribution to the existing body of knowledge on SRM specifically within the setting of Bangladesh. It contributes to the understanding of the advantages that may be gained by implementing successful SRM tactics. The primary objective of this study is to examine the manufacturing and service sectors in Bangladesh. The research will span enterprises of diverse sizes and operational complexities in order to conduct a thorough evaluation of SRM techniques and their influence on the performance of supply chains.

2 EMPIRICAL LITERATURE AND HYPOTHESIS DEVELOPMENT

2.1 Supplier relationship management and supply chain performance

SRM is a critical aspect of modern supply chain management (Adesanya et al., 2020). It involves developing dynamic partnerships between businesses and their suppliers (Sharma et al., 2020). SRM focuses on creating lasting and mutually beneficial relationships beyond mere transactions (Enz & Lambert, 2023). In today's competitive landscape, strong supplier relationships are vital for success (Amoako-Gyampah et al., 2019). SRM goes beyond transactions, encompassing strategic collaboration, innovation, and value generation (Pereira et al., 2022). This review examines SRM's impact on supply chain performance, including cost efficiency, product quality, on-time delivery, and customer satisfaction. SRM has evolved from transactional interactions to strategic alliances (Abbas & Tong, 2023). Recognizing suppliers as essential partners shifted the focus to collaboration and long-term partnerships. Technological advancements improved SRM's efficiency, with digital platforms enhancing communication (Emon & Nahid, 2023; Tseng, 2020). Strong relationships with suppliers stimulate innovation and value creation (Lee & Tang, 2018). SRM now encompasses collaborative partnerships, risk management, supplier development, and sustainability (Emon & Khan, 2023; Huma et al., 2020). Empirical studies show that proficient SRM positively impacts supplier performance, cost-effectiveness, product quality, and delivery punctuality (Le Jr, 2022). Collaboration, information exchange, and trust development are key foundations of successful SRM (Cha & Kim, 2018). Supplier development activities enhance supplier performance (Mani et al., 2018).

2.2 Supplier Collaboration and Supply Chain Performance:

SRM highlights the importance of strategic collaboration as a fundamental element for achieving success in the current dynamic and competitive supply chain environment (Oduro et al., 2020). There is a large body of literature that strongly supports the notion that successful collaboration with suppliers plays a crucial role in improving the performance of the supply chain. This section examines the current studies on how supplier collaboration affects several aspects of supply chain performance and builds upon the literature presented by Oduro et al., (2020). Collaborative relationships in SRM go beyond standard transactional methods and play a crucial role in promoting innovation, enhancing product quality, assuring timely delivery, and ultimately improving customer happiness (Abtahi et al., 2023; Stek & Schiele, 2021). The development of SRM has experienced a significant change from transactional interactions to the formation of strategic partnerships, emphasizing the crucial role of collaboration in creating and sustaining long-term relationships with suppliers (Yang, 2022). The growing interdependence and global integration of supply chains has underscored the importance of strong collaborative methods. Technological improvements are crucial in enabling and enhancing collaborative efforts in SRM. Digital platforms have become crucial instruments that not only facilitate communication but also improve the sharing of information between organizations and their suppliers (Ebinger & Omondi, 2020). These platforms facilitate instantaneous data exchange, which is essential for efficient collaboration, especially in a multinational supply chain setting where prompt information is vital.

Although (Leiras & Fontainha, 2019; Oduro et al., 2020) have shed light on the beneficial effects of supplier collaboration on supply chain performance, there may still be gaps and unexplored areas in the existing literature. The purpose of this part is to identify the gaps in the current understanding of how supplier collaboration affects supply chain performance. It also highlights

the specific contributions of this study in addressing and enhancing the existing knowledge in this area. This study seeks to further the knowledge of the complex relationship between collaborative practices and supply chain performance by combining additional literature that addresses subtle aspects of supplier collaboration.

2.3 Supplier Development and Supply Chain Performance

Supplier development activities are acknowledged as key elements in the larger context of SRM, serving a vital function in improving supplier performance and, subsequently, overall supply chain efficiency (Dubey et al., 2019). This part performs a thorough examination of the current body of research to investigate the complex connection between supplier development and supply chain performance, expanding upon the knowledge presented by Dubey et al., (2019). Supplier development goes beyond conventional transactional methods and encompasses a range of actions aimed at improving the talents and performance of suppliers (Awan et al., 2019). Activities may encompass training programs, streamlining processes, embracing technology, and engaging in collaborative projects with the goal of promoting innovation and ongoing enhancement. According to the literature, supplier development programs that are successful contribute to better supplier performance, which in turn leads to cost-effectiveness and increased efficiency in the supply chain (Asif et al., 2022).

Although the current body of literature offers significant insights into the favorable relationship between supplier development and supply chain performance, there are still intricacies and unique mechanisms that warrant further investigation. Gaining insight into the impact of different elements of supplier development on various facets of supply chain performance is essential for formulating focused and efficient strategies. This section seeks to highlight any existing gaps in the current knowledge and clarify how the present study helps to filling these gaps by offering a detailed perspective on the complex connection between supplier development activities and the overall performance of the supply chain.

2.4 Supplier Evaluation and Supply Chain Performance:

Effective SRM relies on the use of strong supplier assessment methods, which are essential for achieving optimal supply chain efficiency (Amoako-Gyampah et al., 2019; Klingebiel et al., 2013). This section provides a comprehensive analysis of the current research on the complex connection between supplier evaluation and the overall performance of the supply chain. It expands on the fundamental findings presented by Amoako-Gyampah et al., (2019). Supplier evaluation in the context of SRM entails a thorough examination of supplier performance, cost efficiency, product quality, and delivery timeliness (Lim et al., 2021). Proficient SRM has been found to have a favorable impact on supplier evaluation, leading to improvements in several aspects of supply chain performance, as indicated by the existing literature. However, there may be gaps in our present understanding of how the precise criteria used in supplier assessment processes are closely connected to various aspects of supply chain performance. The purpose of this section is to identify and explain the gaps in the current knowledge, by conducting a detailed analysis of the relationship between different criteria used to evaluate suppliers and various aspects of supply chain performance. Through this approach, it aims to enhance and improve the theoretical foundation that supports the connection between supplier evaluation methods and the overall efficacy of the supply chain.

2.5 Long-Term Supplier Relationship and Supply Chain Performance:

Long-term supplier connections play a crucial role in SRM, exerting substantial impact on supply chain performance (Oduro et al., 2020). This part provides a thorough examination of the current research, exploring the complex connection between long-term relationships with suppliers and the various factors that affect supply chain effectiveness. The fundamental knowledge presented by Shakeel et al., (2018) acts as a crucial basis for this investigation. Organizations have recognized the importance of suppliers as crucial partners and have therefore made it a strategic priority to develop long-term relationships. This involves focusing on collaboration and mutual benefits under the SRM framework (Kannan, 2018). Empirical research confirm that long-term supplier relationships have a beneficial effect on different measures of supply chain performance. However, there may be gaps in our current understanding regarding the detailed mechanisms by which these linkages contribute to the complex fabric of supply chain performance. This section aims to thoroughly identify any potential gaps in the current literature, with the goal of clarifying how the present study enhances the understanding of the relationship between long-term supplier relationships and various aspects of supply chain performance. In order to improve the scope and

comprehensiveness of this analysis, it will be crucial to include contemporary research and a variety of viewpoints on long-term supplier partnerships. This section aims to add to both theoretical refinement and practical insights for businesses managing long-term supplier relationships within the broader framework of SRM.

