Supply Chain Flexibility and Customer Responsive: A Perspective from SMEs

Hamed Ali Al Azzani[1], Normal Mat Jusoh[2]

Abstract

The survival of any enterprise in today's dynamic business environment is possible with exceptional performance. Therefore, this study has highlighted the antecedents of SMEs' performance in Oman. It has investigated the relationship between supply chain flexibility and SMEs' performance, supply chain flexibility and customer responsiveness, and customer responsiveness and SMEs' performance. Moreover, it has examined the mediating role of customer responsiveness and the moderating role of market orientation in the relationship between supply chain flexibility and SME performance. We employed quantitative methodology, and the sample size for PLS-SEM analysis was determined to be 385. The results highlighted supply chain flexibility significantly influences SMEs performance (β: 0.185, t: 2.376, p ≤ 0.00) and customer responsiveness (β: 0.790, t: 40.207, p ≤ 0.00). Moreover, customer responsiveness significantly influences SMEs performance (β: 0.202, t: 2.870, p ≤ 0.00). Further, the findings demonstrated customer responsiveness's complementary partial mediating role in the relationship between supply chain flexibility and SME performance (β: 0.155, t: 2.857, p ≤ 0.00). Meanwhile, the moderating role of market orientation was found to be insignificant.

1. Introduction

Small and medium-sized enterprises (SMEs) play an essential role in the development of any country, as they significantly contribute to GDP and help in poverty alleviation by creating job opportunities (Manzoor et al., 2019; Abisuga-Ovekunle et al., 2020; Zafar et al., 2019; Pulka & Gawuna, 2022). Similarly, the SME sector of Oman is actively participating in the country's economic development (Al Bulushi and Bagum, 2017). Still, its overall performance is lower than other Gulf countries because Omani SMEs encounter many issues in operating or entering the challenging global environment. They must find a solution to address these issues. The government of Oman also realizes the strategic importance of SMEs (Sanyal, Hisam, & Baawain, 2020), but besides government support, SMEs should replace their traditional management practices and strategies with flexible, market-oriented, and customer-responsive strategies.

The business environment in developing countries is entirely different from that of developed countries because SMEs in developing countries participate in global supply chains due to the shifting of operations of developed countries' firms to developing countries. Therefore, SMEs operating in developing countries have different supply chain strategies, flexibility levels, and performance as compared to developed countries (Awais

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[1] University of Technology Malaysia
[2] University of Technology Malaysia

Ahmad Tipu & Fantazy, 2014). Moreover, SMEs always need creative strategies to cope with the challenges of a dynamic business environment and remain competitive (Carvalho and Costa, 2014); thus, SMEs operational in Oman should also look forward and innovate themselves by developing flexibility and acquiring knowledge about customers (Nusair et al., 2022) to become customer responsive and enhance their performance.

SMEs in developing countries significantly contribute to economic development; thus, it's essential to highlight the strategic capabilities they require to enhance their performance. Moreover, researchers are still struggling to find the linkage between strategy and SME performance (Nusair et al., 2022). In addition, the review of supply chain literature revealed a paucity of research on flexible supply chain systems, particularly in the context of SMEs in Oman. To fill this gap, this research has extended the prior work of Awais Ahmad Tipu & Fantazy (2014), which compared the link between supply chain flexibility and SMEs performance in developed and developing countries. Moreover, the study has designed its framework on the call of Jafari et al. (2023), who recommended investigating the mediating role of customer responsiveness and moderation of organizational orientation in the relationship between supply chain flexibility and performance. Therefore, this research aims to investigate how supply chain flexibility is related to SMEs' performance and how this relationship is mediated by customer responsiveness and moderated by market orientation.

2. Literature Review

Dynamic Capability View (DCV) is originated from Resource Based View (RBV) and explained by Teece et al. (1997) as an organizational ability to integrate, develop and reconfigure its external and internal capabilities to cope with challenges of dynamic environment. Further, Teece (2007) highlighted that the dynamic capability view (DCV) explains an organization's ability to use dynamic capabilities to achieve competitive advantage over rivals. Organizations possessing higher dynamic capabilities will take the position of organizations having smaller capabilities. Bag & Rahman (2023) differentiated organizational capabilities from dynamic capabilities and argued that former capabilities deal with "effectual manipulation" of present resources, whereas later ones deal with "effectual manipulation" of new resources or opportunities. In addition, Day (2011) explained that dynamic capabilities never provide prompt solutions to problems but provide organizations with specific skill sets to solve the problems. They also help organizations to develop a flexible approach for synchronizing with dynamic market changes. Therefore, these capabilities should be embedded in organizational processes (Zhou et al., 2019). This study has conceptualized the construct "supply chain flexibility" as first-order dynamic capability that can help SMEs to enhance their performance by being market-oriented and customer-responsive. In line with the dynamic capability view (DCV) suggested by Teece et al., (1997) we argued that supply chain flexibility can help enterprises in learning, reconfiguration, integration, and coordination. Further, in line with Teece (2007) we mentioned that supply chain flexibility can enable enterprises to reconfigure their assets. Finally, by focusing on the findings of Benzidia & Makaoui (2020) and Jafari et al., (2023) we argued that supply chain flexibility would improve SMEs' customer responsiveness and performance.

