



IMPACT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON INNOVATIVE PERFORMANCE: MEDIATING ROLE OF ORGANIZATION COMPETENCE AND COLLABORATIVE CAPABILITIES AS MODERATOR IN SME SECTOR

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ABSTRACT. Background – Supply chain management practices can contribute towards firm performance whether financial or non-financial. This study thus aims to examine the impact of supply chain management (SCM) practices on innovative performance of small and medium-sized enterprises (SMEs) in Pakistan. The study also investigates the role of organizational competence as a mediator between SCM and innovative performance. Furthermore, organizations' collaborative capabilities have been proposed as a moderator between SCM and organizational competence.

Methods– A questionnaire-based survey with 201 top executives of SMEs in the manufacturing, services, and trading sector of Punjab province of Pakistan was conducted in this study.

Results – The results show a significant positive relationship between supply chain management practices and the innovative performance of an organization. The role of organization competence as a mediator was also found to be significant. Furthermore, it has also been established that the collaborative capabilities of an organization play its positive role to enhance relationship between SCM practices and organizational competence.

Conclusions – The current study provides evidence of a relationship between SCM practices and innovative performance of SMEs. The results suggest that efforts should be directed at improving supply chain management practices in SMEs to enhance innovative performance through organizational competence. In addition, collaborative capabilities enhance the organizational competence of SMEs with the implementation of SCM practices.

Keywords: Supply chain management practices, Innovative performance, Small and medium-sized enterprises (SMEs), Collaborative capabilities, Organization competence.

INTRODUCTION

The role of small and medium enterprises (SMEs) is imperative for developed and developing countries around the world [Benjamin et al., 2021]. SMEs significantly contribute to the overall growth of the economy and are a major source of job creation. Globally, SMEs contribute to over 90 percent of businesses, and more than half of the world's workers belong to the SME sector. Consistent with the global data, Pakistan's SME sector also constitutes more than 90 percent of businesses, and its contribution to gross domestic product (GDP) and total export of the country is 40

percent [Competition Commission of Pakistan 2021]. The definition of SMEs varies in different economies, and in Pakistan based on a prudential regulation issued by the State Bank of Pakistan, businesses with up to 250 employees and an annual sales turnover of Rs.800.00 million fall under the SME category [State Bank of Pakistan 2022].

It is evident from the existing literature that SMEs are more prone to supply chain deficiencies, which hamper their growth and are a major hindrance in way of their competitiveness. Supply chain disruptions cause more damage to SMEs than to large firms [Thun et al., 2011, Ali and Geologeci, 2019], owing to

the scarcity of resources in SMEs [Arsawan et al., 2020, Thun et al., 2011] and inadequate preparation to absorb supply chain [Wedawatta et al., 2010]. The failure rate for SMEs is on the rise across the world [Arsawan et al., 2020]. However, these challenges can be managed effectively by implementing supply chain practices in SMEs. Supply chain management practices like handling customer relationships, real-time sharing of information, and strategies to effectively engage business partners are imperative for giving competitive advantages to SMEs [Afraiz et al., 2021, Huo et al., 2021, Migdadi, 2021, Li et al., 2006].

Supply chain management (SCM) practices encompass the integration of all stakeholders, which includes suppliers, manufacturers, distributors and customers, in such a way that the overall improved long-term performance of the individual firm is achieved through efficient supply chain management practices [Chopra and Meindl, 2001]. SCM practices play a significant role in bringing innovation to business through innovative products and procedures [Srivastava et al., 1999]. Innovation is an ongoing process to regularly introduce new products/services and procedures in the market or bring changes in the existing products to cater for the growing needs of the business [OECD, 2005]. SCM practices help in developing joint strategies which help in improving the production process and ultimately lead to the development of better and newer products [Kaminski et al., 2008].

