Exploring the Impact of E-Procurement on Supply Chain Performance in SMEs of Pakistan: The Moderating Role of Marketing Communication Strategies

[*]Asif Iqbal, Muhammad Arsalan, Muhammad Amin Hassan, Faisal Ismail, [**]Raheel Farooqi

*College of Management Sciences (CoMS), Karachi Institute of Economics & Technology (KIET), Pakistan

**Bahria Business School, Bahria University Karachi Campus, Pakistan

Abstract

This study examines how electronic procurement (EP) affects the supply chain performance (SCP) of SMEs in Pakistan, focusing on marketing communication's (MC) moderating effect. In Pakistan, resource constraints and restricted access to new technologies adversely affect the SCP of SMEs. In literature, the significance of EP in improving supply chain efficiency, reducing costs, and enhancing performance remains unexplored, especially for SMEs. In addition, the effect of MC on EP and SCP is relatively unknown. Therefore, this study addresses these literature gaps. This study employed a quantitative research design and data were collected from 384 supply chain professionals using a survey questionnaire. The findings show that EP significantly improves the SCP of SMEs. Further, the results do not provide any evidence of the moderating effect of MC on supply chain integration and SCP relationship. This study contributes to the existing literature by providing empirical evidence on the impact of e-procurement on SCP in the specific context of SMEs. The findings imply that the adoption of EP technologies may significantly enhance the SCP of SMEs in Pakistan.

Keywords: E-procurement, supply chain integration, supply chain performance, information sharing, marketing communication

Corresponding Author: Asif Iqbal, asif.coms123@gmail.com

Introduction

Information and communication technology has changed corporate operations, especially supply chain management. Electronic procurement (EP) systems use digital platforms to expedite procurement procedures and improve supply chain efficiency. Using online marketplaces, E-catalogs, and vendor management systems, EP automates and integrates sourcing, ordering, and payment (Das & Hameri, 2020). Small and Medium Enterprises are vital to Pakistan's economy (Manzoor et al., 2021). However, SMEs often face specific supply chain management issues, such as resource constraints, inefficient procurement processes, and limited market intelligence (Thakkar, Kanda, & Deshmukh., 2009). In Pakistan, SMEs are adopting EP solutions to boost supply chain performance. Cost reduction, efficiency, delivery time, product quality, and customer happiness are all aspects of supply chain performance. SMEs in Pakistan can benefit from EP systems by reducing transaction costs, improving supplier selection and management, increasing process efficiency, improving inventory management, and improving customer and supplier integration (Hasan & Shakir, 2022). However, the effects of EP on the supply chain performance (SCP) of SMEs in Pakistan and the factors that affect it are still unexplored.

EP, a purchasing system technology at the information end of the supply chain, has been acknowledged for providing value for enterprises by efficiently managing supply chain resources (Presutti, 2003). Though recent in the corporate sector, this phenomenon requires a thorough investigation of how information technology improves supply chain efficiency. This study explores how EP affects partner relationships, information sharing, and supply chain integration (SCI). Based on research, social interchange, rich knowledge, and collective learning are essential organizational tactics performed through technological functions (Walters, 2008). Due to the many specialized and interdependent suppliers, project-based supply chains are difficult to manage (Wei, Prybutok, & Sauser, 2021). By considering social and technical systems, firms can improve performance. Previous research has shown that SCI improves SCP (Liu, Chen, & Liu, 2016). Requests, provider selection, and buy orders take up a lot of time in the construction business, leaving little time for long-term procurement plans (Brosig-Koch, 2016). This study addresses the lack of research on EP's transparency and speed.

Construction companies may not achieve ideal SCP with only supply chain solutions. Previous research neglected the importance of internalizing supply chain technologies. Technological integration is necessary to improve supply chain collaboration and information visibility (Li et al., 2022; Panda, & Sahu, 2012). EP involves e-tendering, e-purchasing, e-negotiation, and e-evaluation (Kim & Shunk, 2004).

EP and SCP may be moderated by MC, which promotes products and services (Ghadimi, Alipour, & Hashemi, 2019). MC methods can raise awareness, and interest, and overcome stakeholder resistance to EP systems. MC can also help SMEs use EP technologies to improve SCP by strengthening supplier-customer connections (Shafiee & Rejali, 2022). This study examines how MC moderates the effects of EP on SCP of SMEs in Pakistan. This research may help SMEs establish EP systems and develop supply chain-enhancing MC strategies.