2.1 Supply Chain Flexibility & SMEs' Performance

Organizations pursue different flexible strategies to enhance performance; some emphasize organizational agility, marketing agility, or strategic agility (Çallı & Çallı, 2021; Zhou et al., 2019; Gerald et al., 2020), whereas others develop supply chain wide flexibility that can help them to respond to dynamic situation (Jafari et al., 2023). Upton (1994) defined flexibility as "the ability to change or react with little penalty in time, effort, cost or performance" (p. 73). Further, Volberda (1996) explained that flexibility

shows how an organization responds to market evolution. In the supply chain context, flexibility highlights the organizational capacity to easily adjust to volatile demand (Piore and Sabel, 1984), and it can be measured with flexibility in procurement, production, and product development (Benzidia & Makaoui, 2020).

Supply chain flexibility is an important factor that can help businesses to enhance their performance (Arawati, 2011). Therefore, the firms operating in developing countries also focus on it to boost their supply chain performance (Awais Ahmad Tipu & Fantazy, 2014). Omoruyi & Dhurup (2016) argued that the challenges in the modern dynamic business environment have generated the need among organizations to be flexible and strategically integrate their business processes across other strategic business units within the supply chain network. Moreover, they explained that supply chain flexibility positively influences the performance of SMEs. Similarly, Benzidia & Makaoui (2020) found a positive association between supply chain flexibility and organizational performance. In the current dynamic business environment, every micro, small, or large enterprise strives to gain and maintain a competitive advantage. SMEs can gain a competitive advantage over rivals by deploying perfect supply chain approaches. There is an abundance of literature on supply chain, but still, there is a dearth of research in the context of SMEs, even though supply chain flexibility significantly influences the SMEs' performance (Darmawan et al., 2023). Furthermore, Jafari et al. (2023) indicated the need to examine the link between supply chain flexibility and firm performance. Therefore, we proposed that the performance of Omani SMEs is linked with supply chain flexibility. To investigate the relationship between supply chain flexibility and the performance of manufacturing SMEs in Oman, we developed the following hypothesis:

H1: Supply chain flexibility is positively related to SMEs' performance.

2.2 Supply Chain Flexibility, Customer Responsiveness & SMEs Performance

Previously, only a few organizations used to respond to customer needs, but now every organization emphasizes being customer-responsive. Organizational customer responsiveness is an organization's ability to respond to individual customers' needs by sensing the market (Kohli and Jaworski, 1990; Kohli et al., 1993). Whereas prior studies have conceptualized it as customer agility or customer orientation, Bernardes & Hanna (2009) differentiated responsiveness from agility. They highlighted that agility is about "speed of reconfiguration", but responsiveness is concerned with "purposefulness of the change". Further, they defined responsiveness as "a firm's propensity to act on market knowledge to anticipate and/or rapidly address modifications in customer's expectations" (p. 45). In manufacturing organizations, customer responsiveness includes value-adding activities (Matthyssens and Vandenbempt, 2008; Prehrsson, 2011) such as customized services (Schlegelmilch and Ambos, 2004) or solving problems highlighted by customers, providing customer insights (Jermsittiparsert et al., 2019), and customer relationship development (Storbacka and Nenonen, 2009).

Organizations can resolve their supply chain issues by developing the ability to respond to needs and wants of customers promptly and being responsive to dynamic market changes (Kumar and Singh, 2017). Therefore, supply chain managers are becoming more interested in responsiveness as it develops an essential link between production and fulfillment (Danese et al., 2013; Singh, 2015; Biç̧er et al., 2018). Many researchers highlighted that the whole supply chain of an organization is involved in achieving customer responsiveness. Moreover, they argued that any organization's supply chain management should aim to become customer-responsive to generate value (Recker et al., 2017) and enhance performance. SMEs can gain customer responsiveness through supply chain flexibility. Further, this responsiveness can positively influence the organizational performance of any organization (e.g., Prehrsson, 2011; Prehrsson, 2014). Jafari et al. (2023) studied the multidimensional perspective of supply chain flexibility, which includes supply flexibility, internal flexibility, and distribution flexibility. Moreover, they

argued that all these dimensions of supply chain flexibility significantly influence the customer responsiveness of an organization. In addition, they recommended investigating the mediating role of customer responsiveness in the relationship between supply chain flexibility and organizational performance. Therefore, we proposed that customer responsiveness is positively affected by supply chain flexibility, and it can influence the SMEs performance. Thus, customer responsiveness can mediate the effect of supply chain flexibility on SMEs' performance. Based on the discussion given above, we hypothesize that:

H2: Supply chain flexibility is positively related to customer responsiveness.