Previously, researchers investigated dynamic SCM practices in relation to SMEs and pointed towards the effectiveness of these practices for SMEs [Quayle, 2003, Arened and Wisner, 2005, Bhutta et al., 2007, Towers and Burnes, 2008, Bordonaba-Juste and Cambra-Fieero, 2009, Welker et al., 2008]. Research suggests that SMEs have benefited in terms of competitive advantages by applying SCM practices [Bordonaba-Juste and Cambra-Fieero, 2009] and these practices help improve the performance of SMEs [Bhutta et al., 2007]. More recently, it has also been reported that SCM practices can help in the operation and financial performance of SMEs [Lee, 2021]. Thus, it is imperative to look into the relationship between SCM practices and innovative performance. In

this regard, this study aims to address the following research questions. Do SCM practices influence the innovative performance of SMEs in a developing economy i.e. Pakistan? Additionally, to what extent does organizational competence provide a path through which these SCM practices improve the innovative performance of SMEs? Likewise, the study also tests how collaborative capabilities of firms can help in enhancing the SCM practices-organizational competence relationship.

This model is in line with the resource-based view i.e. RBV of the firm. According to RBV [Barney, 1991], firm resources and capabilities are a source of sustainable competitive advantage for the firms. SCM practices can be resources which help enhance organizational competence and innovative performance, therefore becoming a source of sustainable competitive advantage for SMEs. Thus, studying these relationships may help SME managers to better identify the ways to enhance innovative performance and decide on the implementation of SCM practices. This study advocates promoting innovation in SMEs through SCM practices. It further addresses the relationship between SCM practices and the innovative performance of SMEs through organizational competence. In addition, this study explores the moderating role of collaborative capabilities in relations between SCM practices and organizational competence. Overall, enhancing innovative performance in SMEs also contributes to the achievement of United Nations (UN) sustainable development goal number 9 i.e. industry, innovation, and infrastructure, which provides additional motivation for the research.

Supply Chain Management Practices: An Overview

Supply chain management (SCM) practices aim to promote competent management of organization supply chain by using a set of activities. Li et al. [2005] developed six comprehensive, empirically tested dimensions of SCM practices, which include partnership with supplier, relationship with clients, sharing information, quality of information, lean practices adopted internally, and postponement.

Firstly, there is maintaining a long-term relationship between the organization and partnership with supplier. Secondly, the customer relationship focuses on three core areas pertaining to customers including complaint handling, taking feedback from customers to measure their level of satisfaction, and promoting a long-term relationship between an organization and its customers. Thirdly, sharing information is a key dimension which ensures the flow of information to all stakeholders in order to make effective and timely decisions. Fourthly, the quality of information in terms of accuracy and adequacy in timely manners. Fifthly, lean practices mainly deal with maintaining the optimal level of inventory through effective waste management. Sixthly, as dealing with delays in the supply chain is the top priority, postponement strategies fit in this dimension.

The impact of SCM practices has been studied by various scholars in past. For example, according to Ragatz et al. [1997], SCM practices such as strategic suppliers significantly impact on the competitive advantages of an organization. Sharing good-quality information leads to customer satisfaction and the quality of information also helps to increase customer satisfaction [Spekman et al., 1998]. According to Van Hoek et al. [1999], global efficiency and customer responsiveness is achieved through handling postponements in the supply chain process. Recently conducted studies further confirm that SMC practices such as relationships between buyers and seller [Afraz et al., 2021], sharing quality information [Huo et al., 2021] and managing customer relations [Middadi 2021] lead firms towards competitive advantage.

Supply Chain Management Practices and Innovative Performance

Innovative performance is defined as companies' achievements in various fields related to developing new ideas, launching new devices / products, and introducing new improved processes and systems [Ernst 2001, Freeman and Soete 1997]. In the broader perspective, innovative performance is divided into two distinctive categories: production innovation and innovation in process [Prajogo and Sohal, 2003, Gunday et al., 2011, Kim et al.,

2012]. Five major dimensions of organizational innovativeness were defined by Vigoda-Gadot et al. [2005], which include: creativity, risk taking, acceptance and adoption of changes, future orientation, and pro-activeness. Subramanian and Nilakanta [1996] divided innovation practices in two main components: technical innovation, which pertains to innovation in services, processes, and products, and the second type, innovation dealing with structure, administration and process and program-related administrative work.

