

Articles

Small Business and the Supply Chain: The Influence of Social Intelligence on Relationship Resilience

M. Afzalur Rahim¹, Scott R. Cox², Stephen M. Rutner²

¹ Management, Western Kentucky University, ² Management, Marketing, and Logistics, Georgia College & State University

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The need for SME owner/managers to engage in building and maintaining collaborative business relationships is paramount for their success and the resilience of these relationships can be viewed as a crucial factor in successful supply chain management for SMEs. The present study investigates the relationship between the social intelligence of the SME owner/manager and relationship resilience between firms with which they do business. The objective of this study is to explore the relationship between four components of social intelligence (situational awareness, situational response, cognitive empathy, and social skills) of small to medium sized business owners/managers on the resilience of their supply chain relationships. A survey was conducted, and responses gathered from small business owner/managers and the data was analyzed using structural equation modeling. The study provided evidence that the four components of social intelligence are positively associated with relationship resilience.

Introduction

Human behavior is a necessary feature in virtually every supply chain setting. Psychological and behavioral issues, particularly in terms of judgment and decision making, can have considerable relevance and importance for logistics and supply chain research as individuals often don't make choices consistent with normative or optimal policy and do so in specific and systematic ways (Bazerman, 2002; Stanovich & West, 1998; Tokar, 2010). Weiland et al. (2016) note that; "supply chains are not "soulless machines", but complex sociotechnical systems involving cognitive elements and impacted by face-to-face negotiations and conversations" (p. 207). To date however, there has been little research published in logistics and supply chain journals related to human behavior (Tokar, 2010). Only a few studies have investigated the specific psychological factors and behavioral dynamics of individual actors within a supply chain system. All too often, supply chain research is conducted at the organizational level of analysis, processes, and relationships at the individual level are simply neglected or assumed away.

A promising development within the discipline is the recognition by scholars of the importance in answering the question: "What are the factors that are responsible for the way individuals and groups in supply chains behave?" (Schorsch et al., 2017, p. 250). Whenever individuals interact, different psychological factors become significant in addition to the biases and errors of individual decision making (Donohue & Siemsen, 2011). One factor that has recently been incorporated into both the management and organizational behavior literature is the construct of social

intelligence (Rahim, 2014, 2018; Rahim et al., 2018, p. 2019). Defined as being aware of relevant social situational contexts, effectively addresses challenges, understanding the concerns, feelings and emotional states of others, communicating by knowing what to say, when to say it and how to say it, and building and maintaining positive relationships with others (Rahim, 2014). Social intelligence is considered a relationship-based construct which defines a set of interpersonal competencies that inspire others to be effective (Rahim, 2014, 2018; Rahim et al., 2018, p. 2019).

Business-to-business relationships have and continue to be a significant area of both managerial practice and academic investigation within the supply chain management (SCM) domain (Ulaga & Eggert, 2006). Implementing a supply chain management approach leads managers to look beyond the boundaries of the organization and seek collaborative relationships to consider how the resources of both customers and suppliers might be employed to help the organization succeed. Research has indicated that successful collaborative business relationships benefit firms in several ways, including the increased efficiency in the utilization of resources, the development of new competencies, and increased firm performance (Nooteboom, 2004). Supply chain management's promise to improve firm competitiveness and performance through collaborative efforts is appealing to businesses of all sizes. However, despite the identified substantial benefits of SCM practices, managers of small and medium enterprises (SMEs) can be short-sighted in looking at the strategic perspectives of a global supply chain (Morya & Dwivedi, 2009). This is a critical point to this research due to the benefits and disadvantages

that SMEs may face and how the application of social intelligence may impact a firm.

