

Socially responsible supply chain management in small and medium enterprises in the GCC

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Abstract

Purpose – *The purpose of this study is to examine variables and their relationships that hinder socially responsible behaviours in the supply chain of small- and medium-sized enterprises (SMEs) in the Gulf Cooperation Council (GCC) countries.*

Design/methodology/approach – *The study uses the mixed-method approach that includes the survey method and soft mathematical modelling. Empirical data were collected from 130 SMEs and their suppliers based in Qatar and Oman. Furthermore, to understand the barriers and their interrelationships, interpretive structural modelling approach is applied.*

Findings – *The results of empirical study reveal lack of coherence among SMEs and their suppliers in prioritising social responsibility issues in their supply chain. The hierarchy-based model reveals that shortages of incentive, short-term objectives, the lack of cooperation and willingness among supply chain partners, constraints (financial, managerial and technological) and the pressure from customers were the independent barriers and have strong driving power.*

Research limitations/implications – *The findings of this study are expected to provide an insight to further improve and promote socially responsible supply chain in emerging economies in Gulf region. Future research could compare the socially responsible activities of SMEs from different Gulf countries and expand the understanding of the barriers that outline the responses of suppliers situated in different Gulf economies.*

Originality/value – *The results contribute to the field of supply chain sustainability as the first academic attempt to shed light on how SMEs in GCC are dealing with supply chain social responsibility issues and one of the few in the emerging economy perspective that probes the key role of barriers to improve the socially responsible behaviour of Gulf-based SMEs.*

Keywords Sustainability, Social responsibility, Small and medium enterprises (SMEs), Gulf Cooperation Council (GCC), Supply chain management (SCM)

Paper type Research paper

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1. Introduction

In the past two decades, supply chain sustainability has emerged as an approach to improve organisational performance (Chardine-Baumann and Botta-Genoulaz, 2014). The goal of sustainable supply chain management is to integrate and balance the performance of supply chain on environmental, social and economic dimensions (Koberg and Longoni, 2019). Sustainable supply chain practices minimise the negative impacts of operations and improve firm value/efficiency with a significant impact on the company's competitiveness and supply chain operations and provide competitive advantage (Ahmadi et al., 2017). According to signalling theory, socially responsible initiatives can be seen as signals that help to build reputation and reduce information asymmetry in the market, which, in turn, can lead to customer satisfaction (Connelly et al., 2011).

Sustainable supply chain management is essentially guided by the concept of Triple Bottom Line (Elkington, 2002), which requires organisations to simultaneously improve their performance on the three dimensions – economic, social and environmental. Social responsibility is the dimension of sustainability that focusses on human aspects (Huq *et al.*, 2014). While developing strategies to manage social issues, all stages of the supply chain should be involved because any lapses in the upstream may have negative consequences on the downstream, in particular, the end customer and the focal firm (Klassen and Vereecke, 2012). Thus, activities that influence social sustainability are to be integrated in strategic planning process and managed across the supply chain from supplier to focal firm to retailer and finally customer to improve overall social performance of supply chain (Mani *et al.*, 2018).

Social development has become the centre of focus in supply chain practices due to the realisation of importance of human and community concerns by the governments and businesses (Khan *et al.*, 2018). Moreover, due to pressure from government, customers, NGOs and stakeholders to improve transparency in supply chain operations, social issues in supply chains are receiving an increased attention (Mani *et al.*, 2016). To improve sustainability, researchers have proposed variety of sustainability frameworks; however, these frameworks emphasise more on economic and environmental sustainability (Ahmadi *et al.*, 2017). To ensure the social responsibility of a supply chain, issues and dilemmas related to ethics and social responsibility should be resolved both within organisations and across the supply chain (Ferrell and Ferrell, 2016), nonetheless the social dimension in supply chain has received least attention in the sustainable supply chain literature (Mani *et al.*, 2016).

Organisations not only are involved in social responsibility activities but also market them effectively to differentiate their products and improve their stakeholders' satisfaction and the firm's brand image (Jean *et al.*, 2016). Positive image of a firm on social responsibility can even lead to more sales and a boost in investment in shares of firms (Maignan *et al.*, 2002). Mani *et al.* (2016) describe supply chain social sustainability as the "management of social issues, including equity, safety, labour rights, philanthropy, and product responsibility, that affect the safety and welfare of the people in the supply chain". Extant literature reveals that social responsibility in supply chain was lately integrated into research and thereby there is still a lack of theoretical and empirical studies (Eizenberg and Jabareen, 2017). The social dimension was often been neglected in sustainable supply chain studies (Abbasi, 2017), and it is therefore under-valued, under-explored and under-theorised (Silvestre, 2015; Morais and Silvestre, 2018).

Practically, many approaches can affect social responsibility in a supply chain, these include adoption of health and safety management systems like ISO 45001, redesigning the products and processes with the objective of creating positive impact for consumer and workers and contributing to the communities in various entities of supply chain operates (Vargas *et al.*, 2018). Although organisations are under pressure to adopt socially responsible business practices, the motivators and barriers that would affect various stakeholders have not been methodically explored (Hussain *et al.*, 2018). Additionally, majority of the research currently available on sustainability in logistics or supply chain management domain has investigated aspect of environment, workers' safety and community in a detached manner, without consideration of the potential interrelationships among these and other aspects of social responsibility (Hussain, *et al.*, 2018). Therefore, there is a dearth of information and unbalanced research on social aspect of sustainability in supply chains and this call for further research on social sustainability (Popovic *et al.*, 2018).