Literature Review

Underpinning theories

This study examined the Socio-Technical Systems and Resource-Based View (RBV) theories for supply chain practitioners. It prioritizes relationships and technology in their social and technical domains, respectively. Social and technological collaboration improves supply chain productivity and performance. Inter-organizational and supply chain studies have used Socio-Technical Systems (Huo, Ye, Zhao, & Liu, 2016). Technology is crucial to supply chain success, especially in complicated supply chains like the construction industry (Liu et al., 2016). The supply chain system can be improved with a range of technologies. This study emphasizes Supply Chain Technology Internalization (SCTI) as a technological consideration. The study also identifies SCI as the construction industry's social component. RBV argues that effective IT infrastructure use may become standard. Thus, RBV's extension to relational factors provides the theoretical basis to show that EP improves a firm's competitive positioning. Construction companies need supply chain connectivity to compete. Supplier assessment, selection, and quality management explain business performance variances (Zimmermann & Foerstl, 2014). Thus, our study considers EP a valuable construction resource. Finally, the research constructs are explained to clarify the study's goals and methodology.

Socio-Technical Theory

This study examines two supply chain practitioner (SCP) theories: Socio-Technical Systems and RBV. Technical domains use technology, while social domains build relationships. Thus, social-technological collaboration boosts productivity and performance. STS research has explored supply chain systems and inter-organizational contexts (Huo et al., 2016). Technology is essential to supply chains, especially in complex industries like construction (Liu et al., 2016). Technology supports the supply chain system, yet performance is still lacking. Technology internalization is the main factor in improving supply chain performance. This paper proposes that SCTI is a crucial technological aspect. The social dimension includes contractors, subcontractors, suppliers, sub-suppliers, clients, and consultants throughout the supply chain. The construction industry's wide supply chain relies on social integration among all players. SCI is the construction industry's social component. Finally, RBV emphasizes organizations' valuable, rare, distinctive, and inimitable internal resources.

Resource base view (RBV) Theory

According to the RBV, the basis for obtaining a sustainable competitive advantage consists of holding resources that are valuable, scarce, and difficult to copy (Barney, 1991). This is the foundation recommended for achieving a sustainable competitive advantage. EP in IT infrastructure is considered to have the potential to develop into a practice that is conventional across businesses, in the context of this study. To obtain a competitive advantage in the construction business, it is essential to develop solid connections between the various players who participate in the extensive supply chain. Previous research in the field of Supply Chain

Management (SCM) has shown that supplier evaluation and selection techniques, as well as good supplier quality management, contribute to explaining variances in company performance (Zimmermann & Foerstl, 2014). These findings were published in a journal called Supply Chain Management. This study acknowledges the importance of EP as a resource for those working in the construction business by building on previous research findings. Following that, a full overview of each of the structures that were investigated throughout this study will be offered.

E-procurement and supply chain integration

EP and SCI go hand in hand: EP software can aid an organization's efforts in coordinating with its partners (Sain, 2004). Information technology has been shown to assist collaborative planning in previous studies. As a result, this demonstrates the potential for EP to strengthen collaboration between an organization and its partners. As a result, an e-procurement system may help with supply chain integration. The internet is a useful tool for SCI and information exchange. Contractors and suppliers in the construction business can communicate through the EP client. It can also potentially improve collaboration between the client, contractor, subcontractor, and all of the project's partners. It increases transparency and streamlines the information flow in the system (Singh & Chan, 2022). EP, according to Zhang (2010) enhances order timeliness, product homogeneity, and inventory management data with vendors, all of which aid SCI in its construction. The link between the actors in the wide chain is critical for the construction industry's competitive advantage. Supplier evaluation and selection procedures, as well as supplier quality management, have been found in previous SCM studies to help explain disparities in company performance. EP is critical in bridging the gap and facilitating. The EP system is important in SCI (Chang, Tsai, & Hsu, 2013).

H1. E-procurement has a positive impact on supply chain integration.