For SMEs the implementation of SCM practices has its costs, hazards, and challenges. The long-term sustainability of SMEs depends upon “where they compete” and “how they compete”, thus managerial decisions on their supply chain relationship position and operational focus is paramount (Hong & Jeong, 2006). SMEs are more likely to need collaborative relationships to leverage their relatively constrained resources (Daugherty et al., 2006; Steensma et al., 2000). Given that much of the demand for many SMEs is dominated by a few major customers or stronger customers (Morrissey & Pittaway, 2004), SMEs tend to try to develop more personal relationships and build closer, more long-lasting relationships with those major customers (Hong & Jeong, 2006). Buyer-supplier relationships are typically asymmetrical. Based upon the extant literature, buyers tend to have more power in the relationship (Caniëls & Gelderman, 2007). Suppliers have little power and thus recognize personal relationships as a potential source of competitive advantage (Gilgor & Esmark, 2015). This is especially true for SMEs and their relationships with larger firms making them more vulnerable. Studies from both psychology and sociology suggest that it is difficult for relationship participants to separate business decisions from the nature and quality of their friendships (Lian & Laing, 2007). Personal relationships can impact manager’s behavior. It is very common that SMEs are owned and managed by a founder or a founding family. The personal relationships of the owner/manager (focal actor) have traditionally been a major contributor to SME success. This is especially important given the behavior of a focal actor (owner/manager) of an SME can directly affect an exchange relationship. When coupled with size-related resource constraints, considerable investments are at risk from being lost if a business relationship becomes difficult or terminates. This can be compounded given the onerous task of finding and developing new relationships. Establishing and investing inter-organizational bonds on the individual level should therefore be a primary concern of managers who wish to strengthen the relation with other firms within the supply chain (Gilgor & Autry, 2012). With the world of business becoming increasingly more complex, and despite the persistent need for small-business owners to work to generate and manage cash flow while continuing to bring customers in the door, it is also essential for them to cultivate and retain quality business relationships. The need for SME owner/managers to engage in building and maintaining collaborative business relationships is paramount and the resilience of these relationships can be viewed as a crucial factor in successful SCM for SMEs. The behavioral characteristics of the owner/manager can have significant influence on the desired relationship type (Morrissey & Pittaway, 2004) and relationship resilience.

The present study investigates the relationship between the social intelligence of the SME owner/manager and relationship resilience between firms with which they do business. In addressing this objective, a review of the literature is detailing SMEs along with the construct of social intelli-

gence is provided. In addition to a background on relationship resilience, a brief discussion of Social Exchange Theory and reciprocity principle is included. This leads to the presentation of our hypotheses. The authors then describe our research method and data analysis. Finally, the results are reported and the implications of the study are discussed.

Literature Review

Small and Medium Sized Enterprises (SMEs)

The definition of SMEs differs across both legal and institutional frameworks (Kull et al., 2018). The European Commission defines SMEs as any firm having fewer than 250 employees, along with a balance sheet of not more than EUR 43 million and annual turnover of up to EUR 50 million. According to this definition, 99% of all firms in Europe are classified as SMEs. These businesses employ 66.7% of the European workforce (Eurostat, 2011). In the United States, a small business is defined as a firm having fewer than 500 employees. With 29.6 million businesses employing fewer than 500 employees, SMEs represent 99.7% of all firms in the United States (United States Small Business Administration, 2016).

Research into SMEs is considered important for a number of reasons. First, SMEs have tremendous economic importance. According to the United Nations, SMEs account for up to 70 percent of global employment and are responsible for 55 percent of the gross domestic (GDP) in developed countries (*United Nations Micro-Small and Medium-Sized Enterprises Day*, 2020). 97.5 percent of the total number of exporters in the U.S. are SMEs (United States Small Business Administration, 2020). Additionally, as the pace of change in many business environments continues to accelerate, the downsizing and decentralization of some large companies have compelled them to become more innovative and entrepreneurial. Most importantly, the characteristics of SMEs tend to differ from those of large organizations. SMEs are more inclined to be family owned and somewhat informally managed, independent, multi-tasking, resource-constrained, built on personal relationships, and embedded in their local community (Spence, 1999, 2007). Given their prevalence, it can be inferred that SMEs play a significant role in supply chains around the globe (Kull et al., 2018). The literature details many of the major challenges facing SMEs. These include the upgrading of technology (Kleindl, 2000), new product development (Sonia & Francisca, 2005), human resource development (Hudson et al., 2001; Nolan & Garavan, 2016), and managing its supply chain through collaborative relationships (Bennett & O’Kane, 2006; Soh & Roberts, 2005).