SCM practices promote the development of competitive advantages in SMEs, and these practices effectively engage clients and suppliers [Bordonaba-Juste and Cambra-Fierro, 2009]. Both general and operational performance are included in this development [Bayraktar et al., 2009], which provide support for innovative processes in the firm [Zeng et al., 2010]. A strong connection between suppliers and client collaborative practices and innovation in products among Korean SMEs were also reported in previous research [Chun and Mun 2012]. Canadian SMEs also support engaging suppliers through the use of technology to promote innovation [Drayse, 2011]. Similarly, other studies across the world revealed a connection between different dimensions of SCM practices and innovation processes in SMEs [Doloreux, 2004, Wang and Kafourous, 2009].

According to the resource-based view [Barney, 1991], organizational resources such as SCM practices are a source of competitive advantage. A competitive edge can be developed by implying SCM practices mainly engaging suppliers and customer [Bordonaba-Juste and Cambra-Fierro, 2009]. Likewise, vertical integration of suppliers and customers leads to cost competitiveness [Arend and Wisner, 2005]. Other studies also showed that operational and general performance is improved by the implementation of SCM practices in firms [Bayraktar et al., 2009, Bhutta et al., 2007].

As regards innovation, it is well established from previous studies that effective engagement between suppliers and customers leads to innovation in SMEs. A study conducted in Brazil

by Kaminski et al. [2008] established that innovation is a motivational force in creating effective suppliers and customer coordination. Similarly, in the Korean context, Drayse (2011) validated the same concept, showing that collaborative practices between suppliers and customers facilitate innovation process in organizations. According to Doloreux (2004), innovation in processes brings about strong bonds among suppliers and customers. From the business point of view, a study by Ho et al. [2004] also highlighted that close collaboration between suppliers and customers is a result of innovation in processes and products of organization. Abereijo et al. [2009] further validated that the relationship between supplier and customer provides a strong base for innovation in organizational processes. Based on the abovementioned arguments, we propose that.

Hypothesis 1: Supply chain management practices have a significant positive effect on innovative performance of an organization.

Mediating Role of Organizational Competence between SCM Practices and Innovative Performance

Organizational competence is a broad term which includes several components like capabilities, abilities, skills, and resources [Athey and Orth 1999, Prahalad and Hamel 1990, Sanchez 2004]. From the supply chain management perspective, organizational competencies are classified into four major categories i.e. functional competence, relational competence, managerial competence and behavioral competence [Derwik and Hellstrom, 2017]. According to these researchers, functional competence lies in the process and functions of the organization; we can measure functional competence from the operational and strategic levels, relational competence deals with the integration of different stakeholders like customers, suppliers, partners, management and employees. Managerial competency entails specific tasks, which are related to management aspects like resources management and strategy development. The final classification of competence is behavioral competency, which deals with a unique aspect of competency related to attitudes and characteristics.

Organizational competence has been measured in the past by relying on both non-financial and financial aspects [Koh et al., 2007]. Organizational competence and overall achievement of organizational objective go side by side [Hamon, 2003]. In the current study, we limit organizational competence to four dimensions, as defined by Tippins and Sohi [2003], which are relative profitability, growth in sales, retention of customers and growth in overall sales of organization. SCM practices significantly impact organizational competence, which further leads to innovative performance. When organizations implement various SCM practices, including customer relationship building, strategic supplier partnership, and dealing with delays, all these practices help the organization to get a competitive advantage in terms of cost, flexibility, quality, and dependability, which further improves organizational performance [Li et al., 2021]. SCM integration among suppliers, organizations and customers facilitates the transfer of knowledge, thus helping the organization to adapt and change according to advancements and developments in the market [Alkalha et al., 2019]. Moreover, SCM efficiency enhances the organizational competence and ultimately improves the performance of the organization [Wang et al., 2016]. Based on the above discussion, we hypothesize the following.

Hypothesis 2: Organizational competence mediates the relationship between SCM practices and innovative performance.