H3: Customer responsiveness is positively related to SMEs' performance.

H4: Customer responsiveness significantly mediates the effect of supply chain flexibility on SMEs' performance.

2.3 Market Orientation as a Moderator

Many studies have considered customer responsiveness as customer orientation, but it's a dynamic capability that can help organizations meet customer needs purposefully. Similarly, market orientation can enable organizations to sense the market and change their practices or policies to facilitate customers and enhance performance. Naver & Slater (1990) defined market orientation as "the organizational culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and, thus, continues superior performance for the business". There is extensive literature highlighting the role of market orientation of SMEs performance (e.g., Nurhilalia et al., 2019; Länsiluoto et al., 2019; Bamfo & Kraa, 2019; Wasim et al., 2022). However, there is dearth of research that linked market orientation with customer responsiveness. Moreover, Gilgor et al. (2019) argued that in current dynamic market situations, organizations prefer to rely on their suppliers for value creation, but still there is limited literature on market orientation in the context of the supply chain (Gligor et al., 2019). Furthermore, Jafari et al. (2023) studied the moderating of innovation orientation in the relationship between supply chain flexibility and customer responsiveness, and they recommended investigating the moderation of any other orientation that can strengthen the relationship of dynamic capabilities with competitive advantage or performance. Thus, we proposed that market orientation can moderate the relationship between supply chain flexibility (i.e., dynamic capability) and SMEs' performance.

H5: Market orientation moderates the relationship between supply chain flexibility and SMEs' performance.

Based on the literature review discussed above, we designed the following conceptual framework (See Figure 01):
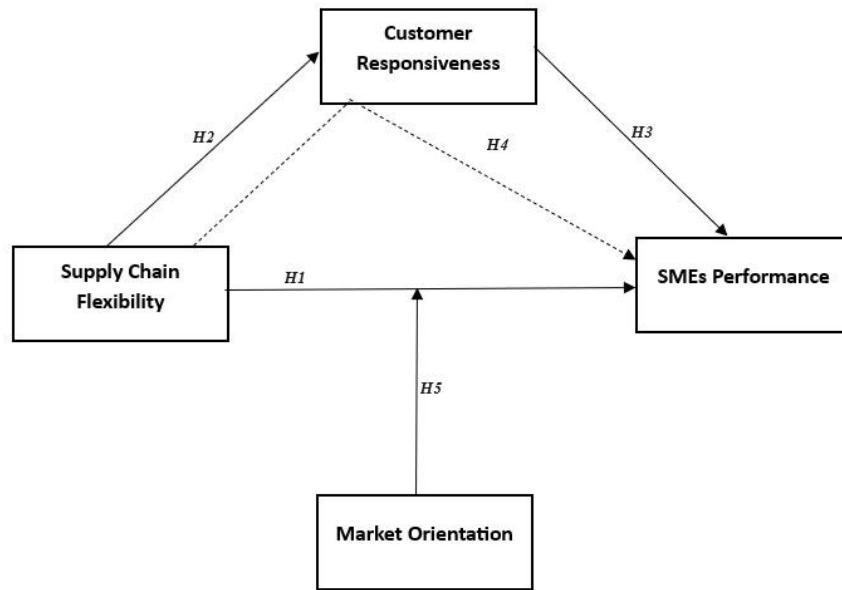
Figure 1: Conceptual Framework

3. Research Method

The study investigated the effect of supply chain flexibility on SMEs' performance in Oman. Moreover, it has examined the moderating role of market orientation and mediation of customer responsiveness in the relationship between supply chain flexibility and SMEs' performance. To examine these relationships, this study has used a quantitative research technique which is deductive procedure to test hypotheses (Cooper and Schindler, 2014). The data were gathered by survey, the most popular and widely accepted method for quantitative research (Cooper & Schindler, 2014). Moreover, the survey helps collect data from multiple respondents simultaneously (Grembowski, 1985; Naz, 2018). The survey comprised two sections, the first section inquired about information related to demographics, and the second included questions about supply chain flexibility, customer responsiveness, market orientation, and SME performance. The items to measure these variables were taken from prior valid studies. The questionnaire was developed in English to retain the questions' consistency and meaning.

3.1 Measures & Measurements

The instruments have great importance while designing the questionnaire, and to maintain the reliability and validity, the instruments were adapted from existing models of studies. Benzidia & Makaoui (2020, p. 177) defined the supply chain flexibility of an SME as the "ability to react to changes in demand, and the ability to modify the level of production and composition of the product portfolio." They measured this concept by using four items. We followed their study to measure the supply chain flexibility of SMEs in Oman. In line with their research, we defined the supply chain flexibility of Omani SMEs as the ability of enterprises to respond to fluctuations in demand and modify their production and product composition capability and efficiency accordingly.