Information sharing and supply chain integration

Supply chain integration requires information sharing. It involves supply chain participants sharing accurate, timely data, knowledge, and insights to make better decisions and coordinate actions (Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006). Organizations can coordinate operations, synchronize production schedules, optimize inventory levels, and respond swiftly to customer demand and market conditions by sharing information (Lee, Chan, & Poon, 2015). Information sharing promotes collaboration, trust, and transparency in supply chains (Li et al., 2006). It reduces supply chain risks by overcoming information asymmetry. It also helps partners discover bottlenecks, manage issues, and plan for future challenges. Sharing information improves supply chain responsiveness, lead times, and performance (Lee et al., 2015). Information sharing improves supply chain performance, according to studies. Information sharing improved supply chain integration and business performance, according to Li et al. (2006). Information sharing improved supply chain integration and performance (Lee et al., 2015).

H2. Information sharing has a positive impact on supply chain integration.

Partner relationship and supply chain integration

Partner connections are crucial to supply chain integration success, according to research. Lambert and Cooper (2000) found that supply chain integration requires partner confidence, commitment, and cooperation. Trusted partner connections allow for information sharing, objective alignment, and supply chain coordination. Partner ties help supply chain integration by improving information flow and collaboration, according to Fawcett, Magnan, and McCarter. (2008). Partners can exchange real-time demand, inventory, production schedules, and other essential data through close ties and good communication. Sharing information helps partners make educated decisions, improve responsiveness, and synchronize operations.

Partner ties also develop shared accountability and commitment among supply chain partners. Li et al. (2006) found that supply chain integration requires committed and collaborative relationships. Partners devote time, resources, and knowledge to align their processes, systems, and technologies when they care about each other's success. This alignment improves supply chain integration, improving efficiency, cost, and customer satisfaction. Ultimately, partner connections enable supply chain integration. Partner trust, commitment, and collaboration foster information sharing, coordination, and synchronization. Strong partner connections promote supply chain integration, operational performance, and competitive advantage (Mofokeng & Chinomona, 2019).

H3. Partner relationship has a positive impact on supply chain integration.

Supply chain technology internalization and supply chain integration

SCTI incorporates technology into all its operating operations and gathers data from them. SCTI improves SCI by increasing visibility of the supply chain and reducing data delays and omissions. Internalization of technology ensures the accuracy, timeliness, and transparency of firm data (Cagliano, 2003; Pattanayak & Punyatoya, 2019). In its broadest sense, information integration lies at the heart of SCI (Hadaya, 2010). Connecting major contractors with their subcontractors and suppliers is beneficial to the construction industry. It is advantageous to the industry since it cuts reaction times. Supply chain technologies are viewed as a success criterion for corporate performance since SCM comprises operational coordination between/among supply chain actors. In the construction business, the full potential of IT has yet to be realized (Hadaya, 2010). The expansion and adoption of IT, according to supply chain members, makes it easier to coordinate operations and procedures.

H4. Supply chain technology internalization has a positive impact on supply chain integration.

Supply Chain Integration and Supply Chain Performance

SCP and supply chain integration have a continuously beneficial association, according to research. Improvements in overall performance are made possible by supply chain integration, which enables the smooth transfer of data, resources, and activities throughout the supply chain

(Cao, Zhang, & Sun, 2011; Piprani, Mohezar, & Jaafar, 2020). Operational efficiency is one area of SCP that integration influences favorably. Supply chain partners can remove duplication, cut costs, and increase overall efficiency by integrating their operations for production, distribution, and procurement (Frohlich & Westbrook, 2001). This connection improves efficiency and performance by streamlining processes, reducing bottlenecks, and optimizing resource use. Another key part of performance is supply chain responsiveness, which is improved by supply chain integration. Integrated supply chains can react swiftly to changes in consumer demand, market conditions, and supply disruptions by exchanging information and coordinating actions in real-time (Gligor, Esmark, & Holcomb, 2013). This responsiveness enables businesses to adjust quickly, cut down on lead times, and more efficiently complete consumer orders, improving customer happiness and overall performance. Supply chain integration also improves inventory control and lowers expenses associated with inventory. Regarding inventory levels, demand projections, and production schedules, integrated supply chains provide better visibility and transparency (Li et al., 2006). Partners can eliminate excess inventory and stockouts because of this visibility, which improves working capital management and lowers costs. The link between supply chain integration and SCP is supported by empirical data. For instance, Li et al. (2006) discovered that in the Chinese setting, supply chain integration has a beneficial impact on firm performance. In a similar vein, Cao et al. (2011) showed that supply chain integration improves operational performance in the manufacturing sector.