Collaborative Capabilities as Moderator between SCM Practices and Organizational Competence

Collaborative capabilities are essential for efficient and effective supply chain management processes. The exchange of information is a fundamental aspect of collaborative capabilities of any organization [Barratt, 2004]. Likewise, another important benefit derived from collaborative capabilities ensures the real-time flow of information [Whipple and Russell, 2007]. In past research, the collaborative capabilities of organization have been studied with respect to information sharing, joint decisions and operational efficiency. For

example, for Daugherty et al. [2006], collaboration is about the real-time flow of information, making strategic plans jointly and managing the firm's operations with respect to changing requirements regarding shared information. Cao et al. [2010] conducted a detailed conceptualization of the collaborative capabilities of organizations and defined constructs which strengthen relationships in diverse supply chain management practices by sharing information, setting performance goals, making decision jointly, sharing business resources, aligning incentives with performance, and by effective communication and knowledge creation.

In any firm, collaborative activities play a vital role in enhancing organizational performance [Wang and Hu, 2020]. Previous research has shown that collaborative innovation capabilities help the firm to replicate knowledge among the firms and their supply chain networks through interactive activities [Mishra and Shah, 2009]. Extensive research has explored how firms acquire resources and develop their

capabilities for supply chain management [Biotto et al. 2012]. Based on the resource-based view, firm's resources and capabilities help to get competitive advantage [Huo 2012]. When firms implement unique resources in the form of SCM practices and collaborative capabilities then they can achieve a competitive advantage in the form of organizational competence. Organizational competence based on relational competency integrates different stakeholders in supply chain management process [Derwik and Hellstrom 2017]. Thus, in the presence of collaborative capabilities and SCM practices, diverse dimensions of organizational competence are expected to be strengthened. Therefore, on the basis of the above discussion, we propose the following hypothesis.

Hypothesis 3: Collaborative capabilities moderate the positive relationship between supply chain management practices and organization competence in such a way that the relationship will be stronger when collaborative capabilities are high.

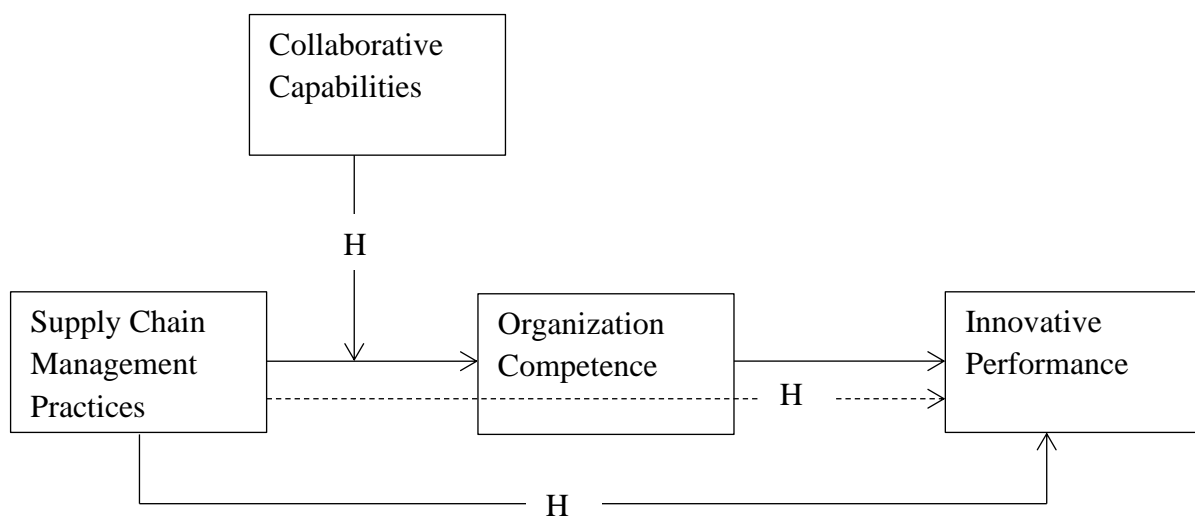


Fig. 1. Research Diagram of Study

Note: In the above model, the straight line from IV to DV represents H1, the dotted line represents H2, and the moderation represents H3.