As supply chains in both the manufacturing and service sectors continue to operate in progressively more dynamic environments characterized by rapidly changing digital technologies and the increasing need for improved customer responsiveness, businesses must participate in greater collaborative efforts to remain competitive. Although there are several reasons for increased supply chain collaboration, the reality is that true collaboration across organizational boundaries is often very difficult to achieve

due to cultural and structural barriers (Stank et al., 2001). Those barriers can be even greater for SMEs (Chin et al., 2012). The survival of SMEs may depend upon how they secure better negotiation terms through collaboration and improvement of their supply chain relationship position (Hong & Jeong, 2006). There are indications that SMEs are less able to harness the benefits of supply chain relationships (Vaaland & Heide, 2007). For example, research has suggested that larger companies may consider SMEs as easily replaceable; thus some large, corporate buyers may be reluctant to invest the time and effort to collaborate with SMEs (Arend & Wisner, 2005). This was demonstrated by Arend (2006) who found a negative relationship between SCM and their associated partnerships, due to managerial commitments and the control and support requirements in collaborative relationships. The overall impact may be a decrease in flexibility typical of the SMEs (a key SME advantage). SMEs can also suffer disadvantages as a consequence of power asymmetry within the supply chain. Mudambi et al. (2004) established that size asymmetry was a determining factor affecting the collaboration between a purchasing SME and a larger supplier. The researchers noted that larger suppliers were able to dictate the degree of closeness they wanted in the relationship with their smaller customer.

In summary, SMEs have advantages and disadvantages. However, they are challenged, and the advantages may be minimized when dealing with larger, corporate partners within the supply chain. SMEs need some form of competitive advantage to offset the managerial challenges of dealing with supply chain partners. Social intelligence may offer a method to improve SMEs' situation within various supply chains.

Social Intelligence

Social intelligence consists of four abilities. Those are 1) situational awareness, 2) situational response, 3) cognitive empathy, and 4) social skills. The first, situational awareness is associated with one's ability to collect information for the diagnosis and formulation of problem(s) and situational response is associated with one's ability to use this information to make effective decisions to attain desired results. These two basic abilities are needed for one's success in life or effective leadership. Cognitive empathy and social skills abilities are needed for better understanding the thinking, feelings, and moods of people and for communicating and building relationships with them. These two abilities can help supervisors to remain aware of various social situational contexts, which in turn, help them to improve their situational response competence. The theoretical basis of the four SI components and interrelationships among them are described as follows (Rahim, 2018).

Situational Awareness

Situational awareness is associated with one's competence or ability to comprehend or assess relevant social situational contexts (Rahim et al., 2018). The need for situational awareness applies in a wide variety of environments. According to Durso and Sethumadhavan (2008), the idea of

situational awareness originated with the aviation community. It then spread to other cognitive tasks of numerous work environments such as nuclear power plant operators, military commanders, anesthesiologists, and automobile drivers. This ability enables a leader, in this research the small business owner/manager, to collect relevant information and diagnose situations in a timely manner to formulate a problem correctly (Rahim, 2012). A situational awareness capability is important at all levels of management. The ability to diagnose a problem is exceptionally important and need not be taken for granted. The absence of situational awareness happens when the small business owner/manager fails to pay attention to what is going on around them. Situational awareness is critical to our effectiveness and our ability to connect with those around us—our customers, our colleagues, our managers.

Interestingly, situational awareness is not widely researched in the business literature. O'Brien and O'Hare (2007) found that participants in training programs with high situational awareness performed well irrespective of the training conditions. Mayo and Nohria (2005) propose that a leader's capacity to understand and adapt to different situational contexts is associated with effective leadership. Rahim (2018) noted that contingency theories of leadership tend to neglect situational awareness, assuming that leaders understand the relevant situational variables and are able to properly formulate any problems.