Small- and medium-sized enterprises (SMEs) play an important role in Gulf Cooperation Council (GCC) governments' wider social, environmental and economic goals and in terms of building sustainable communities. In the GCC, SMEs constitute close to 90 per cent of

the total companies' base (Badal, 2013). SMEs make up the majority of the suppliers of large companies and thus play an important role as vehicles for implementing social responsibility practices along the supply chain (Ayuso *et al.*, 2013). However, there are inexorable challenges for SMEs undertaking social responsibility efforts (Jenkins, 2009). There is a renewed interest to explore how SMEs deal with social responsibility along the supply chain as they are often an important part of supply chains spanning several geographic locations, especially when these SMEs are located in developing countries with lax regulatory environment (Seuring *et al.*, 2008).

From the discussion in the preceding paragraphs, it is clear that there exists a gap in dealing with social issues in supply chain from emerging economies perspective, in particular SMEs. Further, Yawar and Seuring (2017) argues that social issues are time bound, changing and context-specific, thereby demanding future studies in different social settings. Thus, to address the paucity of research on social responsibility in supply chain literature in developing countries, this paper:

- identifies social issues related to SMEs supply chain; and
- uses empirical study and modelling methodology with inputs from SMEs in Qatar and Oman to understand the barriers to social responsibility in supply chains.

We expect to contribute to the field of sustainable supply chain management by providing evidence on priority of social issues considered by focal companies and their suppliers in GCC countries and an understanding of the barriers to social responsibility and their interrelationships intend to fulfil the need for studies using mixed-method approach that address the relationship between social responsible supply chain practices and competitive advantage in context of GCC countries.

The paper is organised as follows: after the Introduction, Section 2 reviews the relevant literature, followed by the research methodology. Then, the research findings are presented and discussed in the context of the literature in Section 3. In Section 4, conclusions are drawn, limitations of the research are pointed out and the implications for further research and practice are suggested.

2. Literature review: barriers to socially responsible supply chains in small- and medium-sized enterprises

In the process of implementing social responsibility in supply chains, the element of power in a buyer-supplier relationship drives or inhibits social responsibility (Eriksson and Svensson, 2015). Bigger firms have more power to encourage socially accountable actions among their supply chain partners (Lepoutre and Heene, 2006; Ayuso *et al.*, 2013). However, in case of SMEs, the limitations of size limit their efforts towards a more socially responsible behaviour. Likewise, research on social responsibility in GCC domain is limited to large firms (Al Naimi *et al.*, 2012; Farouk and Jabeen, 2018). Another challenges lies in the shortage of incentives for SMEs to implement socially responsible behaviour-related measures in a systematic and comprehensive way (Fox, 2005). In addition, the lack of awareness may also deter the adoption of sustainable advancement (Mani *et al.*, 2015). In SMEs, the owner-manager is often both the driver and the implementer of practices who may consider socially responsible practices discretionary and costly (Williamson *et al.*, 2006). The dominant influence of owner-manager is considered as an obstacle to socially responsible practices adoption in SMEs (Preuss and Perschke, 2010). Enablers are factors that facilitate the adoption of sustainable supply chain practices by a focal firm (Sancha *et al.*, 2015); thereby, we can define barriers as those factors that inhibit the adoption of social responsible practices in the supply chain. A comprehensive literature review reveals fourteen barriers that are discussed briefly below.

2.1 Shortage of incentives and support

This includes training, support networks, growth opportunities, regulation awareness, consultation and loans for environmental initiatives (Agan *et al.*, 2013; Ciliberti *et al.*, 2008; Ciliberti *et al.*, 2010; Fox, 2005; Hamann *et al.*, 2005; Mani *et al.*, 2015; Pedersen, 2009; Roberts *et al.*, 2006; Walker *et al.*, 2008; Williamson *et al.*, 2006). Generally, SMEs have very limited knowledge about legislation in developing nations, and hence require substantial efforts to research the appropriate regulation.

2.2 Constraints such as time, financial, human, cultural and organisational governance (management style)

SMEs have inadequate time, economic resources and technical knowledge (Carlisle and Faulkner, 2004; Castka *et al.*, 2004; Ciliberti *et al.*, 2008; Ciliberti *et al.*, 2010; Faisal, 2010; Fox, 2005; Hamann *et al.*, 2005; Jenkins, 2006; Shen *et al.*, 2015; Sweeney, 2007; Vives, 2006; Wooi and Zailani, 2010). Additionally, the mechanisms of the governance of SMEs are primarily internal and are chosen by the leader (Miladi, 2014). An educated and experienced leader/manager enables a democratic and participatory process in establishing a governance system and vice versa.

2.3 Short-term objectives of small- and medium-sized enterprises

SMEs are faced with the long-term nature of strategies regarding corporate social responsibility (CSR) (Carlisle and Faulkner, 2004; Luetkenhorst, 2004; Fox, 2005). Benefits from the implementation of CSR are usually visible in the long-term, which may explain SMEs' reluctance in investing in CSR practices. This combined with the generally short life of SMEs leads to the sacrifice of long-term strategies for short-term objectives.