H5. Supply Chain Integration Has a Positive Impact on Supply Chain Performance.

Marketing Communication and Supply Chain Performance

MC affects SCP, according to Sutduean, Prianto, and Jermsittiparsert (2019). Well-executed MC campaigns can greatly impact customer demand, product exposure, and brand reputation, the authors found. Effective MC raises customer awareness and product demand, which helps optimize supply chain processes, cut lead times, and enhance inventory management. In addition, Sutduean et al. (2019) found that SCP affects MC. The study found that a well-functioning supply chain with prompt delivery, effective logistics, and consistent product availability boosts consumer happiness and brand trust. Positive customer experiences boost brand perception, word-of-mouth promotion, and social media endorsement, which improve MC. MC and SCP are interdependent, as these studies show. A well-integrated approach that integrates MC goals with supply chain capabilities can boost competitiveness and organizational performance in changing marketplaces.

H6. MC has a positive effect on supply chain performance

Moderating Role of Marketing Communication

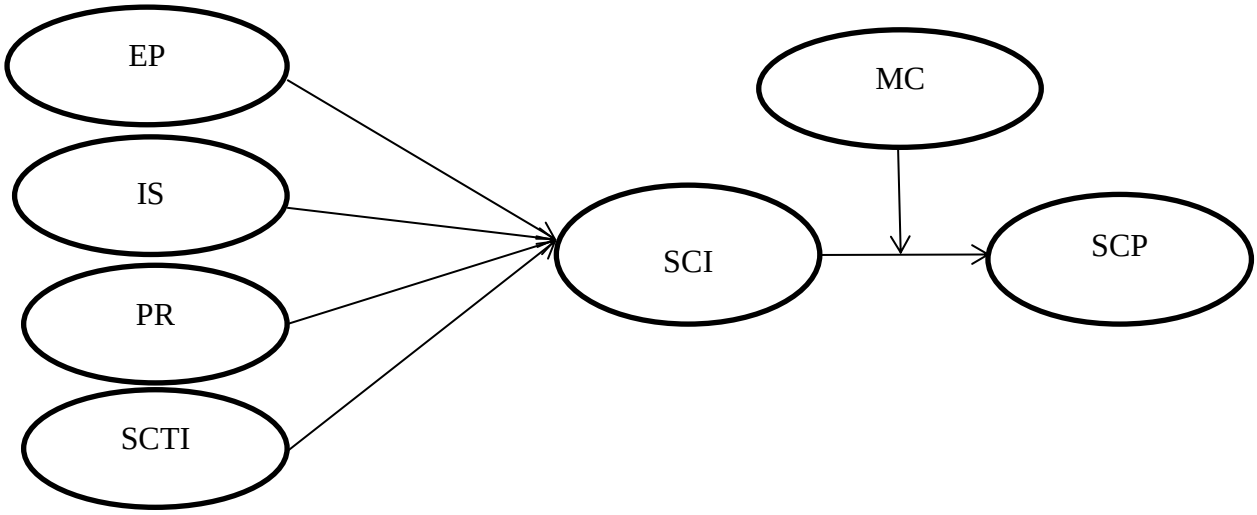
The relationship between supply chain integration and SCP is moderated by MC, which is an important moderating factor. It plays the role of a facilitator, boosting the influence of supply chain integration initiatives on performance outcomes (Sutduean et al., 2019). The ability of MC to enhance information exchange and visibility throughout the supply chain is one feature that moderates this relationship. Advertising, public relations, and customer relationship management are effective MC tactics that aid in the dissemination of important information across supply chain

participants (Falahat, Ramayah, Soto-Acosta, & Lee, 2020). MC improves the integration of information flows within the supply chain by disseminating accurate and timely data on market trends, consumer preferences, and demand forecasts, empowering partners to make informed decisions and enhancing supply chain responsiveness (Lambert & Cooper, 2000). Additionally, MC helps supply chain partners align their aims and objectives. MC develops a shared vision and common understanding of strategic objectives across the supply chain through branding, messaging, and relationship-building initiatives. This alignment facilitates resource sharing, collaborative investments, and collaboration amongst partners, which improves SCP (Martin, Javalgi, & Ciravegna, 2020).