2.6 Theoretical Frameworks in SRM

Table 1 - Theoretical Frameworks in SRM

Theoretical Framework	Key Concepts and Relevance	Sources
Transaction Cost Economics	- Minimizing transaction costs in supplier relationships.	(Rindfleisch, 2020; Schmidt & Wagner, 2019; Stone, 1986)
	- Aligning SRM practices with transaction-specific characteristics.	(Macher & Richman, 2008; Saad et al., 2022; Wynstra et al., 2019)
Resource-Based View	- Leveraging supplier relationships as sources of competitive advantage.	(Barney, 1991; Nandi et al., 2020; Shibin et al., 2020)
	- Recognizing supplier-specific assets, knowledge, and capabilities.	(Burki et al., 2023; Saghiri & Mirzabeiki, 2021; Wernerfelt, 1984)
Agency Theory	- Addressing agency problems and information asymmetry in SRM.	(Dong et al., 2021; Jensen & Meckling, 2019; Kummer et al., 2020)
	- Designing SRM practices to align incentives between organizations and suppliers.	(Ali et al., 2020; Dubey et al., 2019; Eisenhardt, 1989)
	- Monitoring and control mechanisms in SRM relationships.	(Fama, 1980; Songsom et al., 2019)
	- The role of contracts and performance-based incentives in SRM.	(Grum et al., 2023; Milgrom et al., 1992)

Understanding Supplier Relationship Management's (SRM) theoretical foundations and evolution is essential to grasp its dynamics. Originally transactional, SRM has evolved into a strategic approach focusing on long-term value (Dash et al., 2018). Theoretical dimensions include transaction cost minimization, resource leverage, incentive alignment, and risk management (Rejeb et al., 2021). The evolution of Transaction Cost Economics (TCE), Resource-Based View (RBV), and Agency Theory has mirrored SRM's transformation. Transaction Cost Economics (TCE) emphasizes minimizing transaction costs in SRM (Swallehe, 2021). Resource-Based View (RBV) highlights supplier relationships as sources of competitive advantage (Andersen, 2021). Agency Theory addresses agency issues within supplier relationships (Dubey et al., 2019). These theories intersect in SRM to reduce costs, leverage resources, align incentives, and manage risks (Gilmore & Buhaug, 2021).

Depending upon the theoretical underpinnings elucidated in the comprehensive examination of existing literature, the present section delineates the conceptual framework that will guide the investigation. The theoretical framework selected for this study is the Resource-Based View (RBV), which asserts that businesses can attain enduring competitive advantage via the strategic utilization of distinctive resources and skills. across the scope of this study, the Resource-Based View (RBV) framework offers a perspective that enables the examination of how SRM methods impact a particular outcome variable, namely cost efficiency, across supply chains operating in Bangladesh. The Resource-Based View (RBV) theory places significant emphasis on the significance of supplier relationships as important sources of resources and capabilities that ultimately promote cost effectiveness within supply chains. The resources and capabilities obtained through SRM techniques are anticipated to have a favorable impact on cost efficiency. This is demonstrated by the potential to attain cost reductions, cost savings, and cost-effectiveness in supply chain activities.

2.7 Research Hypotheses & Conceptual Framework

Supplier collaboration: The implementation of supplier collaboration, which involves engaging in cooperative activities and sharing knowledge with suppliers, has been demonstrated to improve

the operational efficiency of supply chain processes. Collaboration of this nature has the potential to enhance communication, optimize procedures, and enhance coordination, hence yielding cost efficiencies. Prior studies have provided evidence that the establishment of successful collaboration with suppliers has a beneficial influence on cost efficiency (Cole & Aitken, 2019; Paparoidamis et al., 2019), thus confirming the premise of a positive association.

H0: Supplier collaboration has no significant influence on cost efficiency in the supply chains of Bangladeshi organizations.

H1: Supplier collaboration has a significant positive influence on cost efficiency in the supply chains of Bangladeshi organizations.

Supplier development: Supplier development programs, encompassing activities such as training and knowledge transfer, possess the capacity to augment the capabilities of suppliers, hence resulting in enhancements to processes and reductions in costs. Previous studies have demonstrated that supplier development initiatives have a favorable impact on cost effectiveness (Awan et al., 2019; Sikombe & Phiri, 2019), hence substantiating the proposition of a positive correlation.

H0: Supplier development efforts have no significant impact on cost efficiency in the supply chains of Bangladeshi organizations.

H2: Supplier development efforts have a significant positive impact on cost efficiency in the supply chains of Bangladeshi organizations.

Supplier Evaluation and Selection: The implementation of effective supplier evaluation and selection methods is crucial in ensuring that organizations establish partnerships with dependable and high-performing suppliers. Efficient evaluation procedures are anticipated to result in improved selection of suppliers, hence positively influencing cost effectiveness through the mitigation of quality-related concerns and supply disruptions. The favorable association between supplier evaluation and selection and cost efficiency has been supported by empirical research conducted by Kannan (2018) and Naghshineh & Carvalho (2022) (Kannan, 2018; Naghshineh & Carvalho, 2022).

H0: Effective supplier evaluation and selection practices have no significant effect on cost efficiency in the supply chains of Bangladeshi organizations.

H3: Effective supplier evaluation and selection practices have a significant positive effect on cost efficiency in the supply chains of Bangladeshi organizations.

Long-Term Supplier Relationships: The establishment and maintenance of enduring connections with essential suppliers contribute to the cultivation of trust, collaboration, and shared comprehension. These attributes are frequently linked with enhanced operational efficiency and less interruptions, hence contributing to cost-effectiveness. Prior studies have demonstrated that establishing enduring partnerships with suppliers has a favorable impact on cost effectiveness (Herczeg et al., 2018; Wang et al., 2023), hence lending weight to the proposition of a positive association.

H0: Long-term supplier relationships have no significant impact on cost efficiency in the supply chains of Bangladeshi organizations.

H4: Long-term supplier relationships have a significant positive impact on cost efficiency in the supply chains of Bangladeshi organizations.