2.4 Over-riding influence and lack of knowledge of the owner-manager

In SMEs, the owner-manager is often both the driver and the implementer of principles (Hemingway and MacLagan, 2004; Jenkins, 2009; Preuss and Perschke, 2010; Shen *et al.*, 2015; Thakkar, Kanda and Deshmukh, 2013; Williamson *et al.*, 2006). Managers demonstrate their subjective beliefs through managerial decisions (Hemingway and MacLagan, 2004), and SME owner-managers have the authority to exercise these options (Jenkins, 2009).

2.5 Affordability and applicability

Monitoring the whole subcontracting chain can be very complex and expensive (Ciliberti *et al.*, 2010; Friedman and Miles, 2002; Williamson *et al.*, 2006; Vives, 2006). The high costs from social sustainability practices may sway a manager's decision on the sustainability approach in a supply chain (Sajjad *et al.*, 2015).

2.6 Lack of recognition as a responsible organisation

SMEs do not engage in CSR activities if they receive less appreciation for their CSR deeds due to their trivial existence (Lee, Herold and Yu, 2016). Additionally, the absence or lax enforcement of regulations in developing and under-developed countries can influence SMEs to avoid adopting sustainable practices to gain monetary gains (Camilleri, 2017; Shi, Peng, Liu and Zhong, 2008).

2.7 Sustainable resources non-availability or costly implementation

The process of creating a socially responsible supply chain demands many changes that might be expensive (Noci and Verganti, 1999; Vives, 2006; Ciliberti *et al.*, 2010). Thus, embracing CSR in SMEs is difficult.

2.8 Lack of cooperation and willingness among supply chain partners

Poor suppliers' commitments can also be regarded as a low level of trust between customers and suppliers (Noci and Verganti, 1999; Ciliberti *et al.*, 2010; Sajjad *et al.*, 2015; Sajjad *et al.*, 2015).

2.9 Pressure from customers

Various types of stakeholders create different pressures and influences on the adoption of sustainable supply chain management (SSCM) (Baden *et al.*, 2009; Ciliberti *et al.*, 2010; Meixell and Luoma, 2015; Mont and Leire, 2009; Spence, 2007; Walker *et al.*, 2010; Meixell and Luoma, 2015). Incurring overheads are further substantial for SMEs that have usually less resources and thus are more susceptible (Hervani and Helms, 2005). Customers in developing nations are more likely to go for cost-effective products rather than quality and other societal parameters (Valmohammadi, 2011). Hence, consumer desires for lower prices may force the SMEs to cut corners, especially on social and environmental issues in the supply chain.

2.10 Dilemma related to supply chain partnerships/limiting innovation potential

To build innovative competencies, SMEs need to partner with other firms to gain technical knowledge (Rezaei *et al.*, 2015; So and Sun, 2010; Lambert and Schwieterman, 2012) and to solve business problems. Many SMEs face a dilemma in engaging in supply chain partnerships due to the associated costs and specific resources requirements.

2.11 Difficult to collaborate with multinational corporations as vendors

Due to the SMEs' limited social and environmental awareness, multinational corporations (MNCs) are generally reluctant to collaborate with smaller firms (Darnall *et al.*, 2010; Organisation for Economic Cooperation Development (OECD), 2005).

2.12 Implementing standards is lengthy and expensive

There are various standards such as ISO26000 and the Global Reporting Initiative (GRI) that epitomise the best practices of sustainable impacts (Andersen and Skjoett-Larsen, 2009; Mont and Leire, 2009). However, implementation requires external expertise to understand and apply these standards that are well-matched to their local environment and hence presents supplementary expenditures that SMEs may find challenging (Perera, 2008).

2.13 Barriers to entry in newer markets

In many economies with limited domestic opportunities in a certain sector, diversifying the firm's products and operations for a new market or entering into a foreign market plays a crucial role in achieving growth (Czinkota and Ronkainen, 2010; Kotler and Keller, 2011). Global production networks can allow domestic SMEs to expand their exports and facilitate the accumulation of foreign reserves (Yuhua and Bayhaqi, 2013). However, the SMEs with good products face difficulty in entering developed and/or newer markets because they do not have an SSCM.

2.14 Lack of recognition by society/government

Governments offer limited inducements to SMEs for sustainable practices implementation (Bradford and Fraser, 2008; Kehbila *et al.*, 2010). SMEs perceive less benefits and strategic incentives to invest in sustainable practices than their larger counterparts and hence are less likely to engage in sustainability initiatives (Brammer *et al.*, 2012).

3. Research methodology

The study uses a mixed-method approach that utilises two methods, the survey method and soft mathematical modelling. The basis for adopting a mixed-method approach is the literature review where we did not find any study that discusses social issues in the context of a supply chain in SMEs, particularly in the Gulf region. Thus, the study used the questionnaire-based method to understand the social issues in supply chains of SMEs. Furthermore, one of the major objectives was to understand the barriers and their interrelationships, which prompted us to adopt the interpretive structural modelling (ISM) approach.