Customer responsiveness of SMEs was measured with six items from Bernardes (2010); this scale was also used by Jafari et al. (2023), who related supply chain flexibility with customer responsiveness. Kalaignanam et al. (2021) indicated that market orientation is a marketing concept similar to market or marketing agility as it focuses on sensemaking and marketing/market decisions. Still, instead of using the scale of market agility to measure market orientation, we adopted the 7-item scale of market orientation from the research done by Bhattarai et al. (2019). Many studies examined the financial, market, or

economic performance of SMEs, but in this study, we focused on reviewing the overall performance of SMEs. In the context of our research, we defined SMEs' performance as the ability of enterprises to react more quickly than their competitors to the changing market and customer demands. We adapted five items-based scale by Adomako & Ahsan (2022) to measure the performance of manufacturing SMEs in Oman. Table 1, shows the items and their adoption source (See Appendix A).

3.2 Sampling, Data Collection, and Analysis

All the variables' items were adopted or adapted from prior studies, but the pre-testing was done before the questionnaire was finalized. The pre-testing process involved three academicians in supply chain management and three supply chain managers working in SMEs. The input of academicians and managers was considered, and some items were edited accordingly. The questionnaire was also administered electronically, and its link was shared with managers of SMEs via email. Moreover, two assistants were hired to gather data manually via printed questionnaires from the managers of SMEs located at a distance. The aim was to gather the data from middle or top-level managers who know English and possess knowledge related to strategic and supply chain operations. Furthermore, they can better relate their performance with their rivals.

Roscoe (1979) explained two rules of thumb to determine the sample size for any research. The first rule is that the sample size should be between 31 and 490 as it is most suitable, accurate, and used by the majority of empirical studies. Meanwhile, the second rule contends that sample size should equal or exceed ten times the number of measured variables. In addition, Krejcie & Morgan (1970) mentioned that the sample size of 385 can be considered for unknown populations. The information about an exact number of manufacturing SMEs in Oman, and particularly the number of their middle and top-level managers, is unknown; thus, we considered 385 as the sample size for this research as it follows the recommendations of Krejcie & Morgan (1970) and obeys the two rules of thumb suggested by Roscoe (1979). Furthermore, this sample size is not too large; thus, there are fewer chances of type II error (Sekaran & Bougie, 2019).

We used SPSS V26 to analyze the demographics (i.e., given in Table 2). Further, structural equation modeling was done using Smart Pls 4 to test the model.

Table 2: Demographic Information

Demographic Information			
Gender	Male	Female	
	342	43	
Qualification	Masters	Post Graduation	PhD
	206	160	19
Experience	Less than 5 years	6 – 10 years	11- 15 years	More than 16 years
	84	204	68	29

4. Results

The proposed research model was tested with a partial least square-based structural equation modeling (PLS-SEM) technique. There were two reasons behind using this technique. First, it can model the latent constructs even if conditions are non-normal (Tenenhaus et al., 2005; Ernst et al., 2011; Hair et al., 2014). Secondly, it efficiently runs complex models having multiple relationships (Do Nascimento et al., 2016). First, the

measurement model was examined, and later, the structural model was tested to investigate the proposed relationships.

4.1 Measurement model

The investigation of the measurement model examines the measurement properties of the constructs. We examined every construct's reliability and validity (i.e., discriminant and convergent), including supply chain flexibility, customer responsiveness, market orientation, and SMEs' performance. The reliability of individual item was checked by investigating the item-to-construct loadings for all the items of constructs. Hair et al. (2010) highlighted that if a factor loading of any item is 0.70 or above, then it shows that this item shares 50 % or more variance with the latent construct, and items showing values below this threshold should be removed from the model. The threshold or acceptable value for reliability is 0.5 (Hair et al., 2014). Based on these recommendations, two items (i.e., the fifth and sixth item) of market orientation were removed as their factor loadings were 0.645 and 0.590, respectively (See Figure 2 and Table 3). As shown in Table 3, the Cronbach's alpha values ranged from 0.825 to 0.895, confirming the reliability.

Table 3: Results of confirmatory factor analysis.

Construct and Measurements		Factor Loading
Supply Chain Flexibility: α = 0.837, CR = 0.913, AVE = 0.725		
SCF1	"Our enterprise has ability to change quantity of supplier's order"	0.752
SCF2	"Our enterprise has ability to change delivery times of supplier's order"	0.890
SCF3	"Our enterprise has ability to change production volume capacity"	0.881
SCF4	"Our enterprise has ability to reduce development cycle times"	0.876
Customer Responsiveness: α = 0.895, CR = 0.916, AVE = 0.646		
CR1	"Our enterprise develops new products in anticipation of customer needs"	0.813
CR2	"Our enterprise incorporates the latest technologies in products to satisfy customer needs"	0.864
CR3	"Our enterprise offers products if it identifies a new market segment"	0.828
CR4	"Our enterprise responds at once if customer's needs change"	0.808
CR5	"Our enterprise responds quickly to special customer request"	0.755
CR6	"Our enterprise is proactive in shaping customer's needs rather than being reactive"	0.749
Market Orientation: α = 0.825, CR = 0.894, AVE = 0.630		
MO1	"We have routine or regular measures of customer service"	0.723
MO2	"Our product and service development is based on good market and customer information"	0.889
MO3	"We know our competitors well"	0.791
MO4	"We have a good sense of how our customers value our products and services"	0.709