The conceptual framework includes SRM practices as independent variables and supply chain performance indicators (cost efficiency) as dependent variables. As illustrated in Figure 1 the four independent variables namely Supplier collaboration, Supplier development, Supplier Evaluation and Selection, Long-Term Supplier Relationships have been presented in the left side of the diagram and dependent variable cost efficiency is presented in the Right side of the diagram. The relationships between each independent variable and the dependent variable are indicated by the four-research hypothesis connecting the variables through the arrows.
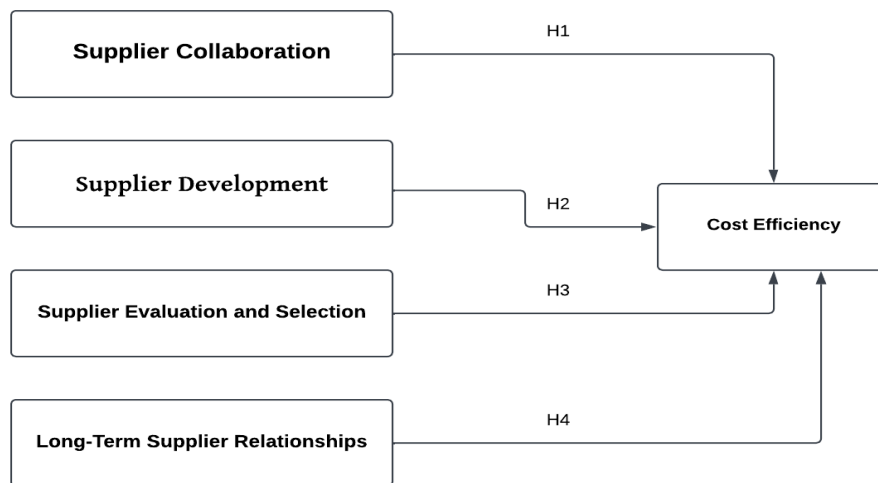
Figure 1 - Conceptual Framework

3. MATERIAL AND METHODS

The research design employed for this study is quantitative, aiming to comprehensively investigate the relationship between SRM practices and cost efficiency in the supply chains of firms operating in Bangladesh. The study focuses on one main category of variables: independent variables representing SRM practices and one dependent variable representing cost efficiency. In terms of independent variables, the study encompasses four dimensions of SRM practices. **Supplier Collaboration,** the variable in question quantifies the extent of collaboration and information exchange between enterprises and their suppliers. This statement elucidates the degree to which firms partake in collaborative endeavors and exchange information with suppliers in order to enhance cost effectiveness within their supply chains (Tai et al., 2022). **Supplier Development,** this variable evaluates the endeavors undertaken by enterprises to enhance the capabilities and resources of their suppliers. The initiatives encompass many strategies, such as training programs, technology transfer endeavors, and collaborative projects focused on enhancing process efficiency with the goal of attaining cost effectiveness (Gu et al., 2021). **Supplier Evaluation and Selection,** this variable investigates the criteria and procedures employed by firms to assess, choose, and oversee their suppliers. The concept incorporates various elements such as assessments of supplier performance, evaluations of quality, and procedures related to risk management, all of which have an impact on cost efficiency (Dobos & Vörösmarty, 2019). **Long-Term Supplier Relationships**, this characteristic pertains to the temporal extent and steadfastness of the associations established between organizations and their suppliers. The metric assesses the degree to which firms sustain enduring collaborations with crucial suppliers, which can have a lasting impact on cost effectiveness (Mohan et al., 2021). The dependent variable, *Cost Efficiency,* the dependent variable in question measures the degree of cost-effectiveness exhibited by supply chain operations. The measurements encompassed in this category consist of cost reduction, cost savings, and supply chain cost-to-revenue ratios (Panfilova et al., 2020). The study's setting was Bangladesh, with a specific focus on organizations in various sectors, including manufacturing and services. The study involved a Convenience sampling technique to ensure representation from both manufacturing and service sectors. Data were collected from multiple departments or individuals responsible for SRM and supply chain operations within each firm, such as procurement, supply chain management, and strategic management. The participants, selected based on their roles and responsibilities related to SRM practices, included managers, procurement officers, and individuals involved in supply chain decision-making processes. A sample size of 270 individuals was determined to strike a balance between practicality and the requirement for statistical significance, considering the constraints of convenience sampling. Data were collected through a structured survey instrument consisting of 22 items, representing independent and dependent variables. The Likert scale was used to measure responses, ranging from strongly disagree to strongly agree. The survey instrument was developed based on a thorough review of existing literature and validated scales used in previous studies. Quantitative techniques, including regression analysis and correlation analysis, were applied for data analysis using SPSS 22 to assess the relationships between SRM practices and cost efficiency. These statistical methods aimed to provide insights into the extent to which SRM practices influenced cost efficiency in the context of Bangladeshi firms. Throughout the research process, ethical considerations, including informed consent, data

confidentiality, and anonymity, were meticulously maintained to ensure the integrity and ethical conduct of the study. The reliability of the measurements was assessed through techniques such as Cronbach's alpha for survey instruments. The study aimed to minimize measurement errors and ensure the reliability of collected data.

Table 2 - Reliability of the Measurements

Construct	Item No	Cronbach's alpha
Supplier Collaboration	5	.911
Supplier Development	5	.922
Supplier Evaluation and Selection	5	.876
Long Term Supplier Relationships	5	.917
Cost Efficiency	2	.854

The reliability of the measurements was assessed through Cronbach's alpha values for each construct in Table 2. The results indicate high internal consistency and reliability among the items measuring Supplier Collaboration, Supplier Development, Long-Term Supplier Relationships, and Cost Efficiency, with Cronbach's alpha values of .911, .922, .917, and .854, respectively. The construct of Supplier Evaluation and Selection also exhibits good internal consistency, with a Cronbach's alpha value of .876. These findings affirm the dependability of the measurement instruments, suggesting that the items within each construct consistently capture the intended concepts. Overall, the study's measurement instruments demonstrate satisfactory to excellent reliability, instilling confidence in the accuracy and consistency of the data collected for the investigation.

4. RESULTS

4.1 Correlation

Table 3 - Correlations Analysis

		Supplier Collaboration	Supplier Development	Supplier Evaluation and Selection	Long Term Supplier Relationships	Cost Efficiency
Supplier Collaboration	Pearson Correlation	1	.889**	.856**	.796**	.728**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	270	270	270	270	270
Supplier Development	Pearson Correlation	.889**	1	.885**	.801**	.702**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	270	270	270	270	270
Supplier Evaluation and Selection	Pearson Correlation	.856**	.885**	1	.792**	.685**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	270	270	270	270	270
Long Term Supplier Relationships	Pearson Correlation	.796**	.801**	.792**	1	.782**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	270	270	270	270	270
Cost	Pearson	.728**	.702**	.685**	.782**	1

Efficiency	Correlation				
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	270	270	270	270	270
**. Correlation is significant at the 0.01 level (2-tailed).						

The results of the correlation study, as shown in Table 6, indicate statistically significant associations among the variables being examined, namely "Supplier Collaboration," "Supplier Development," "Supplier Evaluation and Selection," "Long Term Supplier Relationships," and "Cost Efficiency." The quantification of these interactions is accomplished by use Pearson correlation coefficients, all of which exhibit statistical significance at the 0.01 level (two-tailed), so suggesting robust associations.

The dimension of "Supplier Collaboration" demonstrates a notably strong positive correlation of 88.9% with the dimension of "Supplier Development," indicating a solid and significant association between these two aspects of managing supplier relationships. Furthermore, the concept of "Supplier Collaboration" exhibits a significant positive correlation of 85.6% with "Supplier Evaluation and Selection," underscoring the robustness of the association between these two factors. The concept of "Supplier Development" exhibits a notably robust positive correlation of 88.5% with "Supplier Evaluation and Selection," hence emphasizing their significant alignment. Moreover, there exists a strong positive correlation of 80.1% between the construct of "Supplier Development" and the construct of "Long Term Supplier Relationships," highlighting the significant interdependence of both variables. The variable "Supplier Evaluation and Selection" demonstrates a significant positive correlation of 79.2% with the variable "Long Term Supplier Relationships," indicating a robust link between the two. There exists a positive association between "Cost Efficiency" and all elements of supplier relationship management, as evidenced by the Pearson correlation coefficients. It is worth noting that the variable "Cost Efficiency" exhibits a substantial positive correlation of 72.8% with the variable "Supplier Collaboration," a positive correlation of 70.2% with "Supplier Development," a positive correlation of 68.5% with "Supplier Evaluation and Selection," and a notably high positive correlation of 78.2% with "Long Term Supplier Relationships." In summary, the aforementioned data suggest that when supplier management techniques adopt a more collaborative approach, prioritize development, incorporate evaluation measures, and aim to cultivate long-term partnerships, there is a notable enhancement in "Cost Efficiency." The percentages presented in the data indicate the magnitude and orientation of these connections, underscoring the noteworthy influence of proficient supplier relationship management on cost effectiveness, a critical facet of organizational efficacy.