Situational Response

Situational response is associated with one's competence or ability to adapt to or deal with any social situations effectively (Rahim, 2012). As described by Zaccaro et al. (1991) this is essentially the decision-making competence of leaders. Situational response could be considered a complementary, although distinct, skill to situational awareness. Similar leadership capabilities such as behavioral flexibility (Zaccaro et al., 1991) and adaptive capacity (Bennis & Thomas, 2002) have been discussed in the literature. However, situational response is considered a broader concept than either behavioral flexibility or adaptive capacity. An important aspect of situational response is the ability to avoid dysfunctional conflict. Rahim (2014) notes it is possible for someone to recognize and diagnose a problem correctly, thus having situational awareness, but they may not be able to make a decision that is likely to lead to a desirable outcome.

The current leadership literature has been proficient in prescribing how to match leadership style with situational variables in order to improve job performance, but so far has been insufficient in identifying unique situations for which creative managerial responses would be needed to improve managerial outcomes (Rahim, 2012). Bennis and Thomas (2002) describe this as adaptive capacity.

Cognitive Empathy

This third component of SI refers to one's ability to understand others and taking interest in them, recognizing and responding to changes in their emotional states, and

understanding their feeling. Kaukiainen et al. (1999) suggests that “the cognitive component of empathy forms an essential part of social intelligence” (p. 83). Cognitive empathy is associated with a person’s ability to recognize the thinking, feelings, intentions, moods, and impulses of people inside and outside of the organization (Rahim, 2018). Empathy is considered vital because it affects how bargaining power, positions, and interests are conveyed, received, and understood (Holmes & Yarhi-Milo, 2016).

Cognitive empathy should help to improve the small business owner/manager’s awareness of the feelings and the needs of those with whom they wish to form and maintain a business relationship. Adopting a more empathetic approach may allow the small business owner/manager to think beyond a formal relationship and potentially limit negative experiences. This ability to connect with people should help improve a leader’s, or in this case the small business owner/manager’s, social skills and may help to improve their effectiveness (Rahim, 2014). Empathy has been shown to facilitate communication within business relationship (Bagozzi, 2006). Communication can create an ability to connect with others, thus, cognitive empathy should be positively associated with social skills.

Social Skills

Finally, social skills are associated with one’s ability or competence to interact with different people effectively. Social skills are those skills that are needed to build and maintain positive relationships. They involve an understanding of how to act properly in human relations, how to deal with problems without demeaning those who work with us, and the ability to negotiate and manage conflict with tact and diplomacy. Rahim (2012) notes “Social skills involve acting properly in human relations, to deal with problems without demeaning those who work with him or her, and to negotiate and manage conflict with tact and diplomacy” (pp. 44–45). This component of SI enables the small business owner/manager to collect pertinent information from both the internal and external environments in order to improve their situational awareness.

In a professional setting, social skills have been found to influence a wide variety of organizational practices (Baron & Tang, 2009). Compared to people low in social skills, those with greater social skills have been found to receive higher performance reviews, attain faster promotion, and receive higher salaries (Belliveau et al., 1995; Robbins & DeNisi, 1994). In addition, those with higher social skills have been found to attain better results in negotiations (Hochwarter et al., 2006). Negotiation is considered an integral part of managing conflict. The studies of Baron and Markham (2000) and Baron and Tang (2009) suggest that the social skills of entrepreneurs may play a role in their success.

The four elements of social intelligence may provide a means to help SMEs. Since SMEs need to find a competitive type advantage to work with larger and more powerful partners, SI may help to provide them tools and/or opportunities to better position their companies with others within the supply chain. A goal of effective SI may be to build bet-

ter and more resilient bonds with other supply chain organizations. This leads to a discussion of supply chain relationship resilience that is needed to build a stronger SME and partner alliance.