| MO5 | "We are more customer-focused than our competitors" | 0.841 |
MO6	"We compete primarily based on product or service differentiation"	0.645*
MO7	"Our products/services are the best in the business"	0.590*
SMEs Performance: α = 0.845, CR = 0.890, AVE = 0.619		
SP1	"The employee ratio in my enterprise is growing"	0.793
SP2	"The market share of my enterprise is growing"	0.797
SP3	"The profitability of my enterprise is growing"	0.789
SP4	"The sale of my enterprise is growing"	0.839
SP5	"Overall performance of my enterprise is growing"	0.709
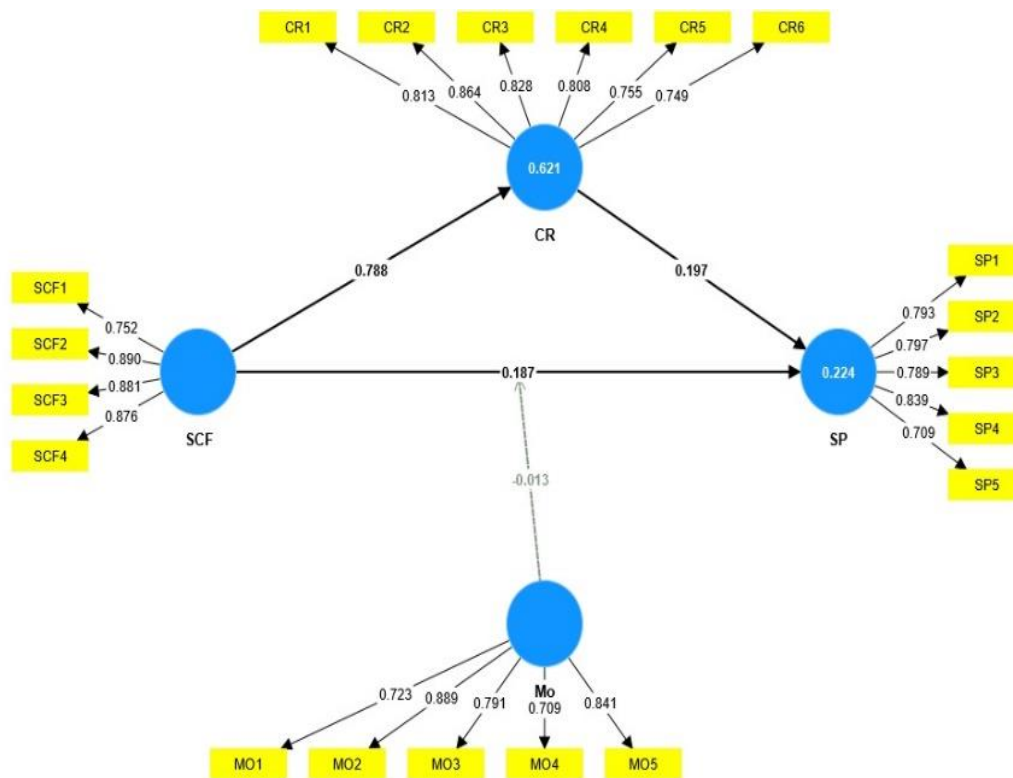
Figure 2: Measurement Model

The convergent validity can be analyzed by investigating AVE and CR; their minimum thresholds are 0.5 and 0.7, respectively (Fornell and Larcker 1981). Therefore, we investigated the convergent validity by assessing the Average Variance Extracted (AVE) and composite reliability (CR), and the results demonstrated that all values are within the recommended thresholds (See Tables 3 and 4). Meanwhile, the estimation of discriminant validity was done by examination of the factor loadings of the items with their respective constructs (Benzidia & Makaoui, 2020). Malik et al. (2023) argued that Fornell-Larcker's criterion can accurately estimate the discriminated validity. Moreover, they mentioned that "according to Fornell and Larcker, if the Average Variance Explained (showed in the diagonal matrix) surpasses the squared correlation of latent variables, then the assumption of discriminant validity is supported" (p. 90). The discriminant validity can be estimated by examining that every construct's square root of Average Extracted Variance (AVE) is more than the inter-construct correlations (Fornell and Larcker 1981). The analysis (See Table 4) revealed that the correlation between each contrast and other constructs under

consideration is less than the square root of the Average Extracted Variance (AVE) of every construct; thus, discriminant validity is confirmed.