3.1 Empirical study

3.1.1 Data collection. This study used a structured closed ended questionnaire to collect primary data about the perception of the entrepreneurs and suppliers of small- and medium-sized manufacturing firms about social and environmental issues. The purpose was to understand these issues in the context of supply chains. Keeping in mind the profile of the respondents and the importance of having a one-on-one interaction, the paper and pencil questionnaire was used instead of an online questionnaire to reduce the problems and limitations from an Internet-based questionnaire survey (Lyons *et al.*, 2005). The items for the instrument used in this study are mainly derived from the GRI document and a few are from previous studies. To test the reliability of the instrument, Cronbach's α was calculated and the value exceeded 0.70 in our current study, which indicates adequate reliability (Nunnally, 1978). Furthermore, experts from the supply chain domain in the manufacturing industry and academia were consulted. These experts provided a review of the instrument and gave feedback regarding item content and functionality of the instrument. Few minor adjustments were made on the basis of the recommendation of these experts. The sample frame for this study consisted of SMEs from Qatar and Oman. The administration of the survey to the owners/partners of these firms consisted of personal visits to these organisations where the authors explained the rationale of the study to them and, more importantly, assured them that the results would be used only for academic purposes.

The administration of the surveys occurred over a period of two months from May 2017 to June 2017. The resulting data sample consisted of 57 valid questionnaires (out of 69 visits), including 34 from Qatar and 23 from Oman-based SMEs. Furthermore, 73 valid questionnaires (out of 116 visits) were collected from supplier firms, including 43 from Qatar and 30 from Oman. The questionnaire consisted of two parts. The first part focussed on demographic characteristics, including the number of employees, the year of inception, the owner's gender, age, and education, the number of suppliers and certifications. The second part of the questionnaire consisted of questions related to the perception of the owners about social and environmental issues in the supply chain. Each respondent rated the importance of factors under social and environmental dimensions and their satisfaction of their own firm's implementation on a five-point Likert scale. As this study adopted a single respondent approach, we conducted a post hoc test of common method variance using Harman's single factor test proposed by Podsakoff *et al.* (2003). We found that common method bias was not a significant concern.

3.1.2 Results of empirical study. 3.1.2.1 Demographics. Table I summarises the demographics of the sample SMEs and survey respondents. From the demographic data, it can be seen that majority of the SMEs are less than five years from being established. The majority of these SMEs are owned by males, have less than 50 employees and the majority of the owners are graduates.

3.1.2.2 Socially responsible supply chain. Table II provides the results for social issues in the supply chain for the focal company (SME) and its suppliers. For social issues, the research examined the importance accorded to the issue and the actual implementation based on the perception of the owners, both for the focal companies and suppliers. For priority, the results in the table are for survey participants that considered these issues as “important” or “highly important” on a five-point Likert scale. The implementation mentions the level of satisfaction and the results are for “satisfied” and “highly satisfied”.

The results indicate that there is a mismatch among the priorities with regard to social issues for the SMEs and their suppliers. Both SMEs and its suppliers give high priority to the four items of “local community engagement”, “workers benefits”, “safe working environment” and “customer health and safety”. In addition, other items that include

Table I Respondents' demographics

Demographic characteristic	Items	Frequency	(%)
Years since inception	≤5 years	28	49.12
	6-10 Years	19	33.33
	>10 Years	10	17.54
Owner	Male	41	71.93
	Female	16	28.07
Number of employees	≤50	37	64.91
	51-100	13	22.80
	100-150	7	12.29
Age of the owner	≤35 years	21	36.84
	36-45 Years	27	47.37
	>46 Years	9	15.79
Academic Degree	High School	13	22.80
	Bachelors	35	61.40
	Masters	9	15.80
	Additional Certifications	17	—
Number of suppliers	≤10	23	40.35
	11-20	20	35.08
	21-30	14	24.56

Table II Social issues in supply chain

Issue	Focal Company (SMEs)				Suppliers			
	Priority (No.)	(%)	Implementation (No.)	(%)	Priority (No.)	(%)	Implementation (No.)	(%)
Local community engagement	49	85	33	58	57	78	10	14
Training programmes for workers	27	47	10	18	11	15	7	9
Human rights assessment	26	47	9	16	12	16	10	14
Ngo certifications	21	37	5	9	10	14	5	7
Workers' benefits	42	74	27	47	32	44	13	18
Safe working environment	53	93	39	68	35	48	17	23
Marketing and labelling	43	75	33	58	13	18	10	14
Customer health and safety	51	89	41	72	43	59	38	52
Non-discrimination	27	47	21	37	11	15	7	9

“training programmes for workers”, “human rights”, “NGO certifications”, “marketing and labelling” and “non-discrimination” are accorded high priority by the SMEs. However, other than “customer health and safety”, the suppliers do not consider them as important. Furthermore, with regard to satisfaction with the implementation, for SMEs, the satisfaction with the implementation for “training programmes for workers”, “human rights” and “NGO certifications” are low. Meanwhile, for suppliers, in addition to low satisfaction with implementation for these items, “marketing and labelling” and “discrimination” also have low satisfaction. Thus, the results of the empirical study show that there is a clear lack of a coherent policy to manage social issues across the supply chain.