Relationship Resilience

While collaboration with supply chain partners is considered a resilience-enhancing capability (Christopher & Peck, 2004; Wieland & Wallenburg, 2013), there are occasions in collaborative business relationships when certain incidents may cause these relationships to break down. These can be cognitive breakdowns such as failures in performance resulting in economic loss or changes in organizational policy. They could also be behavioral such as breaking the rules of the relationship or the potential unwillingness to solve problems or failures (Fleming et al., 2016; Smith, 2002; Tähtinen & Vaaland, 2006). As a result, in addition to the set up-costs of having to begin a new relationship, SMEs can suffer lost relational investments, incur process costs related to relationship termination, and potential sanctions for future business, each of which can test the resilience of a business relationship. As buyer-supplier firms interact and their overall commitment to the relationship strengthens, the SME OM is likely to make constructive attempts to continue the relationship.

Research in the field of psychology defines resilience at the individual level as “the ability to bounce back from negative emotional experiences and flexibly adapt to the changing demands of stressful experiences” (Hu et al., 2015, p. 18). Much of the literature concerning supply chain resilience has provided recommendations for building a resilient supply chain. Christopher and Peck (2004) detailed five broad enablers of supply chain resilience: 1) supply chain understanding implying knowledge about supply chain structures, a supply base strategy; 2) selecting the right number of suppliers; 3) supply chain collaboration, 4) agility, and 5) creating a risk management culture. The seminal work of Sheffi (2005) illustrates how firms can provide for improved supply chain resilience by building redundancy and flexibility into their supply chain thorough the use of standardization, modular design, creating a culture of flexibility, and developing collaborative relationships.

Relationship resilience is defined as the extent to which a buyer-supplier dyad can absorb negative events and recover to a more desirable state (Kaufmann et al., 2018). Relationship resilience has also been characterized as a “process encompassing positive adaptation within the context of adversity” in which situational factors (e.g., the behavior of a relational other) play a significant role in the adaptive process (Masten, 2001). For this research, relationship resilience is operationalized as trust. More specifically, the loss of interpersonal trust (Hu et al., 2015). Research has shown that trust is a key factor in building long-term, collaborative relationships, overcoming mutual difficulties, and is considered necessary for interorganizational relationships (Cheng et al., 2008; Coulter & Coulter, 2002; Zineldin & Jonsson, 2000). Since SMEs can feel par-

ticularly vulnerable given their limited resources, trust is of critical concern to them.

Interpersonal relationships can be critical to help build trust as a part of relationship resilience in several ways. They can mitigate interorganizational trust loss, potentially facilitate any relationship recovery process, and are likely to make collaborative interorganizational relationships more resilient (Kaufmann et al., 2018). Research has indicated that resilient relationships are considered more optimistic in the face of adversity (Dutton & Heaphy, 2003; Losada & Heaphy, 2004). Additionally, trust is considered a critical resource for SMEs that may be created through repeated social interactions rather than rigid contractual arrangements and, thus, likely have significant influence on buyer–supplier relationships (Feranita et al., 2017).

It should benefit SMEs to clarify their strategic focus and their supply chain relationship position (Berry, 1998; Entralgo et al., 2000; Fronmueller & Reed, 1996; Kempainen & Vepsäläinen, 2003). Gibb (1993, 1997) proposes that personal social actions build wider organization contacts and turn casual and natural relationships into a means for improving business (purposive relationships). Scase and Goffee (1987, p. 163) concluded that, “it is important to view the small business as social and to recognize that they are organized on the basis of particular patterns of personal relationships.” Holmlund and Kock (1996) noted one reason for a weak relationship position was due to the lack of social bonds.

The discussion of SMEs, social intelligence and relationship resilience help to provide the foundation for the research. The specific challenges and opportunities when combined with a likely higher level of social intelligence provide a framework to allow for great levels of relationship resilience. This combination helps to create a theoretical foundation for examination to determine the validity of the concepts and the strength of the relationships.