MATERIAL AND METHODS

Data Collection and Sample

Data were collected from SMEs in Pakistan. SMEs across Pakistan fall into three major categories: manufacturing, trading, and

service-related operations. We selected SMEs since they represent the majority of businesses in the country. The State Bank of Pakistan uses sales volume and number of employees as a basis on which to define a business category as a small or medium enterprise. In our sample, we selected firms with average sales ranging from Rs.50 million to Rs.800.00 million and with an average number of employees of less than 250.

Data were collected from employees working in SMEs in Punjab province, using a self-administered questionnaire comprising 32 items. We distributed questionnaires to 280 respondents, of which 201 questionnaires were found to be usable, resulting in an effective response rate of 71%. We ensured voluntary participation and also guaranteed the anonymity of the respondents and their responses. Data insights revealed that 43% of the respondents were from the manufacturing sector, 33% were from trading, and 27% were from the services sector. 53% of participants were from sole proprietorships, whereas 35% were from partnerships and 12% were from registered companies. Regarding the number of employees in firms selected for the study, 16% had 1-50 employees, 15.4% had 51-100 employees, 25.4% had 101-150 employees, 20.9% had 151-200 employees, and the remaining 21.9% had employees 201-250. This means that the sample was representative, since the employees were from all types of SMEs across the region.

Measures

Supply Chain Management Practices: SCM practices were measured by using the Koh et al. [2007] scale. The respondents reported to what extent they generally agree or disagree with a list of 12 supply chain management practices that are practised by SME firms. This used a Likert scale with options from 1 to 5 “strongly disagree” to “strongly agree”. The Cronbach’s alpha reliability of the scale was 0.89.

Innovative Performance: For measurement of innovative performance, scale of Thorgren et al. [2009] has been used which comprised of 5 items, each of which offered five answer options ranging from 1 “strongly disagree” to 5 “strongly agree”. The Cronbach’s alpha reliability of the scale was 0.81.

Organizational Competence: Organizational Competence was measured by using King et al.’s [2001] scale, which comprised 7 items, each of which offered five answer options ranging from 1 “strongly disagree” to 5 “strongly agree”. The Cronbach’s alpha reliability of the scale was 0.70.

Collaborative Capabilities: For collaborative capabilities, the scale developed by Kotabe et al. [2003], Koufteros et al. [2007] and Patnayakuni et al. [2006] was used, which comprised 8 items ranging from 1 “strongly disagree” to 5 “strongly agree”. The Cronbach’s alpha reliability of the scale was 0.88.

Control Variables: One-way ANOVA was used to identify the control variables. However, the results showed that there were no significant differences across the demographic variables, such as legal structure of business, numbers of years in business, numbers of employees and type of business. Hence, none of the demographics was controlled. The results of one-way ANOVA are shown in Table 1.

Table 1. One-Way ANOVA

Innovative Performance		
Source of variation	F	P
Legal Structure of business	2.227	0.111
No. of years in business	1.446	0.220
Type of business	1.30	0.325
Total no. of employees in business	0.257	0.905

RESULTS

Descriptive Statistics and Correlation Analysis

Table 2 represents means, standard deviation and bivariate correlations. The results

show that the supply chain management practices are positively and significantly correlated with innovative performance in the organization ($r = 0.638, p < 0.000$), as well as organizational competence ($r = 0.212, p < 0.000$). Similarly, supply chain management practices showed a positive and significant relationship with collaborative capabilities ($r = 0.394, p < 0.000$).

Table 2. Descriptive Statistics, correlations and reliabilities

	Mean	S.D	1	2	3	4
1. Innovative Performance	4.048	0.478	(0.808)			
2. Organizational Competence	4.202	0.284	.307*	(0.70)		
3. Collaborative Capabilities	4.181	0.512	.373*	*.329	(0.875)	
4. Supply Chain Management Practices	4.060	0.424	.638*	.212*	.394*	(0.890)

* $P \leq 0.05$ $n=201$, Alpha reliabilities are in parenthesis.