3.1.2.3 Barriers to socially responsible supply chain management in small- and medium-sized enterprises. In the literature, review section, a list of variables were discussed that can be considered as barriers in creating a socially responsible supply chain in SMEs. In this section, the objective is to derive interrelationships among these variables with the purpose of classifying them into driving variables and resulting actions. The first category is those variables that require maximum attention of the policy makers, while the other category can be considered as the resulting actions. The first step before proceeding to using the ISM is to conduct a correlation test to verify the existence of relationships among these variables. The results in [Table III](#) indicate that the majority of the variables are related to one another. Therefore, we can now proceed to developing the ISM model.

3.2 Interpretive structural modelling

[Warfield \(1974\)](#) developed the ISM approach to address complex situations as a tool for communication and a visualised hierarchical structure. This approach is utilised for understanding the relationships between variables ([Khan et al., 2015](#); [Faisal and Talib, 2016a](#)). Generally, it is seen that this approach is used for an effective decision-making process. Hence, the authors have selected this approach because of its previous benefits and direct and indirect relationships between variables based on situations ([Cagno et al., 2014](#); [Faisal and Talib, 2016b](#)). From the extent literature review, it was observed that there is no research undertaken on the identification of barriers for socially responsible supply chain management in SMEs. For this reason, the ISM approach has been preferred and adopted in the present study. The various steps involved in ISM modelling are enumerated in many recent studies, such as [Faisal and Talib \(2016a, 2016b\)](#), [Jabeen et al. \(2017\)](#), [Jabeen and Faisal \(2018\)](#) and [Dubey et al. \(2017\)](#).

Step 1: The major barriers of CSR implementation in supply chains that are identified and considered for the system under consideration are listed in [Table III](#).

Table III Correlation Matrix – enablers of sustainable MSWM

Enablers	14	13	12	11	10	9	8	7	6	5	4	3	2
1. Shortages of incentives	0.413	0.453	0.515	0.667	0.431	0.428	0.387	0.343	0.554	0.332	0.568	0.119	0.321
2. Constraints	0.469	0.618	0.456	0.763	0.466	0.545	0.442	0.534	0.612	0.357	0.105	0.528	
3. Short-term objectives	0.372	0.426	0.118	0.219	0.431	0.610	0.458	0.539	0.407	0.678	0.129		
4. Lack of knowledge	0.576	0.397	0.349	0.691	0.235	0.154	0.397	0.468	0.473	0.691			
5. Affordability and Applicability	0.519	0.472	0.397	0.346	0.343	0.517	0.711	0.419	0.319				
6. Difficult to collaborate	0.209	0.431	0.538	0.189	0.713	0.461	0.211	0.523					
7. Non-availability of technology	0.472	0.524	0.597	0.366	0.513	0.391	0.327						
8. Lack of cooperation	0.614	0.491	0.297	0.379	0.157	0.478							
9. Pressure from customers	0.424	0.369	0.373	0.210	0.523								
10. Limiting potential	0.251	0.371	0.471	0.257									
11. Lack of recognition	0.621	0.454	0.574										
12. Implementation of standards		0.383	0.374										
13. Lack of recognition by society		0.473											
14. Barriers to entry		1.000											

Step 2: The ISM approach suggests the role of expert (both from academia and industry) opinions in developing the contextual relationship between the barriers. A group of eight experts working in the areas of CSR and SCM from various organisations and academia was formed. They were asked to develop the contextual relationships between the identified barriers.

Step 3: A structural self-interaction matrix (SSIM) (Table IV) is developed for barriers by indicating pairwise relationships among the barriers of the system.

Step 4: Table IV (SSIM matrix) is converted into a binary matrix named the initial reachability matrix by replacing V, A, X and O by 1 and 0 in SSIM as per the given case, which is shown in Table V.

Step 5: Level partitioning the reachability matrix.

Table IV Structural self-interaction matrix (SSIM)

Barrier no.	Barrier name	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1.	Shortages of incentives	V	V	V	V	V	A	A	V	V	V	V	O	A	–
2.	Constraints (financial, managerial, and technological)	V	V	V	V	V	X	X	V	V	V	O	V	–	
3.	Short-term objectives	V	V	O	O	V	A	A	V	V	V	O	–		
4.	Lack of knowledge of owner/manager	V	X	X	V	O	O	A	X	V	V	–			
5.	Affordability and Applicability	V	A	A	V	V	A	A	A	V	–				
6.	Difficult to collaborate with MNCs as vendor	O	A	A	O	V	A	O	A	–					
7.	Non-availability of technology/costly implementation	V	X	X	V	V	A	A	–						
8.	Lack of cooperation and willingness among SC partners	V	V	V	V	O	X	–							
9.	Pressure from customers	V	V	V	O	V	–								
10.	Limiting potential of innovation	O	A	A	O	–									
11.	Lack of recognition as a responsible organisation	V	A	A	–										
12.	Implementation of standards is lengthy and costly	V	X	–											
13.	Lack of recognition by society/govt	V	–												
14.	Barriers to entry in new markets	–													

Notes: V: Variable *i* will help achieve variable *j*; A: Variable *j* will be achieved by variable *i*; X: Variable *i* and *j* will help achieve each other; and O: Variables *i* and *j* are unrelated