Table 4: Convergent and discriminant validity results

Constructs	Composite Reliability	AVE	CR	MO	SCF	SP
Customer Responsiveness (CR)	0.916	0.646	0.804			
Market Orientation (MO)	0.894	0.630	0.213	0.794		
Supply Chain Flexibility (SCF)	0.913	0.725	0.788	0.309	0.852	
SMEs Performance (SP)	0.890	0.619	0.390	0.321	0.409	0.787

Note. AVE: Average Extracted Variance, CR: Customer Responsiveness, MO: Market Orientation, SCF: Supply Chain Flexibility, SP: SMEs Performance

4.2 Structural model

The explanation above shows the measurement model results and confirms that our proposed model's psychometric qualities are above the satisfaction level. Thus, we examined the structural model to identify the relationship between every construct and test hypothetical statements. First, we estimated the path coefficients, and then their significance was examined with t-statistics. The strength of relationships was estimated with a size of path coefficient. The summary of direct hypotheses is presented in Table 5, and Figure 3 shows the structural model.

Table 5: Hypotheses Summary (Direct Paths)

Structural Path	Standard Coefficient	T-values	Hypothesis Test
H1: SCF -> SP	0.185**	2.376	Supported
H2: SCF -> CR	0.790**	40.207	Supported
H3: CR -> SP	0.202**	2.870	Supported

Note: **<0.05

Hypothesis 1 predicted the effect of supply chain flexibility on SMEs' performance. The results (See Table 5, Figure 3) have shown a significant effect of supply chain flexibility on the performance of manufacturing SMEs in Oman (β: 0.185, T-Statistics: 2.376), thus supporting Hypothesis 1 (i.e., H1). Hypothesis 2 predicted the effect of supply chain flexibility on customer responsiveness. The results revealed a significant effect of supply chain flexibility on customer responsiveness of SMEs (β: 0.790, T-Statistics: 40.207), thus supporting Hypothesis 2 (i.e., H2). Hypothesis 3 predicted the effect of customer responsiveness on SMEs' performance. The results revealed a significant effect of customer responsiveness on performance of manufacturing SMEs in Oman (β: 0.202, T-Statistics: 2.870), thus supported Hypothesis 3 (i.e., H3).
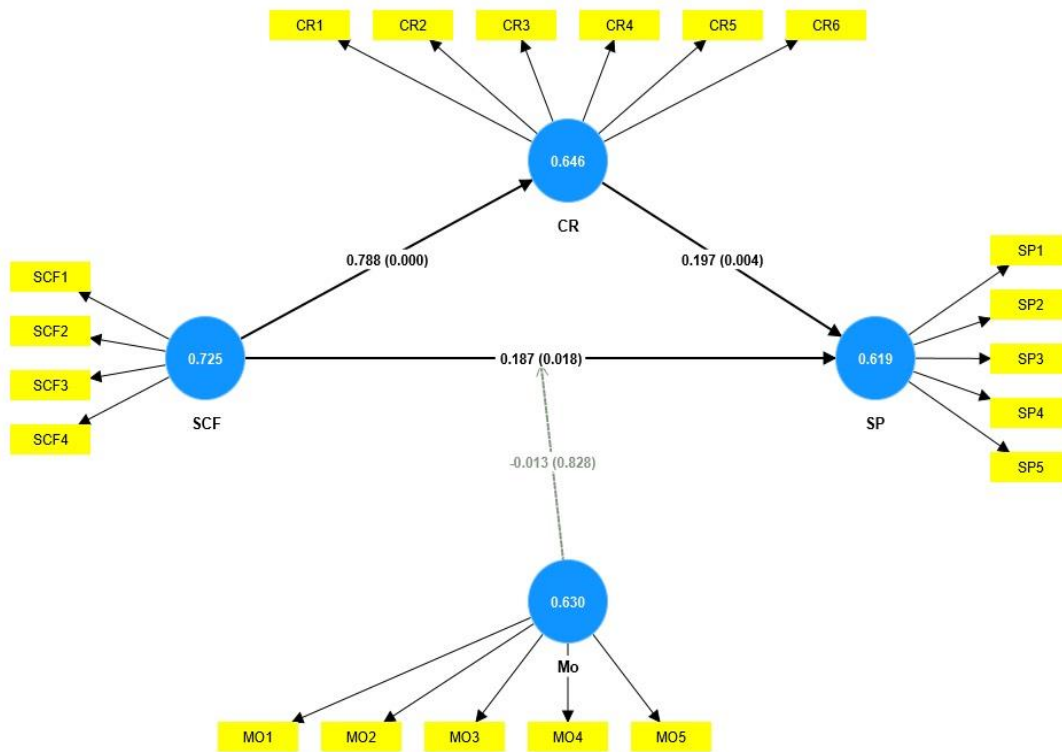
Figure 3: Structural Model