Regression Analysis

Direct and in-direct effects were checked by using a bootstrapping technique [Hayes and Sacharkow 2013] through SPSS process macros model 4. Table 3 shows the results for both direct and indirect paths. The direct path model provides the results for H1 in the study, which predicted a positive relationship between supply chain management practices and innovative

performance. The results provide support for supply chain management practices and innovative performance ($\beta = 0.68$, $p < 0.001$) leading to acceptance of H1. The in-direct path model provides support for H2, which proposed that SCM practices lead to innovative performance through organizational competence. Our results provide support for the indirect path, showing that SCM practices influence innovative performance of a firm through organizational competence ($\beta = 0.04$, $p < 0.001$). These results give support to H2.

Table 3. Direct and indirect path coefficients

Path	Estimate	SE	Decision		
H1 SCM Practices \rightarrow IP	0.68****	0.06	Accepted		
Bootstrap results for indirect effects					
Path	Effects	SE	LL 99%CI	UL 99%CI	Decision
H2 SCM Practices \rightarrow OC \rightarrow IP	0.04	0.02	0.01	0.13	Accepted

$n = 201$. Bootstrap sample size = 5,000. **** $p \leq 0.001$, *** $p \leq 0.01$, * $p \leq 0.05$. SMP = Supply Chain Management Practices; OC = Organizational Competence; IP = Innovative Performance; LL, lower limit; CI, confidence interval; UL, upper limit.

Table 4 represents the results for the moderation analysis. Hypothesis 3 proposes the moderating role of collaborative capabilities between supply chain management practices and organizational competence. The moderating role of collaborative capabilities was tested using the

Hayes Process Macros model 1. The results reveal that collaborative capabilities significantly moderate the relationship between supply chain management practices and organizational competence ($\beta = 0.21$, $p < 0.001$, CI [0.04,037], $1R^2 = 0.5$), leading to acceptance of hypothesis 3.

Table 4. Moderating role of Collaborative Capabilities (DV: Organizational Competence)

	B	SE	LLCI	ULCI	Decision
Constant	4.19	0.02	4.13	4.24	
SCM Practices	0.13	0.050	-0.01	0.27	
CC	0.16***	0.04	0.06	0.26	
Interaction	0.21***	0.064	0.04	0.37	Accepted
ΔR^2 due to Interaction	0.05***				
Slope Test					
Moderator: CC					
-0.51	0.03	0.05	-0.09	0.15	
0.00	0.13	0.05	-0.00	0.27	
0.51	0.24	0.07	0.06	0.43	

$n = 201$. SCM Practices = Supply Chain Management Practices; OC = Organizational Competence; CC= Collaborative capabilities, Bootstrap sample size = 5,000. LL, lower limit; CI, confidence interval; UL, upper limit. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