5.2 Regression Analysis

Table 4 - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.801[a]	.642	.637	.69525	.642	118.993	4	265	.000
a. Predictors: (Constant), Long Term Supplier Relationships, Supplier Evaluation and Selection, Supplier Collaboration, Supplier Development									

The Model Summary table presents a detailed overview of the regression analysis performed in this study, providing insights into the performance and importance of the model. The table presents a strong positive linear association between the dependent variable (not specified in the table) and a group of independent variables, including SRM practices such as Supplier Collaboration, Supplier Development, Supplier Evaluation and Selection, and Long-Term Supplier Relationships, as indicated by an R-value of .801. The considerable R-value highlights the model's capacity to elucidate fluctuations in the dependent variable. The coefficient of determination, represented by the symbol R^2, is seen to be 0.642. This implies that around 64.2% of the variability observed in the dependent variable may be ascribed to the impact of the SRM practices used in the model. The observed R^2 value indicates that the set of SRM practices under consideration make a substantial contribution towards explaining the variability observed in the dependent variable. Additionally, the adjusted R^2, which accounts for the number of predictors in the model, demonstrates a robust value of .637. The revised number suggests that, even after accounting for

the potential danger of overfitting, the model is capable of efficiently elucidating around 63.7% of the variability observed in the dependent variable. The standard error of the estimate, which represents the mean variation between projected and actual values, is calculated to be .69525. This metric offers a measure of the model's accuracy in forecasting the values of the dependent variable. The change statistics section provides evidence of a significant enhancement in the model's fit when using the SRM practices as predictors. The F-statistic, which has a value of 118.993, along with a p-value of .000 that is highly significant, provides confirmation of the overall relevance of the model incorporating these predictors. The aforementioned observation highlights the significance and pertinence of the Strategic Risk Management (SRM) techniques when elucidating the fluctuations observed in the dependent variable. In summary, the Model Summary table indicates that the regression model, which includes SRM practices as predictors, is statistically significant and has a strong ability to account for a significant portion of the variability in the dependent variable. This underscores the importance of these practices in the context of the study.

Table 5 - ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	230.073	4	57.518	118.993	.000[b]
	Residual	128.094	265	.483		
	Total	358.167	269			
a. Dependent Variable: Cost Efficiency						
b. Predictors: (Constant), Long Term Supplier Relationships, Supplier Evaluation and Selection, Supplier Collaboration, Supplier Development						

Table 4 presents the ANOVA table, which provides valuable insights into the relevance of the predictor variables in the regression model used to estimate "Cost Efficiency." The table is partitioned into three primary segments, namely Regression, Residual, and Total. In the Regression section, the calculation of the sum of squares is performed to evaluate the amount of variance accounted for by the model. The resulting value is determined to be 230.073, with a corresponding 4 degrees of freedom (df). The mean square value that corresponds to the given data is 57.518. In contrast, the Residual part pertains to the unexplained variance and presents a sum of squares equal to 128.094, which is accompanied by 265 degrees of freedom. The Total Sum of Squares (TSS), which measures the total variance in "Cost Efficiency," is calculated to be 358.167.

The F-statistic, a crucial metric, is computed as 118.993 by dividing the mean square for the regression by the mean square for the residual. This statistical measure evaluates the overall significance of the regression model. The p-value, shown as "Sig.," is significantly small (p = .000). The obtained p-value, which is remarkably low, provides strong evidence that the regression model, encompassing Long-Term Supplier Relationships, Supplier Evaluation and Selection, Supplier Collaboration, and Supplier Development as predictor variables, is highly significant in elucidating the fluctuations observed in "Cost Efficiency." In more accessible language, these predictor variables together considerably improve the model's capacity to explain the differences found in "Cost Efficiency." Therefore, the analysis of variance (ANOVA) findings offer strong statistical support for the model's ability to effectively elucidate and forecast cost efficiency within the framework of supplier relationship management procedures.

Table 6 - Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.303	.270		-1.121	.263
	Supplier Collaboration	.342	.109	.275	3.146	.002
	Supplier Development	.027	.114	.022	.233	.816
	Supplier Evaluation and Selection	-.007	.118	-.005	-.058	.954
	Long Term Supplier Relationships	.681	.082	.550	8.332	.000
a. Dependent Variable: Cost Efficiency						

The examination of the coefficients in Table 5 allows for the analysis of the regression model, providing valuable insights into the distinct impacts of each predictor variable on the dependent variable, "Cost Efficiency." The constant term in the equation represents the baseline level of "Cost Efficiency" in the absence of any predictor factors. The observed phenomenon exhibits an unstandardized coefficient (B) of -0.303, accompanied by a standard error of 0.270. The t-statistic associated with the given data is -1.121, resulting in a p-value of 0.263. This p-value is above the commonly accepted significance level of 0.05. Therefore, it may be concluded that the constant term does not possess statistical significance in its ability to explain the fluctuations observed in "Cost Efficiency." Shifting our focus towards the independent factors, the variable "Supplier Collaboration" holds considerable importance. The unstandardized coefficient (B) is reported as 0.342, with a standard error of 0.109, and a standardized coefficient (Beta) of 0.275. The predictor exhibits a t-statistic of 3.146, accompanied by a p-value of 0.002, indicating a significant and positive influence on the variable "Cost Efficiency." More precisely, there is a positive correlation between a one-unit increase in supplier collaboration and a 0.342-unit improvement in "Cost Efficiency." On the other hand, the variable "Supplier Development" demonstrates a coefficient (B) of 0.027, which lacks standardization, accompanied with a standard error of 0.114. Nevertheless, the standardized coefficient (Beta) for this variable is only 0.022, indicating a minimal impact. The t-statistic for the predictor variable is calculated to be 0.233, with a corresponding p-value of 0.816. This p-value exceeds the commonly accepted significance level of 0.05. Therefore, the variable "Supplier Development" does not exhibit a statistically significant impact on the variable "Cost Efficiency." Similarly, the variable "Supplier Evaluation and Selection" is found to have an unstandardized coefficient (B) of -0.007, with a corresponding standard error of 0.118. The standardized coefficient (Beta) has a value of -0.005. The t-statistic for the predictor in question is -0.058, and its corresponding p-value is 0.954, both of which are significantly beyond the conventional threshold for statistical significance. Therefore, the variable "Supplier Evaluation and Selection" does not demonstrate a statistically significant influence on the variable "Cost Efficiency." Finally, the variable "Long Term Supplier Relationships" appears as a significantly influential predictor. The unstandardized coefficient (B) is reported as 0.681, accompanied by a standard error of 0.082. Additionally, the standardized coefficient (Beta) is reported as 0.550, indicating a significant effect. The t-statistic for the predictor variable exhibits robustness, measuring 8.332. The related p-value is 0.000, indicating a significant and positive impact on the variable "Cost Efficiency." Specifically, an increase of one unit in long-term supplier connections is associated with a significant rise of 0.681 units in "Cost Efficiency." In summary, the variables of "Supplier Collaboration" and "Long Term Supplier Relationships" demonstrate statistically significant relationships with positive impacts on "Cost Efficiency." However, the variables of "Supplier Development" and "Supplier Evaluation and Selection" do not exhibit such statistical significance in explaining variations in the dependent variable.