Mediation analysis was performed to assess the mediating role of customer responsiveness in the relationship between supply chain flexibility and SMEs' performance. The results (See Table 5) revealed a significant indirect effect of supply chain flexibility on SMEs' performance through customer responsiveness (Beta: 0.155, T-Statistics: 2.857, p < 0.001). The total effect of supply chain flexibility on SMEs' performance was significant (Beta: 0.342, T-Statistics: 6.223, p < 0.001), with the inclusion of the mediator the effect of supply chain flexibility on SMEs performance was still significant (Beta: 0.185, T-Statistics: 2.376, p < 0.001). These results show the complementary partial mediating role of customer responsiveness in the relationship between supply chain flexibility and SMEs performance. Therefore, H4 was supported. The moderating effect of market orientation was tested on the effect of supply chain flexibility on SMEs' performance. The results reported an insignificant moderating effect of market orientation between supply chain flexibility and SMEs' performance. Thus, H5 was not supported.

Table 5: Hypotheses Summary (Mediation & Moderation)

Mediation				
Type of Effect	Effect	Coefficient	T-Stats	Remarks
Total Effect	SCF -> SP	0.342	6.223**	Significant total effect
Indirect Effect	H4: SCF -> CR -> SP	0.155	2.857**	Significant indirect effect
Direct Effect	SCF -> SP	0.185	2.376**	Significant direct effect
Percentile bootstrap 95 % Confidence Interval				
Lower		Upper		

0.050		0.264		
Moderation				
Type of Effect	Effect	Coefficient	T-Stats	Remarks
Moderation	Mo x SCF -> SP	-0.013	0.217	Un Supported

Note. CR: Customer Responsiveness, MO: Market Orientation, SCF: Supply Chain Flexibility, SP: SMEs' Performance

5. Discussion

Small and medium-sized enterprises (SMEs) can play a crucial role in economic development (Alraja et al., 2020; Niazr & Matriano, 2022) and diversification; thus, Arab countries are also paying significant consideration to SMEs for economic diversification. Similarly, the government of Oman is taking initiatives to address the challenges SMEs face to enhance their growth and performance (Niazr & Matriano, 2022). Currently, 90 % of the total corporate sector in Oman is constituted by SMEs, generating significant revenue (Alraja et al., 2020) compared to other sectors. Many studies focusing on supply chain in Oman have ignored the opportunities and challenges SMEs face while optimizing their supply chain practices to increase performance (Niazr & Matriano, 2022). Moreover, it's important to highlight the other strategic capabilities that can stimulate the SMEs' performance in Oman (Nusair et al., 2022). Thus, we proposed that manufacturing SMEs in Oman require flexibility, responsiveness (Alraja et al., 2020), and market orientation to improve their performance. Therefore, we designed the research model according to the theoretical lens of dynamic capability theory (DCV) to investigate the driver of SMEs performance (Abdelfattah et al., 2023), including supply chain flexibility (i.e., dynamic capability), customer responsiveness, market orientation and SMEs performance.

The first hypothesis (i.e., H1) was established to predict the positive influence of supply chain flexibility on SMEs' performance. The positivity stipulates that supply chain flexibility being dynamic capability can help the manufacturing small and medium-sized enterprises (SMEs) of Oman to enhance their performance. The results reported that manufacturing SMEs of Oman can improve their performance by developing supply chain flexibility as it will enable them to control the subsystem level to reduce the cost (Bag & Rahman, 2023) and react promptly to changes in demand by modifying the production and composition levels (Benzidia & Makaoui, 2020). The findings align with the prior explanation of Omoruyi & Dhurup (2016), who highlighted that SMEs should emphasize developing supply chain flexibility to stimulate their performance. Thus, the manufacturing SMEs of Oman can enhance their performance by adopting supply chain flexibility. The results supported the H1 and confirmed that SMEs need supply chain flexibility to boost their performance.

The adoption or achievement of supply chain flexibility is possible if all the functions of organizations including manufacturing, supply chain, and marketing works in stream. Therefore, it can positively affect the customers (Vickery et al., 1999). Thus, supply chain managers of organizations are more keen on responsiveness as it can help them establish a streamlined path between production and order fulfillment (Biçer et al., 2018). The supply chain management of every enterprise should work on developing customer responsiveness to generate a significant value (Recker et al., 2017) and enhance performance. Therefore, hypothesis 2 (i.e., H2) was developed to predict the relationship between supply chain flexibility and customer responsiveness of SMEs. Further, H3 was formulated to predict the relationship between customer responsiveness on SMEs' performance. The results supported the hypothesis 2 and indicated that supply chain flexibility is important for SMEs to develop customer responsiveness. These results are

supported by the prior study by Jafari et al. (2023), who conceptualized supply chain flexibility as a multidimensional concept and found that all dimensions of supply chain flexibility, including supply flexibility, internal flexibility, and distribution flexibility, significantly influence customer responsiveness. Furthermore, the H3 was also supported, and results are in line with the findings of Pehrsson (2011), who argued that customer responsiveness can be considered an important strategy for manufacturing enterprises operational in growing markets.