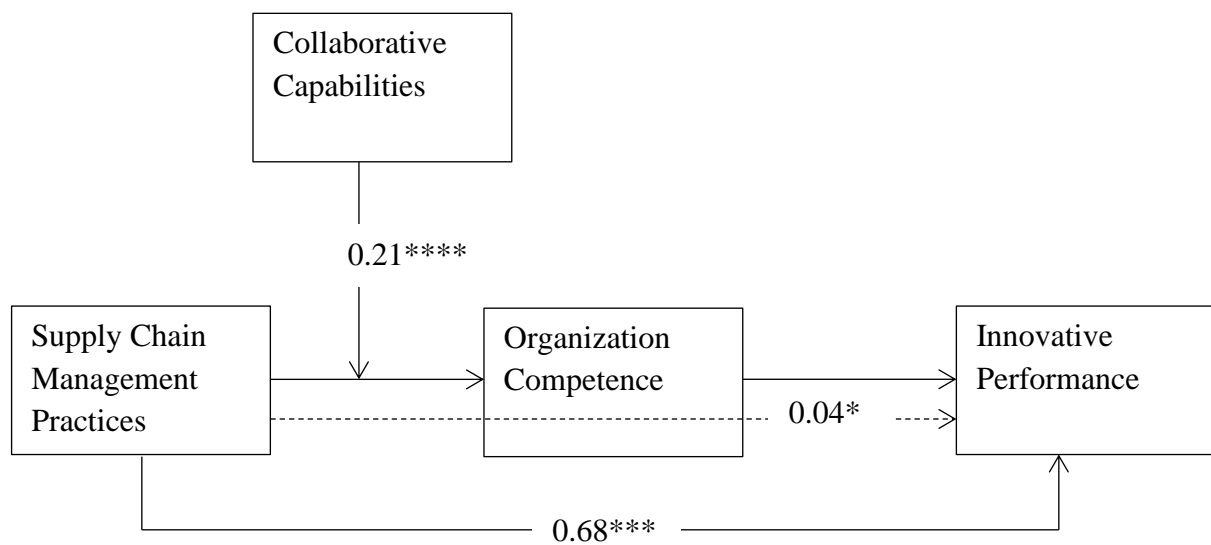


Fig. 2. Results of the Study

In the above figure, the beta values for each relationship are shown along with the significance level. Likewise, since the interactive

term is positive, the relationship between supply chain management practices and organization competence is depicted through a slope diagram at a different level of collaborative capabilities.

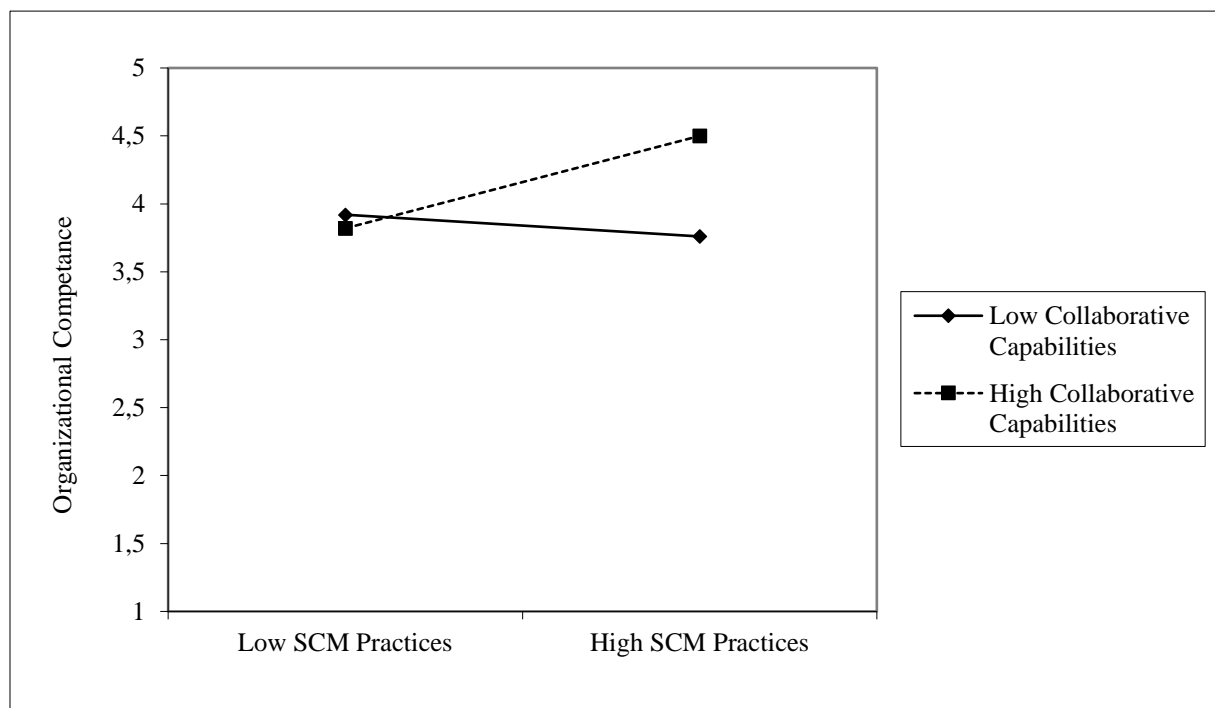


Fig. 3. Interaction Plot, SCM Practices = Supply Chain Management Practices, OC = Organizational Competence

The interaction plot shown in Figure 3 illustrates how the interaction for SCM practices is stronger when collaborative capabilities are high ($\beta = 0.24$, $p < 0.001$), while it is insignificant when collaborative capabilities are low ($\beta = 0.05$, $p = n.s.$). These results provide support for our moderation hypothesis.