5. DISCUSSION AND IMPLICATIONS OF FINDINGS

The study's findings provide useful insights into the connections between SRM practices and supply chain performance, with a specific emphasis on cost efficiency. This analysis is conducted within the specific context of Bangladesh's industrial and service industries. The correlation study demonstrates statistically significant relationships among the variables under investigation, emphasizing the strong linkages between Supplier Collaboration, Supplier Development, Supplier Evaluation and Selection, Long-Term Supplier Relationships, and Cost Efficiency. The presence of positive correlations suggests that the successful execution of SRM procedures has a key role in attaining cost-effectiveness in supply chain operations. The robust positive association between Supplier Collaboration and Supplier Development highlights the interdependence of both SRM characteristics. Organizations that participate in cooperative efforts and allocate resources to increase the competencies of their suppliers are likely to achieve a synergistic outcome, resulting in enhanced cost effectiveness (Feizabadi & Alibakhshi, 2022; Shafiq et al., 2022; Uddin et al., 2020). Furthermore, the strong correlation between Supplier Collaboration and Supplier Evaluation and Selection underscores the significance of thorough evaluation and collaboration. This implies that organizations that prioritize both aspects simultaneously are more likely to achieve efficient and economical supply chain operations. The strong positive association between Supplier Development and Supplier Evaluation and Selection highlights the consistency between both procedures. Organizations that allocate resources to supplier development projects are also prone to having clearly defined assessment and choice procedures, which in turn lead to improved cost effectiveness. Furthermore, the robust positive link between Supplier Development and Long-Term Supplier Relationships underscores the strategic interconnectedness of both aspects. Organizations that prioritize the development of their suppliers are more likely to establish long-lasting partnerships, which in turn leads to sustainable cost efficiency in the long run (Lahti et al.,

2018; Larsson & Larsson, 2020; Prosser et al., 2021; Wren, 2022). The correlation between Long-Term Supplier Relationships and Supplier Evaluation and Selection indicates that firms that maintain long-term partnerships with important suppliers also place a high emphasis on thorough evaluation and selection procedures. This emphasizes the need of stability and trust in supplier relationships for attaining cost-efficient supply chain operations. The regression analysis enhances these insights by offering a comprehensive model summary. The model, which incorporates Supplier Collaboration, Supplier Development, Supplier Evaluation and Selection, and Long-Term Supplier Relationships as predictors, shows statistical significance in explaining the observed heterogeneity in Cost Efficiency. The high R-value and coefficient of determination (R^2) suggest that approximately 64.2% of the variation in cost efficiency may be attributable to the influence of the SRM practices included in the model. The corrected R^2, which takes into consideration the number of predictors, remains strong at 63.7%, confirming the model's effectiveness in explaining variability without overfitting. The substantial F-statistic in the ANOVA table provides additional confirmation of the model's overall significance, highlighting the combined influence of the predictor variables on Cost Efficiency. The coefficients analysis offers comprehensive insights into the specific effects of each predictor variable. Supplier Collaboration and Long-Term Supplier Relationships are identified as statistically significant factors that have a beneficial impact on Cost Efficiency. Nevertheless, the effects of Supplier Development and Supplier Evaluation and Selection on Cost Efficiency are not statistically significant.

The study's findings through the empirical results hold substantial implications for organizations in Bangladesh's manufacturing and service sectors, offering precise guidance on optimizing supply chain performance, particularly in terms of cost efficiency. The strong positive connections observed between Supplier Collaboration, Supplier Development, Supplier Evaluation and Selection, Long-Term Supplier Relationships, and Cost Efficiency highlight the interconnectedness of various aspects under SRM. Businesses must recognize the need of implementing a thorough and unified approach to SRM processes to enhance cost efficiency in their supply chain operations. The importance of Supplier Collaboration and Long-Term Supplier Relationships in terms of strategic significance becomes evident as a crucial lesson. Organizations that prioritize collaborating with suppliers and fostering long-lasting partnerships are well-positioned to achieve ongoing cost reduction (Allioui & Mourdi, 2023). This highlights a change in viewpoint, encouraging businesses to see suppliers not only as transactional entities but as strategic partners, cultivating enduring relationships that greatly contribute to the overall success of the supply chain. The correlation between Supplier Collaboration and Supplier Development implies a mutually beneficial result when firms collaborate and invest in improving supplier skills. This is consistent with the current body of research on collaborative supply chain methods and their influence on operational efficiency and cost reduction (Benton Jr et al., 2020; Gu et al., 2021; Lo et al., 2018). Moreover, it is important to strengthen the argument of the significant association between Supplier Development and Long-Term Supplier Relationships by referencing research that emphasize the strategic interdependence of these factors. Empirical evidence demonstrating the enduring advantages of supplier development activities on fostering durable partnerships and enhancing cost efficiency would strengthen the claim (Cocskun et al., 2022; Faruquee et al., 2021; Jia et al., 2023; Manuela et al., 2021; Rezaei Vandchali et al., 2020). Supplier Development remains crucial in SRM, but its effect on cost efficiency depends on the presence of complementary strategies, as indicated by the study. The integration of supplier development programs with rigorous supplier evaluation and selection processes is crucial. Organizations should prioritize not only improving supplier competencies, but also conducting thorough evaluations and choosing suppliers based on their performance, quality, and risk management. The strong correlation between Long-Term Supplier Relationships and Supplier Evaluation and Selection emphasizes the significance of stability and confidence in supplier connections. Organizations that establish long-term cooperation with important suppliers are more inclined to prioritize comprehensive review and selection procedures, resulting in streamlined supply chain operations (Tay & Aw, 2021). Therefore, it may be inferred that making efforts in establishing and sustaining long-lasting relationships with suppliers can result in a series of beneficial outcomes for many aspects of supply chain performance, such as improved cost effectiveness. Having highlighted in the above discussions, it is worth mentioning here that these discoveries provide practical and implementable knowledge for sustaining supply chain operations in Bangladesh. Emphasizing cooperative methods, fostering enduring partnerships with crucial suppliers, and executing rigorous assessments of suppliers can greatly contribute to achieving cost effectiveness. The study suggests prospective areas for further research, promoting a thorough investigation of certain methods within Supplier Development and Supplier Evaluation and Selection. Furthermore, conducting inquiries into industry-specific variables that impact these connections within the distinct setting of Bangladesh could yield useful insights. In summary, the study provides accurate and useful advice for firms dealing with the complex field of supply chain management in Bangladesh.