Theoretical Foundation

Social Exchange Theory

Social exchange theory (SET) provides the specific concepts to build a theoretical foundation for this specific study. Despite an extensive history in a variety of non-business domains, SET provides an excellent theoretical underpinning in supply chain relationship research despite its relatively limited application within SCM research (Narasimhan et al., 2008). SET proposes that individuals will effort to achieve desirable results within social interactions by maximizing rewards and minimizing the costs in any relationship. SET focusses primarily on the social rather than the economic nature of any exchange (Blau, 1968) and emphasizes the “relationship between the exchange parties as the governance mechanism of exchange” (Lambe et al., 2001, p. 3). Subsequently, social outcomes are deemed a crucial part of any relational exchange and could provide superior benefits than merely solely economic outcomes (Thibaut & Kelley, 1959). More recently, supply chain researchers have applied SET to studies related to supply chain justice (Griffith et al., 2006), time

pressure in buyer–supplier relationships (R. W. Thomas et al., 2010), and the relational impact of using win–win or win–lose negotiation strategies (S. Thomas et al., 2018).

Within SET, the reciprocity principle suggests that actors will reciprocate the actions of others in an exchange relationship (Gouldner, 1960). Reciprocity induces a feeling of obligation to others based on past behavioral interactions. In essence, people are inclined to imitate the actions, behaviors, and the communication style of the initiator in exchange relationships (Brett et al., 1998; Gouldner, 1960). People tend to respond to each other in a similar fashion. SET theory was selected as appropriate given the social interaction necessary in small business relationships. For example, Gibb (1993, 1997) suggests that small business personal social interactions, such as the exchanging knowledge or problem solving, can transform occasional relationships into continuing relationships and turn natural relationships into a means for doing business. Tokman et al. (2013) noted that an SME’s satisfaction with its supply chain portfolio performance may be enhanced through relationships that reciprocate access to highly valuable resources that cannot be acquired from elsewhere efficiently and/or effectively. Based on the literature and this theoretical foundation, the model and hypotheses have been developed. The interrelations among the four components of social intelligence and their influence on both relationship quality and relationship resilience are shown in [Figure 1](#).

[Figure 1](#) shows the theoretical model for this study. Each of the four solid lines in the model indicates a positive relationship between two variables. Each of the three broken lines in the model indicates an indirect relationship between variables or the presence of a mediating variable. For example, the broken line connecting cognitive empathy and situational awareness indicates that social skills mediate the relationship between these two variables.

Hypothesis 1: Social skills mediates the relationship between cognitive empathy and situational awareness.

Hypothesis 2: Situational awareness mediates the relationship between social skills and situational response.

Hypothesis 3: Situational response mediates the relationship between situational awareness and relationship resilience of the small business owner/manager.

Research Method

Measurement

Social Intelligence

The four social intelligence components of the small business owner/manager were measured with the 28 items of the Rahim Social Intelligence Test (RSIT). The RSIT was adapted to measure the small business owner/manager’s social intelligence. An established measure in the literature, the RSIT uses a 5–point Likert scale (5 = Strongly Agree 1 = Strongly Disagree) to rank the items. The higher score indicates greater social intelligence. Sample scale items include: “The owner/manager is aware of the events that affect our organization (Situational awareness);