DISCUSSION

By integrating SCM practices, organizational competence, collaborative capabilities and innovative performance, we found evidence for both direct and indirect results. Our findings indicate that organizational

competence partially mediates the relationship between SCM practices and innovative performance. Our results also show that firms with collaborative capabilities can improve their organizational competence by implementing SCM practices.

Our findings are in line with previous studies which show that the implementation of SCM practices helps firms to bring about innovation in their products, services, and operations [Zeng et al., 2010, Kaminski et al., 2008, Dolereoux, 2004]. Hence, the findings of this study further validate existing literature pertaining to the existence of a positive relationship between SCM practices and innovative performance. SCM practices, including handling customer relationships, real-time sharing of information, and strategies to effectively engage business partners, are very important for the success of any organization [Afraz et al., 2021]. Organizations that ensure the coordination and configuration of the processes necessary for the timely distribution and availability of their products and services can enjoy innovation in their products. Strategic planning, customer relationship, information sharing and information quality can promote organizational effectiveness [Koh et al., 2007], which ultimately leads to innovative performance.

Our results also provide support for the mediating role of organizational competence between SCM practices and innovative performance. In the past, researchers have found a significant relationship between SCM practices and organizational competence [Tippins and Sohi, 2003]. Organizational competence based on sales and profit growth, customer retention and return on investment can bring about innovation in a company's products and services.

Furthermore, the current study addresses the moderating role of collaborative capabilities between SCM practices and organizational competence. Collaborative capabilities help the firms to effectively engage all stakeholders of a business in which communication becomes stronger and updated information is shared in real time, which ultimately improves organizational competence, especially in the

financial aspects of organizational competence, such as inventory, logistic and other related information. All these activities minimize the losses and maximize profitability, leading the firm to enjoy a competitive advantage. According to the resource-based view of firms, resources and capabilities together lead the firm towards a competitive advantage [Huo 2012]. When organizations implement SCM practices and have high collaborative capabilities in terms of sharing information, setting performance goals, making decisions jointly, and sharing business resources, these capabilities with SCM practices lead the organizations towards competence.

Practical Implications

The current study has several implications for managers and policy makers. The findings are helpful for organizations in terms of implementation of SCM practices. When organizations integrate and coordinate their activities according to the demands of the customers, these activities will improve the organizational competence, which ultimately boost innovative performance. Although integrating supply chain activities is a major challenge for managers, it improves an organization's innovative performance. Innovation is a continuous process, which gives competitive advantages to firms. Moreover, at present, business environments where fast and innovative solutions to existing problems are imperative for business growth, supply chain management practices provide room for improvement and innovation. This study further recommends that to achieve a competitive advantage in the market and across the world, SME firms should implement supply chain management practices in a more effective and efficient way, as these practices are helpful in solving many practical problems faced by many operating businesses. Furthermore, collaborative capabilities are a very important part of SMEs because these capabilities help to improve the organizational competence in the presence of SCM practices.

Limitations and Future Research Directions

Despite many practical implications, this study is not without limitations. Firstly, it only focuses on SMEs, which may limit the generalizability of the results, because SMC practices can vary from sector to sector, as well as from supply chain to supply chain [Aslam et al., 2021]. Therefore, it is important to replicate this model in other industries to increase the generalizability of the findings. Secondly, a survey-based study design with closed-ended questions was used, which itself has the limitation of not capturing additional explanations and in-depth information. It is recommended that future researchers should conduct qualitative case-based studies to gain in-depth information, which may lead to practical solutions to many research questions.

Another limitation is the small sample size and cross-sectional data. Future researchers are therefore recommended to increase the sample size for better results and revalidate the research findings. In addition, a longitudinal study design is also recommended, which may help the researchers to access change at different points in time and to establish cause and effect relationships [Isnaini et al., 2020]. Although the study tried to capture data from SME firms operating across Pakistan using the convenience sampling technique, SMEs availing facilities from banking channels were taken into the sample, which limits the generalizability of findings to the entire SME sector operating in Pakistan. Finally, as this study focused only on SMEs operating in Pakistan, its findings are not applicable to all SMEs operating in developing countries. In future, more research in this field would help to validate the findings of our study.

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