6 CONCLUSION

The study intended to investigate the function of SRM in the changing economic environment of Bangladesh, specifically focusing on its influence on supply chain performance. During the investigation, it became evident that SRM methods have a beneficial impact on different aspects of the supply chain, notably in relation to cost effectiveness. The results highlight the crucial significance of Supplier Collaboration and the establishment of enduring Supplier Relationships. The study found strong positive associations, highlighting the interconnectedness of several components of SRM. Organizations that actively collaborate and develop long-lasting partnerships with suppliers are more likely to achieve sustained cost effectiveness in their supply chain operations. In contrast, the individual effects of Supplier Development and Supplier Evaluation and Selection on cost efficiency were not statistically significant. This suggests that the efficacy of these activities may depend on the presence of complementary tactics or an integrated strategy. The study promotes a comprehensive comprehension of SRM, going beyond individual practices, in order to fully use its potential in the context of Bangladesh. The research findings offer useful insights for professionals and policymakers in the manufacturing and service sectors of Bangladesh. They emphasize the significance of implementing a thorough SRM strategy, regarding suppliers as strategic allies, and cultivating lasting partnerships for sustained success in the supply chain. The study's practical implications provide valuable counsel for firms aiming to improve their supply chain performance, specifically in terms of cost effectiveness. Notwithstanding the contributions offered, it is imperative to recognize the limitations of the study. The findings may have limited generalizability due to the emphasis on certain sectors and the presence of operational complexity. Potential areas for future research involve investigating industry-specific variables that impact the success of SRM in Bangladesh, as well as conducting in-depth analysis of practices within Supplier Development and Supplier Evaluation and Selection. The study establishes a base for continued investigation of SRM in developing countries, with the goal of gaining a more detailed comprehension of its intricacies and potential advantages.

REFERENCES

Abbas, H. & Tong, S. (2023), "Green Supply Chain Management Practices of Firms with Competitive Strategic Alliances—A Study of the Automobile Industry", *Sustainability*, Vol. 15, No. 3, pp. 2156.

Abtahi, A.T., Farhana, N. & Hasan, M.M. (2023), "A Study on the Impact of E-Commerce Adoption for Enhancing Supply Chain Efficiency in Bangladesh SMEs", *Business and Economics in Developing Countries*, Vol. 1, No. 1, pp. 29-33.

Adesanya, A., Yang, B., Bin Iqdar, F.W. & Yang, Y. (2020), "Improving sustainability performance through supplier relationship management in the tobacco industry", *Supply Chain Management: An International Journal*, Vol. 25, No. 4, pp. 413-426.

Ali, S.S., Kaur, R., Ersoz, F., Altaf, B., Basu, A. & Weber, G.-W. (2020), "Measuring carbon performance for sustainable green supply chain practices: A developing country scenario", *Central European Journal of Operations Research,* Vol. 28, pp. 1389-1416.

Allioui, H. & Mourdi, Y. (2023), "Exploring the full potentials of IoT for better financial growth and stability: A comprehensive survey", *Sensors*, Vol. 23, No. 19, pp. 8015.

Amoako-Gyampah, K., Boakye, K.G., Adaku, E. & Famiyeh, S. (2019), "Supplier relationship management and firm performance in developing economies: A moderated mediation analysis of flexibility capability and ownership structure", *International Journal of Production Economics,* Vol. 208, pp. 160-170.

Andersen, J. (2021), "A relational natural-resource-based view on product innovation: The influence of green product innovation and green suppliers on differentiation advantage in small manufacturing firms", *Technovation*, Vol. 104, pp. 102254.

Asif, M., Searcy, C. & Castka, P. (2022), "Exploring the role of industry 4.0 in enhancing supplier audit authenticity, efficacy, and cost effectiveness", *Journal of Cleaner Production*, Vol. 331, pp. 129939.

Awan, U., Sroufe, R. & Kraslawski, A. (2019), "Creativity enables sustainable development: Supplier engagement as a boundary condition for the positive effect on green innovation", *Journal of Cleaner Production*, Vol. 226, pp. 172-185.

Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management,* Vol. 17, No. 1, pp. 99-120.

Benton Jr, W.C., Prahinski, C. & Fan, Y. (2020), "The influence of supplier development programs on supplier performance", *International Journal of Production Economics,* Vol. 230, pp. 107793.

Burki, U., Glavee-Geo, R., Dahlstrom, R., Kanani, R. & Buvik, A. (2023), "The moderating effect of market knowledge on contractual efficacy: evidence from Asian supplier--Western buyer relationships", *Asian Business & Management,* pp. 1-31.

Cha, K.-J. & Kim, Y.S. (2018), "Critical success factors for mutual collaboration with suppliers in IT outsourcing industry: a case study of a top IT outsourcing company in Korea", *Enterprise Information Systems,* Vol. 12, No. 1, pp. 76-95.

Cocskun, S.S., Kumru, M. & Kan, N.M. (2022), "An integrated framework for sustainable supplier development through supplier evaluation based on sustainability indicators", *Journal of Cleaner Production,* Vol. 335, pp. 130287.

Cole, R. & Aitken, J. (2019), "Selecting suppliers for socially sustainable supply chain management: post-exchange supplier development activities as pre-selection requirements", *Production Planning & Control,* Vol. 30, No. 14, pp. 1184-1202.

Dash, A., Pothal, L.K. & Tripathy, S. (2018), "Factors affecting supplier relationship management: An AHP approach", I*OP Conference Series: Materials Science and Engineering,* Vol. 390, No. 1, pp. 12056.

Dobos, I. & Vörösmarty, G. (2019), "Inventory-related costs in green supplier selection problems with Data Envelopment Analysis (DEA)", *International Journal of Production Economics*, Vol. 209, pp. 374-380.

Dong, J.Q., Karhade, P.P., Rai, A. & Xu, S.X. (2021), "How firms make information technology investment decisions: Toward a behavioral agency theory", *Journal of Management Information Systems*, Vol. 38, No. 1, pp. 29-58.

Dubey, R., Gunasekaran, A., Childe, S.J., Papadopoulos, T. & Helo, P. (2019), "Supplier relationship management for circular economy: Influence of external pressures and top management commitment", *Management Decision*, Vol. 57, No. 4, pp. 767-790.

Ebinger, F. & Omondi, B. (2020), "Leveraging digital approaches for transparency in sustainable supply chains: A conceptual paper", *Sustainability*, Vol. 12, No. 15, pp. 6129.

Eisenhardt, K.M. (1989), "Agency theory: An assessment and review", *Academy of Management Review,* Vol. 14, No. 1, pp. 57-74.

Emon, M.M.H. & Khan, T. (2023), "The Impact of Cultural Norms on Sustainable Entrepreneurship Practices in SMEs of Bangladesh", *Indonesian Journal of Innovation and Applied Sciences (IJIAS),* Vol. 3, No. 3, pp. 201-209.

Emon, M.M.H. & Nahid, M.H. (2023), "Factors Affecting Sustainable E-Commerce Adoption: Empirical Evidence from Bangladeshi SME's", Corporate Sustainable *Management Journal (CSMJ)*, Vol. 01, No. 01, pp. 32-36. Disponível em: https://csmj.com.my/csmj-01-2023-32-36/

Enz, M.G. & Lambert, D.M. (2023), "A supply chain management framework for services", *Journal of Business Logistics*, Vol. 44, No. 1, pp. 11-36.

Fama, E.F. (1980), "Agency problems and the theory of the firm", *Journal of Political Economy*, Vol. 88, No. 2, pp. 288-307.