Jafari et al. (2022) recommend examining the mediating role of customer responsiveness in the relationship between supply chain flexibility and organizational performance. Moreover, they directed to identify how organizational orientations portray the realistic view of the effect of dynamic capabilities on the competitive advantage. Therefore, based on their directions and support of literature, we proposed that market orientation can be an important organizational orientation affecting the role of supply chain flexibility on SMEs performance. Further, we conceptualized supply chain flexibility as a dynamic capability. Thus, we developed H4 to investigate the mediating role of customer responsiveness in the relationship between supply chain flexibility and SMEs' performance, and H5 was formulated to predict the moderating role of market orientation on the relationship between supply chain flexibility and SMEs' performance. The results supported the H4 by claiming a complementary partial mediation of customer responsiveness in the relationship between supply chain flexibility and SMEs performance. Thus, H4 was accepted, but H5 was rejected. Therefore, the manufacturing SMEs of Oman need to develop supply chain flexibility as this dynamic capability will make them customer-responsive and enhance their performance.

6. Implications

The study has developed a comprehensive framework based on a dynamic capability view (DCV) to enhance the performance of manufacturing SMEs in Oman. Moreover, it has provided several implications. The study has shifted the attention towards essential dynamic capability (i.e., supply chain flexibility) and general capability (i.e., customer responsiveness) that can enable SMEs to enhance their performance. The prior studies focusing on supply chain flexibility have conceptualized it as a multidimensional construct, but this research has not considered any dimension and measured it as a single construct comprising six items. Thus, this study is significantly different from prior studies. Moreover, the research has contributed to the literature on supply chain flexibility, customer responsiveness, and market orientation in the context of SMEs. The research findings can help intrapreneurs, managers, owners, and policymakers of manufacturing SMEs in Oman enhance their performance by developing supply chain flexibility and being responsive toward customers.

7. Conclusion

The study has examined the effect of supply chain flexibility on SMEs' performance and customer responsiveness. Moreover, it has investigated the relationship between customer responsiveness and the performance of manufacturing SMEs in Oman. Furthermore, the mediating role of customer responsiveness and moderation of market orientation was tested in the relationship between supply chain flexibility and SMEs' performance. The findings supported all the direct and indirect hypotheses, but the moderation hypothesis was rejected. The results revealed that supply chain flexibility directly and indirectly (i.e., in the presence of customer responsiveness) influences the performance of manufacturing SMEs in Oman. Meanwhile, market orientation neither strengthens nor weakens the relationship between supply chain flexibility and SMEs' performance.

8. Limitations and Recommendations

The study has highlighted two essential strategies that can enhance the performance of SMEs in Oman. Future research could possibly explore other dynamic capabilities leading to the performance of SMEs in developing or developed countries. Moreover, future researchers can consider different organizational orientations that can strengthen the relationship between supply chain flexibility and SMEs' performance. In addition, future studies can specifically emphasize examining SMEs' operational, market, or financial performance.

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Appendix A

Table 1: Items of constructs and Status

Supply Chain Flexibility (SCF)		
No of items: 4	**Source**	**Status**
"Our enterprise has ability to change quantity of supplier's order"	(Benzidia & Makaoui, 2020)	Adopted
"Our enterprise has ability to change delivery times of supplier's order"		
"Our enterprise has ability to change production volume capacity"		
"Our enterprise has ability to reduce development cycle times"		
Customer Responsiveness (CR)		
No of items: 6	**Source**	**Status**
"Our enterprise develops new products in anticipation of customer needs"	(Bernardes, 2010).	Adopted
"Our enterprise incorporates the latest technologies in products to satisfy customer needs"		
"Our enterprise offers products if it identifies a new market segment"		
"Our enterprise responds at once if customer's needs change"		
"Our enterprise responds quickly to special customer request"		
"Our enterprise is proactive in shaping customer's needs rather than being reactive"		
Market Orientation (MO)		
No of Items: 7	**Source**	**Status**
"We have routine or regular measures of customer service"	(Bhattarai et al., 2019)	Adopted
"Our product and service development is based on good market and customer information"		
"We know our competitors well"		
"We have a good sense of how our customers value our		

products and services"		
"We are more customer-focused than our competitors"		
"We compete primarily based on product or service differentiation"		
"Our products/services are the best in the business"		
SMEs' Performance (SP)		
No of Items: 5	**Source**	**Status**
"The employee ratio in my enterprise is growing"	(Adomako & Ahsan, 2022).	Adapted
"The market share of my enterprise is growing"		
"The profitability of my enterprise is growing"		
"The sale of my enterprise is growing"		
"Overall performance of my enterprise is growing"		