Table V Final reachability matrix

Barrier no.	Barrier name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Driving Power	Rank
1.	Shortages of incentives	1	0	0	1	1	1	1	0	0	1	1	1	1	1	10	II
2.	Constraints (financial, managerial, and technological)	1	1	1	1 [⊕]	1	1	1	1	1	1	1	1	1	1	14	I
3.	Short-term objectives	0	0	1	1 [⊕]	1	1	1	0	0	1	1 [⊕]	1 [⊕]	1	1	10	II
4.	Lack of knowledge of owner/manager	0	0	0	1	1	1	1	0	0	1 [⊕]	1	1	1	1	9	III
5.	Affordability and Applicability	0	0	0	0	1	1	0	0	0	1	1	0	0	1	5	IV
6.	Difficult to collaborate with MNCs as vendor	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	V
7.	Non-availability of technology/costly implementation	0	0	0	1	1	1	1	0	0	1	1	1	1	1	9	III
8.	Lack of cooperation and willingness among SC partners	1	1	1	1	1	1	1	1	1	1 [⊕]	1	1	1	1	14	I
9.	Pressure from customers	1	1	1	1	1	1	1	1	1	1	1 [⊕]	1	1	1	14	I
10.	Limiting potential of innovation	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	VI
11.	Lack of recognition as a responsible organisation	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	V
12.	Implementation of standards is lengthy and costly	0	0	0	1	1	1	1	0	0	1	1	1	1	1	9	III
13.	Lack of recognition by society/govt	0	0	0	1	1	1	1	0	0	1	1	1	1	1	9	III
14.	Barriers to entry in new markets	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	VI
	Dependence Power	4	3	4	9	10	11	9	3	3	12	11	9	9	12	109	
	Rank	V	VI	V	IV	III	II	IV	VI	VI	I	II	IV	IV	I		

Note: 1[⊕] entries are included to incorporate transitivity

The final reachability matrix (Table V) is partitioned and the procedure is completed in six iterations. The barriers, their stable reachability set, the priority set, the interaction set and levels are summarised in Table VI.

Step 6: Development of ISM model.

From the final reachability matrix and Table VI, a structural model is generated and presented in Figure 1. The relationship between barriers i and j is shown by the arrow point from i to j . The resulting graph is called a digraph. After removing the indirect links, a final digraph is developed. Next, the digraph is converted into an ISM model by replacing the nodes of the elements with statements, as shown in Figure 1.

3.2.1 Impact matrix cross-reference multiplication applied to a classification analysis. After the development of the ISM model, an Impact Matrix Cross-Reference Multiplication Applied to a Classification (MICMAC) analysis is performed, as shown in Figure 2. The purpose of the MICMAC analysis is to evaluate the driving power and the dependence power of the barriers into four sectors (autonomous, dependent, linkage and independent) based on the dependence and driving powers of each barrier under study (Duperrin and Godet, 1973).

4. Results and discussion

In today's globalised business world, SMEs are considered as the backbone of the manufacturing sector that accounts for more than 80 per cent of global economic growth (Singh et al, 2010). They contribute to several economic indicators such as employment, the manufacturing of goods, GDP, income generation, opportunities and poverty. Furthermore, SMEs are still confronted with pressure to respond socially towards their stakeholders, including customers, shareholders, employees, suppliers, NGOs, and international organisations, in terms of products and services, quality, environment and social issues (Frolova and Lapina, 2015; Maignan and Ferrell, 2004). As mentioned by Drake and Rhodes (2015), managers need to understand the advantages of adopting a CSR "mindset" when developing sustainable business strategies. For these reasons, CSR is playing a major role in continuously increasing their sustainable competitive advantage in the global market by introducing socially responsible practices within the SMEs. However, there are several challenges for SMEs to adopt CSR practices, which can act as barriers while implementing them. For example, Williamson et al. (2006) revealed that the top managers or owners of the

Table VI Barriers of socially responsible SCM level iterations

Barriers (Bi)	Barrier name	Reachability set R (Bi)	Antecedent set A (Bi)	Intersection set $R(Bi) \cap A(Bi)$	Level
10	Limiting potential of innovation	10	1,2,3,4,5,6,7,8,9,10,12,13	10	I
14	Barriers to entry in new markets	14	1,2,3,4,5,7,8,9,11,12,13,14	14	I
6	Difficult to collaborate with MNCs as vendor	6	1,2,3,4,5,6,7,9,12,13	6	II
11	Lack of recognition as a responsible organisation	11	1,2,3,4,5,7,8,9,11,12,13	11	II
5	Affordability and Applicability	5	1,2,3,4,5,7,8,9,12,13	5	III
4	Lack of knowledge of owner/manager	4,7,12,13	1,2,3,4,7,8,12,13	4,7,12,13	IV
7	Non-availability of technology/costly implementation	4,7,12,13	1,2,3,4,7,8,9,12,13	4,7,12,13	IV
12	Implementation of standards is lengthy and costly	4,7,12,13	1,2,3,4,7,8,9,12,13	4,7,12,13	IV
13	Lack of recognition by society/govt	4,7,12,13	1,2,3,4,7,8,9,12,13	4,7,12,13	IV
1	Shortages of incentives	1	1,2,8,9	1	V
3	Short-term objectives	3	2,3,8,9	3	V
2	Constraints (financial, managerial, and technological)	2,8,9	2,8,9	2,8,9	VI
8	Lack of cooperation and willingness among SC partners	2,8,9	2,8,9	2,8,9	VI
9	Pressure from customers	2,8,9	2,8,9	2,8,9	VI