The moderating effect of MC in the relationship between supply chain integration and SCP has been supported by empirical studies. For instance, Li et al. (2006) observed that in the Chinese setting, the relationship between supply chain integration and company performance was positively influenced by effective MC strategies. Another study by Cao et al. (2011) showed that MC was crucial in improving the connection between operational performance and supply chain integration in the manufacturing sector.

H7. MC moderates the relationship between Supply Chain Integration and supply chain performance.

Figure-1 Conceptual Framework



Note: EP = E-Procurement; IS = Information Sharing; PR = Partner Relationship; SCTI = Supplu chain technology internalization; SCI = Supply chain integration; MC = Marketing communication; SCP = Supply chain performance.

Methodology

According to Schindler (2013), a population is defined as "a collection of events, records, or individuals from which data or information can be gathered using questionnaires, interviews, or other data collection methods." In other words, a population is the source of the data or information that is collected. The SMEs in Pakistan have been selected as the population of interest for the

purposes of this study. On the other hand, sampling is a method that is used to select a subset, or sample, from a larger population that is representative of that population as a whole. It entails selecting objects or people from a certain target demographic to determine the overall population (Schindler, 2013). The city of Karachi is the primary focus of this research because Pakistan is home to more than three million small and medium-sized businesses. The supply chain experts, irrespective of gender, working in a variety of businesses across a range of industries, such as manufacturing, importing, exporting, and services, make up the population of interest. The size of the population that is being targeted is thought to be around 200,000, and the results of calculations performed with the Raosoft sample size calculator have led to the establishment of a recommended sample size of 384. It is imperative that it be emphasized that choosing an adequate sample size is of the utmost importance. This is because it enables the findings of the study to be generalized to the larger population, while also taking into consideration issues such as cost, effort, and time limits (Johnson, 2002). Data collection is one of the most significant components of research because it is through data collecting that the researcher acquires the necessary information for the study's progress (Waris & Hameed, 2019). A questionnaire survey was issued to the target population via online and offline venues to gather information. A five-point Likert Scale questionnaire prepared in Google Forms was used to collect survey data.

Results and Data Analysis

The present study used smartPLS software for data analysis. This section contains two parts of the study's results. The first section reports on factor loading construct reliability, and validity (measurement model), while the second part reports on path analysis and hypothesis testing (structural model).

The data were first analyzed and purified in SPSS software. Descriptive statistics are used to check the mean, median, mode, and range values. Then skewness and kurtosis values were identified to assess the abnormalities in the data. After performing the multivariate outliers test, we finally tested the data in SmartPLS.

Demographic Profile

Table 1 shows the demographics of the respondents in terms of age, gender, and classification.

Table 1 Demographic Profile

Demographic items	Percentile
Gender	
Male	32.3%
Female	44.4%
Designation	
Prefer not to say	23.3%
Executive Level	7.3%
Managerial Level	18.4%
Supervisor	42.6%
Other	31.7%

Measurement Model Results

As shown below, Smart PLS was utilized to simultaneously evaluate both the structural and measurement models. The model's measurement quality was evaluated using individual items and scale reliability. Convergent and discriminant validity were used to test the construct's measure (Waris & Hameed, 2023). Smart PLS was employed once again in the study for the measure's convergent and discriminant validity. The construct's reliability and validity are determined by the measurement model as shown in figure 2.

Reliability and Validity of the Construct

Construct Reliability

In this study, construct reliability or internal consistency is measured for each construct using "Cronbach's alpha, composite reliability, and individual factor loadings." The construct reliability results are provided in Table 2.

There are composite reliability scores for EP, information sharing, partner connections, supply chain technology internalization, supply chain integration, MC, and SCP. This satisfies the criterion, as it must be more than 0.7 (Hair et al., 2021).

Table 2 Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted(AVE)
EP	0.854	0.859	0.901	0.695
IS	0.855	0.865	0.902	0.697
MC	0.952	0.953	0.977	0.954
PR	0.817	0.819	0.892	0.734
SCI	0.741	0.758	0.853	0.661
SCP	0.854	0.86	0.901	0.695
SCTI	0.849	0.865	0.909	0.769

Table 2 shows path model construct scale reliability, convergent validity, and discriminant validity results. Composite reliability scores and Cronbach's α values assessed scale dependability. All composite reliability scores and Cronbach's α values were higher than the recommended threshold of 0.55 (Tabachnick & Fidell, 2007), supporting scale reliability.