Farooque, M., Zhang, A., Liu, Y. & Hartley, J.L. (2022), "Circular supply chain management: Performance outcomes and the role of eco-industrial parks in China", *Transportation Research Part E: Logistics and Transportation Review,* Vol. 157, 102596.

Farooque, M., Zhang, A., Thürer, M., Qu, T. & Huisingh, D. (2019), "Circular supply chain management: A definition and structured literature review", *Journal of Cleaner Production*, Vol. 228, pp

Faruquee, M., Paulraj, A. & Irawan, C.A. (2021), "Strategic supplier relationships and supply chain

resilience: is digital transformation that precludes trust beneficial?", *International Journal of Operations & Production Management,* Vol. 41, No. 7, pp. 1192–1219.

Feizabadi, J. & Alibakhshi, S. (2022), "Synergistic effect of cooperation and coordination to enhance the firm's supply chain adaptability and performance", *Benchmarking: An International Journal,* Vol. 29, No. 1, pp. 136–171.

Fouji, M.H. & Hoque, I. (2021), "Supplier internationalization through upgrading in global supply chain: Evidence from the garments industry of Bangladesh", *International Journal of Global Business and Competitiveness,* Vol. 16, No. 2, pp. 116–129.

Gilmore, E.A. & Buhaug, H. (2021), "Climate mitigation policies and the potential pathways to conflict: Outlining a research agenda", *Wiley Interdisciplinary Reviews: Climate Change*, Vol. 12, No. 5, e722.

Grum, B., Tsegaye, D., Tariku, Z., Gebremariam, D., Gebremicael, H., Kuhilen, T., Yemane, S., Aregawi, A., Abebe, B.A., et al. (2023), "Applicability and Cost Implication of Labor-Based Methods for Sustainable Road Maintenance (SRM) in Developing Countries", *Advances in Civil Engineering*, 2023.

Gu, V.C., Zhou, B., Cao, Q. & Adams, J. (2021), "Exploring the relationship between supplier development, big data analytics capability, and firm performance", *Annals of Operations Research*, Vol. 302, pp. 151–172.

Herczeg, G., Akkerman, R. & Hauschild, M.Z. (2018), "Supply chain collaboration in industrial symbiosis networks", *Journal of Cleaner Production*, Vol. 171, pp. 1058–1067.

Hoang, T.-H., Nguyen, N.P.P., Hoang, N.-Y.N., Akbari, M., Quang, H.T. & Binh, A.D.T. (2023), "Application of social media in supply chain 4.0 practices: a bibliometric analysis and research trends", *Operations Management Research*, pp. 1–23.

Hossain, M.Z., Rahman, M.A.U., Rahaman, K.R., Ha-Mim, N.M. & Haque, S.F. (2023), "Investigating critical relationships among vulnerability, livelihoods, and non-migration strategies at the fishing communities in the Sundarbans", *Environment, Development and Sustainability*, pp. 1–40.

Huma, S., Ahmed, W. & Najmi, A. (2020), "Understanding the impact of supply-side decisions and practices on supply risk management", B*enchmarking: An International Journal,* Vol. 27, No. 5, pp. 1769–1792.

Jensen, M.C. & Meckling, W.H. (2019), "Theory of the firm: Managerial behavior, agency costs and ownership structure", in Corporate Governance, pp. 77–132, Gower.

Jia, M., Stevenson, M. & Hendry, L. (2023), "A systematic literature review on sustainability-oriented supplier development", *Production Planning & Control,* Vol. 34, No. 8, pp. 727–747.

Kannan, D. (2018), "Role of multiple stakeholders and the critical success factor theory for the sustainable supplier selection process", *International Journal of Production Economics,* Vol. 195, pp. 391–418.

Klingebiel, K., Leiras, A. & Másculo, F.S. (2013), "Challenges for Managing Complexity in Industrial and Operations Management--A point of view from ICIEOM 2013", *Brazilian Journal of Operations & Production Management,* Vol. 10, No. 2, pp. 7–10.

Kummer, S., Herold, D.M., Dobrovnik, M., Mikl, J. & Schäfer, N. (2020), "A systematic review of blockchain literature in logistics and supply chain management: identifying research questions and future directions", *Future Internet,* Vol. 12, No. 3, 60.

Lahti, T., Wincent, J. & Parida, V. (2018), "A definition and theoretical review of the circular economy, value creation, and sustainable business models: where are we now and where should research move in the future?", *Sustainability*, Vol. 10, No. 8, p. 2799.

Larsson, J. & Larsson, L. (2020), "Integration, application and importance of collaboration in sustainable project management", *Sustainability*, Vol. 12, No. 2, p. 585.

Le Jr, T. (2022), "Supplier's Price Evaluation in the Purchasing Process", *Journal details needed*.

Lee, H.L. & Tang, C.S. (2018), "Socially and environmentally responsible value chain innovations: New operations management research opportunities", *Management Science*, Vol. 64, No. 3, pp. 983–996.

Leiras, A. & Fontainha, T.C. (2019), "Opportunities & Challenges for operations management--A point of view from the 2018 POMS International Conference in Rio", *Brazilian Journal of Operations & Production Management,* Vol. 16, No. 3, pp. 371–374.

Lim, M.K., Li, Y., Wang, C. & Tseng, M.-L. (2021), "A literature review of blockchain technology applications in supply chains: A comprehensive analysis of themes, methodologies and industries", *Computers & Industrial Engineering,* Vol. 154, p. 107133.

Lo, S.M., Zhang, S., Wang, Z. & Zhao, X. (2018), "The impact of relationship quality and supplier development on green supply chain integration: A mediation and moderation analysis", *Journal of Cleaner Production,* Vol. 202, pp. 524–535.

Macher, J.T. & Richman, B.D. (2008), "Transaction cost economics: An assessment of empirical research in the social sciences", *Business and Politics,* Vol. 10, No. 1, pp. 1–63.

Mani, V., Gunasekaran, A. & Delgado, C. (2018), "Enhancing supply chain performance through supplier social sustainability: An emerging economy perspective", *International Journal of Production Economics,* Vol. 195, pp. 259–272.

Manuela, P., Cristina, B. & Molina-Morales, F.X. (2021), "I need you, but do I love you? Strong ties and innovation in supplier--customer relations", *European Management Journal,* Vol. 39, No. 6, pp. 790–801.

Milgrom, P.R., Roberts, J. & Roberts, J. (1992), "Economics, organization and management", Vol. 7, Prentice-Hall, Englewood Cliffs, NJ.

Mohan, M., Nyadzayo, M.W. & Casidy, R. (2021), "Customer identification: the missing link between relationship quality and supplier performance", *Industrial Marketing Management,* Vol. 97, pp. 220–232.

Naghshineh, B. & Carvalho, H. (2022), "The implications of additive manufacturing technology adoption for supply chain resilience: A systematic search and review", *International Journal of Production Economics*, Vol. 247, p. 108387.

Nandi, M.L., Nandi, S., Moya, H. & Kaynak, H. (2020), "Blockchain technology-enabled supply chain systems and supply chain performance: a resource-based view", Supply Chain Management: *An International Journal*, Vol. 25, No. 6, pp. 841–862.