Figure 1 ISM for CSR barriers in supply chain

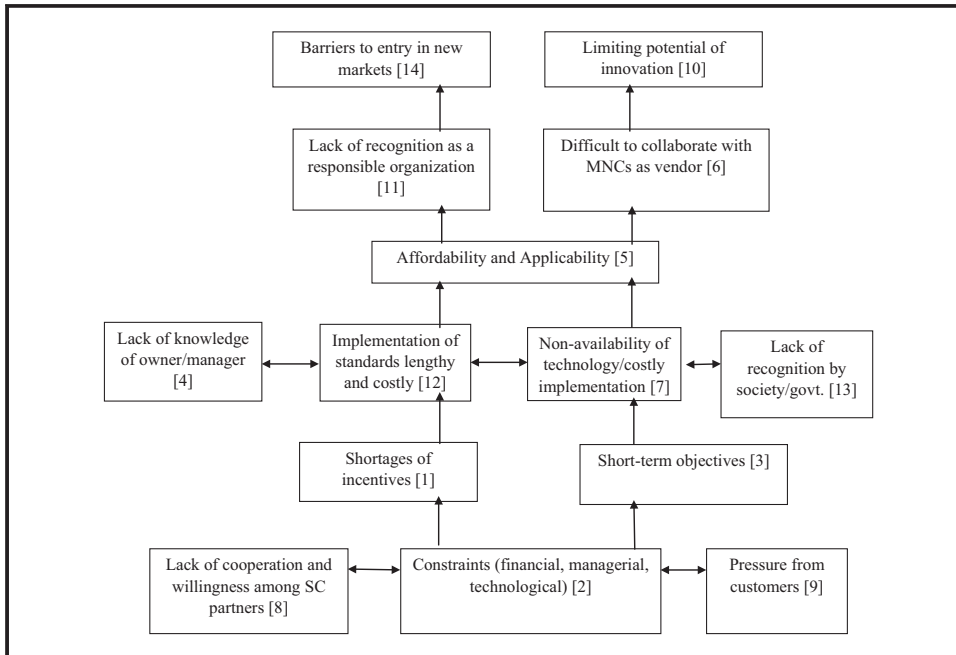
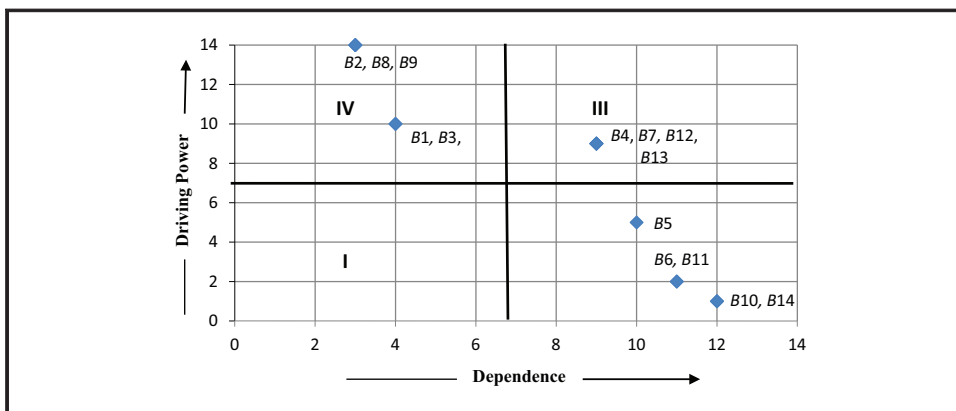


Figure 2 MICMAC analysis of CSR barriers



SMEs considered CSR practices optional as they feel that their implementation is expensive. This paper analyses CSR barriers in SMEs and investigates the key role of barriers in improving a socially and environmentally responsible supply chain using experts' opinions from SMEs.

The results of the analysis of ISM model are summarised in Figures 1 and 2. In Figure 1, the ISM model for CSR barriers is presented in six levels. From Table V, the driver-dependence power diagram that is obtained from MICMAC analysis gives valuable information about the relative importance and interdependence among the 14 barriers. Using MICMAC analysis, the barriers considered in this research can be categorised into four clusters as follows:

Autonomous barriers (Cluster I): Generally, these barriers have weak driving and dependence powers. There are no CSR barriers in this autonomous sector, which indicates that all the barriers have notable driving power and therefore must be managed for socially responsible supply chains in SMEs.

Dependent barriers (Cluster II): Barriers in this sector have less driving power and higher dependence power, and the results confirm these findings. [Figure 2](#) shows that there are five CSR barriers that have weak driving but strong dependence power. These barriers are affordability and applicability (B5), difficult to collaborate with MNCs as vendor (B6), limiting potential of innovation (B10), lack of recognition as a responsible organisation (B11) and barriers to entry in new markets (B14). These barriers are at the top and middle positions (Levels I, II and III) of the ISM. These barriers are dependent on the mid-level and bottom level barriers. Therefore, to minimise the effect of these barriers in supply chains in the form of end results, managers and owners of SMEs must focus on barriers that have a high driving power and should formulate policies to reduce them in SMEs.