AVE scores assessed convergent validity, which suggests trust in evaluating a construct using its indicators. Table 2 shows convergent validity. The path model constructs of EP, Information Sharing, Partner Relationship, Supply Chain Technology Internalization, Supply Chain Integration, MC, and SCP were assessed for convergent validity using the "criterion of Fornell & Larcker's (1981). For convergent validity, AVE values must surpass 0.5. Table 2 shows that the

research model meets convergent validity criteria because all AVE scores exceeded 0.5 (EP = 0.695, IS = 0.697, PR = 0.734, SCTI = 0.769, SCI = 0.661, MC = 0.954, SCP = 0.695).

Discriminant validity measures how unrelated construct measurements are. Cross-loadings, AVE, and heterotrait-monotrait correlation ratios assessed it. To demonstrate discriminant validity, Campbell and Fiske (1959) recommend that the square root of the AVE for each variable be greater than the correlation between components. As shown in Table 3, Fornell and Larcker (1981) require that the square root of the AVE for all latent variables exceed the inter-construct correlation and that the individual loading of each indicator exceeds its cross-loading to prove discriminant validity.

Table 3 Discriminant Validity Results

	EP	IS	MC	PR	SCI	SCP	SCTI
EP	**0.834**						
IS	0.778	**0.835**					
MC	0.528	0.497	**0.977**				
PR	0.755	0.802	0.502	**0.857**			
SCI	0.783	0.82	0.575	0.805	**0.813**		
SCP	0.757	0.704	0.546	0.813	0.728	**0.834**	
SCTI	0.639	0.622	0.795	0.659	0.762	0.655	**0.877**

Figure 2: Measurement Model

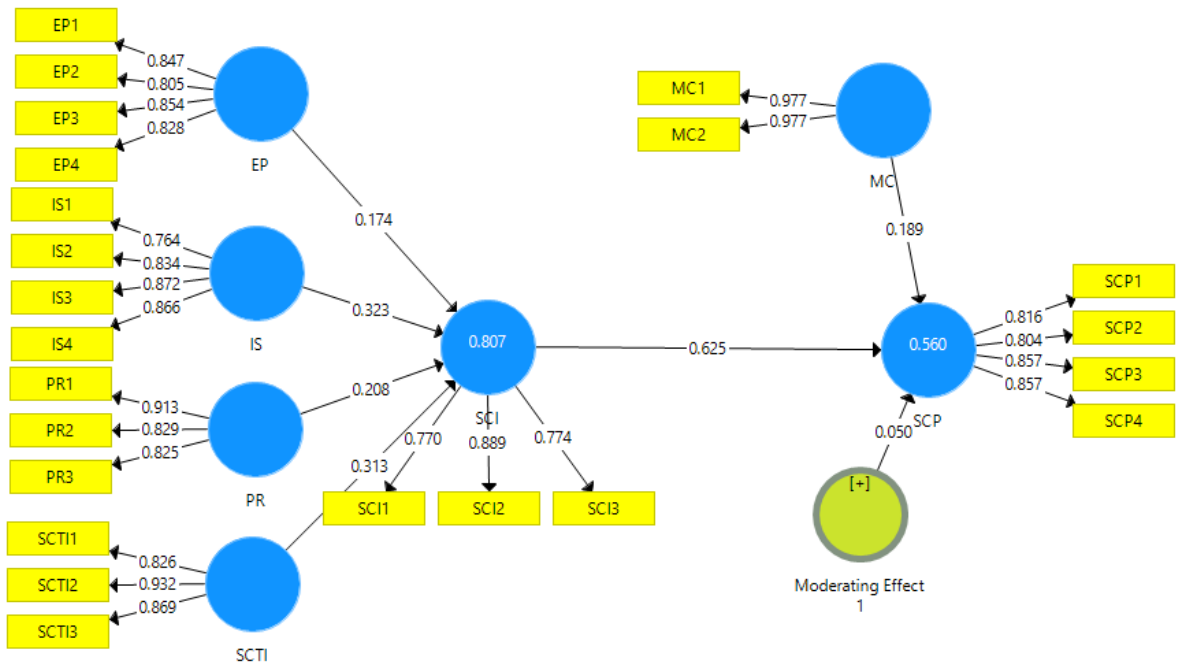


Table 4 Heterotait-Monotrait Ratio (HTMT).