Oduro, S., Nyarku, K.M. & Gbadeyan, R.A. (2020), "Supplier relationship management and organizational performance of hospitals in an emerging economy context: a comparative study", *Journal of Modelling in Management,* Vol. 15, No. 4, pp. 1451–1478.

Panfilova, E., Dzenzeliuk, N., Domnina, O., Morgunova, N. & Zatsarinnaya, E. (2020), "The impact of cost allocation on key decisions of supply chain participants", *International Journal of Supply Chain Management*, Vol. 9, No. 1, pp. 552–558.

Paparoidamis, N.G., Katsikeas, C.S. & Chumpitaz, R. (2019), "The role of supplier performance in building customer trust and loyalty: A cross-country examination", *Industrial Marketing Management,* Vol. 78, pp. 183–197.

Pereira, G.I., Niesten, E. & Pinkse, J. (2022), "Sustainable energy systems in the making: A study on business model adaptation in incumbent utilities", *Technological Forecasting and Social Change*, Vol. 174, p. 121207.

Prosser, L., Lane, E.T. & Jones, R. (2021), "Collaboration for innovative routes to market: COVID-19 and the food system", *Agricultural Systems*, Vol. 188, p. 103038.

Queiroz, M.M. & Wamba, S.F. (2019), "Blockchain adoption challenges in supply chain: An empirical investigation of the main drivers in India and the USA", *International Journal of Information Management,* Vol. 46, pp. 70–82.

Rejeb, A., Keogh, J.G., Simske, S.J., Stafford, T. & Treiblmaier, H. (2021), "Potentials of blockchain technologies for supply chain collaboration: a conceptual framework", *The International Journal*

of Logistics Management, Vol. 32, No. 3, pp. 973–994.

Reuß, M., Grube, T., Robinius, M. & Stolten, D. (2019), "A hydrogen supply chain with spatial resolution: Comparative analysis of infrastructure technologies in Germany", *Applied Energy,* Vol. 247, p. 438–453.

Rezaei Vandchali, H., Cahoon, S. & Chen, S.-L. (2020), "Creating a sustainable supply chain network by adopting relationship management strategies", *Journal of Business-to-Business Marketing,* Vol. 27, No. 2, pp. 125–149.

Rindfleisch, A. (2020), "Transaction cost theory: past, present and future", *AMS Review,* Vol. 10, Nos. 1–2, pp. 85–97.

Saad, N.A., Elgazzar, S. & Kac, S.M. (2022), "Linking supply chain management practices to customer relationship management objectives: a proposed framework", Business: Theory and Practice, Vol. 23, No. 1, pp. 154–164.

Saghiri, S.S. & Mirzabeiki, V. (2021), "Buyer-led environmental supplier development: Can suppliers really help it?", *International Journal of Production Economics,* Vol. 233, p. 107969.

Schmidt, C.G. & Wagner, S.M. (2019), "Blockchain and supply chain relations: A transaction cost theory perspective", *Journal of Purchasing and Supply Management,* Vol. 25, No. 4, p. 100552.

Shafiq, A., Johnson, P.F. & Klassen, R.D. (2022), "Building synergies between operations culture, operational routines, and supplier monitoring: implications for buyer performance", *International Journal of Operations & Production Management,* Vol. 42, No. 5, pp. 687–712.

Shakeel, R., Sajjad, H. & Ramish, A. (2018), "Towards A Third Party Logistics (3PL) Based Sustainable Supplier Relationship Management Framework", *Journal of Quality and Technology Management,* Vol. 15, No. 2, pp. 1–36.

Sharma, A., Adhikary, A. & Borah, S.B. (2020), "Covid-19's impact on supply chain decisions: Strategic insights from NASDAQ 100 firms using Twitter data", *Journal of Business Research,* Vol. 117, pp. 443–449.

Shibin, K.T., Dubey, R., Gunasekaran, A., Hazen, B., Roubaud, D., Gupta, S. & Foropon, C. (2020), "Examining sustainable supply chain management of SMEs using resource based view and institutional theory", *Annals of Operations Research,* Vol. 290, pp. 301–326.

Sikombe, S. & Phiri, M.A. (2019), "Exploring tacit knowledge transfer and innovation capabilities within the buyer--supplier collaboration: A literature review", *Cogent Business & Management*, Vol. 6, No. 1, p. 1683130.

Songsom, N., Nilsook, P., Wannapiroon, P., Fung, L.C.C. & Wong, K. (2019), "System architecture of a student relationship management system using Internet of Things to collect Digital Footprint of Higher Education Institutions", *International Journal of Emerging Technologies in Learning (IJET),* Vol. 14, No. 23, pp. 125–140.

Stek, K. & Schiele, H. (2021), "How to train supply managers--necessary and sufficient purchasing skills leading to success", *Journal of Purchasing and Supply Management*, Vol. 27, No. 4, p. 100700.

Stone, A. (1986), "The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. By Oliver E. Williamson. (New York: Free Press, 1985. Pp. 450. $27.95.)", *American Political Science Review,* Vol. 80, No. 4, pp. 1424–1425.

Swallehe, O. (2021), "Analysis of Challenges Facing SMEs in Implementing Suppliers Relationship", SSRN. *Nota: Detalhes adicionais sobre publicação são necessários para uma referência completa.*

Tai, P.D., Anderson, M.R., Hien Duc, T.T., Thai, T.Q. & Yuan, X.-M. (2022), "Strategic information sharing in supply chain with value-perceived consumers", *Industrial Management & Data Systems,* Vol. 122, No. 4, pp. 841–863.

Tay, H.L. & Aw, H. Sen. (2021), "Improving logistics supplier selection process using lean six sigma--an action research case study", *Journal of Global Operations and Strategic Sourcing,* Vol. 14, No. 2, pp. 336–359.

Tseng, S.-M. (2020), "The Impacts Of Social Media Adoption And SRM Relational Information Processes On Supply Chain Agility", *Journal of Information, Technology and Society.*

Uddin, M.B., Fu, Y. & Akhter, B. (2020), "Inter-organizational cost management: effects of antecedents and methods in a hybrid relational context", *Journal of Business & Industrial Marketing,* Vol. 35, No. 5, pp. 909–923.

Wang, C.-N., Yang, F.-C., Vo, T.M.N., Nguyen, V.T.T. & Singh, M. (2023), "Enhancing Efficiency and Cost-Effectiveness: A Groundbreaking Bi-Algorithm MCDM Approach", *Applied Sciences,* Vol. 13, No. 16, p. 9105.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5, No. 2, pp. 171–180.

Wren, B. (2022), "Sustainable supply chain management in the fast fashion Industry: A comparative study of current efforts and best practices to address the climate crisis", *Cleaner Logistics and Supply Chain,* Vol. 4, p. 100032.

Wynstra, F., Suurmond, R. & Nullmeier, F. (2019), "Purchasing and supply management as a multidisciplinary research field: Unity in diversity?", *Journal of Purchasing and Supply Management*, Vol. 25, No. 5, p. 100578.

Yang, X. (2022), "Vertical Coopetition: Effect of Supplier Relationship Management Strategies on Supplier Involvement in New Product Development", IEEE Transactions on Engineering Management.

Zhang, A., Wang, J.X., Faroharvaroque, M., Wang, Y. & Choi, T.-M. (2021), "Multi-dimensional circular supply chain management: A comparative review of the state-of-the-art practices and research", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 155, p. 102509.