Linkage barriers (Cluster III): Linkage barriers have strong driving power and strong dependence power. They represent unstable categorical barriers as any action on the barriers of these categories will have an effect on others and feedback on themselves. Of the 14 CSR barriers, four barriers fall in this category. All the four barriers have equal driving and dependence power. This means that they act as key barriers for social responsibility implementation in the supply chain for SMEs. The four barriers are lack of knowledge of owner/manager (B4), implementation of standards is lengthy and costly (B12), non-availability of technology/costly implementation (B7) and lack of recognition by society/government (B13). Managers and owners of SMEs must pay consistent attention to these barriers because any effect on these four barriers will affect others and on themselves.

Independent barriers (Cluster IV): In the fourth cluster, the remaining five barriers appear. They are shortages of incentives (B3), short-term objectives (B3), lack of cooperation and willingness among SC partners (B8), constraints (financial, managerial, technological) (B2) and pressure from customers (B9). All these barriers have strong driving power and weak dependence power and are called driving barriers or forcing barriers. They lie at the bottom of the ISM hierarchy and are placed at two different levels (Levels V and VI) as depicted in [Figure 2](#). Hence, to implement social responsibility across SMEs' supply chain for achieving a sustainable competitive advantage, managers and owners must focus their efforts on reducing the effect of these key barriers.

4.1 Implications

4.1.1 Practical implications. Many managers still view social sustainability simply as “philanthropy” rather than as a key dimension for the sustainability performance of organisations and supply chains ([Morais and Silvestre, 2018](#)). In this context this research has many practical contributions that are discussed in this section. Firstly, to our knowledge no previous study in the Gulf region have examined social responsibility in context of SMEs supply chain. This is an important finding, as many of these SMEs are looking for new markets and their social performance may be a critical factor for their entry in the global markets. Secondly, the study provides an opportunity to SMEs owners/managers to identify the mismatches among the priorities with regard to social issues for their organisations and its suppliers. This would facilitate a coherence among supply chain partners mind set, for promoting socially responsible behaviour across the supply chain. Thirdly, the hierarchy-based model developed in the present research would help in developing suitable strategies according to the driving power-dependence of the variable, thereby making the efforts more focussed and aligned. Finally, the present research may facilitate regulatory bodies and policy makers to develop strong regulatory norms/policies to promote the

adoption of socially responsible business practices across the supply chain in Gulf countries' context.

4.1.2 Theoretical implications. This study also has some important theoretical implications. Although Westernised perspectives are dominant in the area of social responsibility and supply chains, perspectives in emerging economies are relevant and required. Therefore, a more robust understanding of the dynamics of sustainable supply chain in emerging countries is needed (Hussain *et al.*, 2018). This research helps fill this gap by explaining what may be the barriers and their relationships and social responsibility issues considered important by the focal companies and suppliers in the Gulf region. Further, ISM model provides an understanding of what focal companies should really do to eliminate barriers to social initiatives in emerging economies like Qatar and Oman. There is also a lack of mixed-method approach in the study of social responsibility in supply chains. The present study uses the strength of a mixed-method approach in conducting research by integrating empirical and modelling methods. The contextualisation of ISM to understand social responsibility in SMEs supply chain can be considered an unique contribution.

4.2 Limitations and scope for future studies

The major limitation of this study was that the data were collected from only two GCC countries (Oman and Qatar), and hence may not be generalisable for the whole GCC region. For future studies, these barriers may be tested on the SMEs and its suppliers operating in different industries/sectors in all GCC countries to examine the similarities and variances for better policy formulation. It can also help construct an impetus towards enriched sustainable socially responsible practices in the national, regional and global supply chain.

4.3 Conclusions

This research was a modest attempt to explore the status of socially responsible activities and the barriers to their adoption in the supply chain of SMEs in the GCC region. The study is exploratory in nature and contributes to the existing literature on socially responsible supply chain management in the Gulf-based SMEs context, as little previous research has been conducted on SMEs.

We began our study with a questionnaire-based survey method to ascertain the opinions of the entrepreneurs and suppliers of these SMEs about various social and environmental issues. The study's findings illustrated that the SMEs and their suppliers in the GCC region have incompatible views on social issues across the supply chain, such as training programmes for workers, human rights, NGO certifications, marketing and labelling, and non-discrimination. However, entrepreneurs and suppliers gave similar priorities to the social issues, such as local community engagement, workers' benefits, a safe working environment and customer health and safety.

Furthermore, to identify the barriers specifically linked to socially responsible supply chain management in Gulf-based SMEs, an ISM approach was adopted. The ISM study was summarised in four sectors: autonomous barriers, dependent barriers, linkage barriers, and independent barriers. It was found that there are no CSR barriers in the autonomous sector. However, in dependent sector, five CSR barriers (affordability and applicability, difficulties to collaborate with MNCs, the limiting potential of innovation, the lack of recognition, and barriers to entry in new markets) have less driving power and higher dependence power. In the Linkage sector, the four CSR barriers (the lack of knowledge of owner/manager, the implementation of standards, the non-availability of technology, and the lack of recognition by the stakeholders) show strong driving power and strong dependence power. Last, in the independent sector, five remaining CSR barriers (shortages of incentives, short-term objectives, the lack of cooperation and willingness among SC partners, financial,

managerial, and technological constraints, and pressure from customers) have strong driving power and weak dependence power. Therefore, to promote socially responsible behaviour in supply chain in SMEs in the GCC region, efforts must be exerted to reduce the effects of these key barriers.

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