	EP	IS	MC	PR	SCI	SCP	SCTI
EP							
IS	0.901						
MC	0.582	0.552					
PR	0.896	0.949	0.569				
SCI	0.974	1.013	0.686	1.031			
SCP	0.881	0.812	0.604	0.964	0.906		
SCTI	0.746	0.724	0.893	0.784	0.958	0.763	

The results of the heterotrait-monotrait correlation ratio given in Table 4 do not imply one variable in which the values do not signify the discriminant validity criteria (SCI). This one value exceeds the stated criterion of 0.9 (Henseler, Ringle, & Sarstedt, 2015). While the other two variables IS and SCP is partially being significant.

Fitness of Research Model

The "predictive accuracy of the path model" is determined using R2 values as an evaluation criterion. It's also known as the coefficient of determination. R square has a large value of 0.67, a moderate value of 0.33, and a weak value of 0.19, according to Chin (1998).

Table 5 Fitness of Research Model

	R Square	R Square Adjusted
SCI	0.807	0.805
SCP	0.555	0.552

The structural model analysis results are in Table 5. Supply Chain Integration's R square value is 0.805, indicating that the model's independent variables explain 80% of its variation. The R square score for SCP is 0.552, indicating that the variables under examination explain 55% of its variance. The structural model assessment examines direct and indirect impacts between hypotheses. Direct effects show how independent and dependent variables relate, while indirect effects show how mediator and moderator variables affect them.

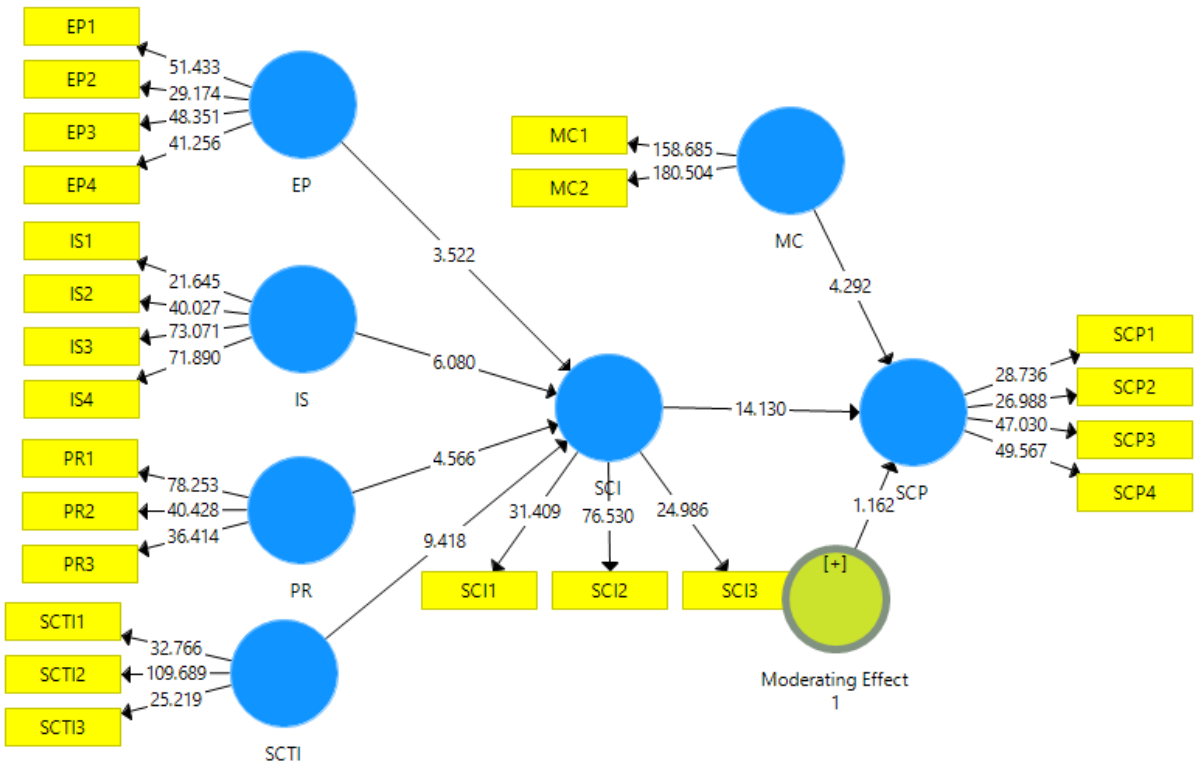


Table 6 Hypotheses Assessment Summary

	Path coefficient	Standard Deviation	T Statistics	P Values
EP -> SCI	0.174	0.048	3.644	0.000
IS -> SCI	0.323	0.049	6.578	0.000
MC -> SCP	0.189	0.044	4.280	0.000
MC*SCI -> SCP	0.050	0.045	1.109	0.268
PR -> SCI	0.208	0.044	4.719	0.000
SCI -> SCP	0.625	0.047	13.268	0.000
SCTI -> SCI	0.313	0.033	9.379	0.000

Table 6 shows this study's statistical analysis. Except for the moderating influence on MC, all t-statistics exceed 1.96 and P-values are below 0.05. All associations were statistically significant. Besides the moderating impact, the path coefficients support the hypothesis. All independent variables positively affect supply chain integration, according to the data. SCI also improves SCP. EP, information sharing, partner relationships, and SCTI positively affect SCI, the mediator variable. Thus, SCI can improve performance while taking MCs into account.

Discussion and Conclusion

This study examined how EP affects the SCP of SMEs in Pakistan, with an emphasis on MC's moderating function. This study shows how EP and MC can improve SME supply chain efficiency. EP positively affects supply chain integration, as shown by its significant relationships with information sharing, partner relationships, supply chain technology internalization, and SCP. According to past studies, EP improves supply chain collaboration, transparency, and information flow. Moreover, MC moderates the relationship between EP and SCP. Effective MC tactics can boost EP's benefits by improving supply chain trust, communication, and customer satisfaction. However, poor MC might limit the supply chain efficiency benefits of EP. The findings' practical consequences are discussed. To boost SCP, SMEs must implement EP solutions. EP improves partner collaboration, information flow, and supply chain integration. This can increase operational efficiency, cost, and customer happiness. Second, to support EP, SMEs should invest in MC techniques. Online promotions and consumer involvement can help SMEs boost brand image, customer relations, and SCP. The findings also suggest SMEs should prioritize partner relationships and supply chain technology internalization. These variables enhance SCI and EP. SME supply chain partners should collaborate, share expertise, and utilize technology to improve performance. The study was limited by its geographic location and industry. To learn more, future studies could involve other industries and economies. EP and MC unleash supply chain efficiency for Pakistani SMEs, according to this report. SMEs can increase supply chain integration, operational performance, and competitiveness by adopting EP technologies and effective MC tactics.

Limitations and Future research directions

This study sheds light on the effects of EP on SCP and the moderating function of MC in Pakistani SMEs, but it has limitations: This study examined Pakistani SMEs. Results may not apply to other sectors, nations, or organizations. To improve generalizability, future research should duplicate and validate these findings in diverse circumstances. The study used 384 SMEs, which is tiny. Despite efforts to ensure a representative sample, the sample size may limit statistical power and generalizability. To strengthen conclusions, future study could use larger samples and more rigorous sampling methods. The study used a questionnaire survey, which may include response bias and common method variance. Future studies could use a mixed-methods approach or several data sources, such as interviews or observation, to triangulate and strengthen conclusions. External influences and business environment changes may affect the study's conclusions. Longitudinal or comparative research across different time periods may help explain how EP and MC affect SCP. Based on the constraints revealed, there are numerous avenues for future research to better understand how EP and MC affect supply chain effectiveness in SMEs:

Compare EP and MC across nations to see how cultural differences affect SCP. Culture may influence supply chain practices and strategies. Examine how EP and MC initiatives affect SCP over time. Longitudinal studies show how supply chain relationships change over time. Combine quantitative studies with qualitative research to learn how EP and MC affect SCP. Qualitative

studies can illuminate context, difficulties, and best practices. EP, MC, and SCP may be affected by other mediating and moderating factors. Organizational culture, leadership styles, and technology may affect these behaviors. Industry-Specific Studies: Study how EP and MC affect different sectors. These strategies may improve SCP in different businesses depending on their needs. Scholars and practitioners can better understand how EP and MC can unlock supply chain efficiency in SMEs and inform SCP strategies by addressing these limitations and exploring these future research directions.

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