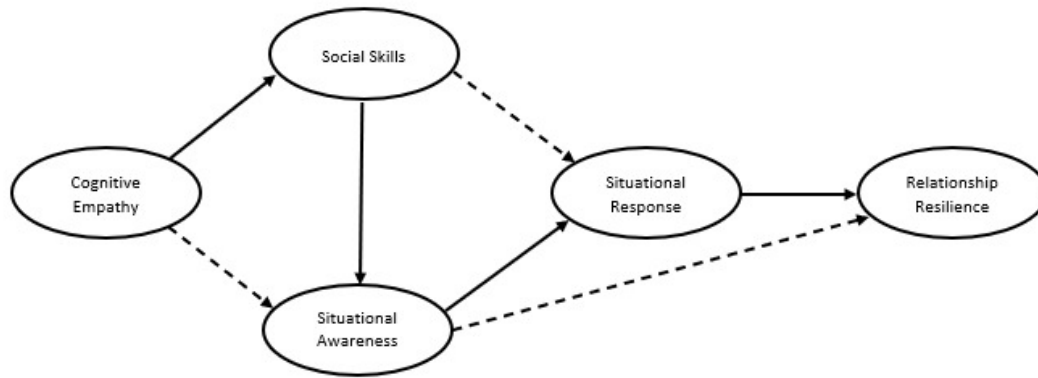


Figure 1. A Model of Social Intelligence and Resilience in Supply Chain Management

“The owner/manager makes decisions at the right time” (Situational response); “The owner/manager can sense when others try to say things through nonverbal messages” (Cognitive empathy); “The owner/manager knows how to build and maintain positive relations with others” (Social skills).

Relationship Resilience

This variable was measured using the ten-item scale adapted from Kaufman et al. (2018). The scale uses a 5–point Likert scale (5 = Strongly Agree 1 = Strongly Disagree) and a higher score indicates greater relationship resilience. Sample items for this scale include: “The buying/supplying company treats my company fairly and justly.” “The buying/supplying company is sincere in its promises”.

Data Collection and Sample

To test the proposed model, an online survey was conducted using Qualtrics. The survey method provides several advantages. First, surveys permit the measurement of unobservable data, including traits, preferences, beliefs, attitudes, and behaviors, (Dillman et al., 2014). Second, the survey method allows the collection of data about a population that is too large for direct observation. Third, respondents may prefer survey questionnaires given their unobtrusive nature. Lastly, surveys are efficient with regard to time and cost in comparison to experiments and case studies.

Three hundred and seventy-nine members of a chamber of commerce in the county of a southern state in the U.S. were invited to participate in this study. Following an invitation to complete the survey and three reminders, 90 usable responses were received for a response rate of 23.7%. While all respondents were small businesses, that is a business employing less than 500 employees, 59 of 90 (65.6%) surveyed employed less than 50 people. 26.7% of businesses surveyed were in the service sector. 12.2% were in the retail sector. 12.2% were in the manufacturing sector. Tables 1

Table 1. Demographical Information of Respondents

Item	Mean	SD
Age	47.03	19.72
Education	15.72	2.79
Experience	29.45	13.16
Gender	55% male	45% female

Table 2. LISREL Summary Statistics

Statistic	Measurement Model		Structural Equations Model
	1-Factor	5-Factors	
χ^2/df	6.15	2.49	2.84
RMSEA	25.00	11.00	12.00
Standardized RMSR	.15	.06	.06
Normed Fit Index	.40	.89	.87
Comparative Fit Index	.42	.94	.92
Incremental Fit Index	.44	.94	.92
Goodness-of-Fit Index	.71	.89	.88

Note: RMSEA = Root mean square error of approximation, RMSR = Root mean square residual

and 2 report the relevant demographics on the individuals and companies that responded.

Results

The purpose of this study was to analyze the impact of the small business owner/manager’s social intelligence on relationship resilience. The initial part of the analysis was designed to test the psychometric properties of the measures of SI and RR. The second part of the analysis was de-

signed to test the study hypothesis. Data analysis was performed with SPSS 26 and LISREL 10.3 statistical packages.

Validity Assessment

To assess the validity of the measures, a confirmatory factor analysis of the SI and RR items was computed. Results show acceptable fit indexes ($\chi^2/df = 2.49$, RMSEA = .11, Standardized RMSR = .06, NFI = .87, CFI = .92, IFI = .92, GFI = .89) for the five-factor solution (see [Table 2](#)). Existing studies provide evidence of construct validity for the RSIT. The present study provides additional support for the convergent, discriminant, and criterion validities which are needed to support the construct validity of the RSIT and RR. Evidence of this validity was also provided by several studies, particularly the study by Rahim (2014).

The analysis also shows the results of a single-factor solution. The fit indexes ($\chi^2/df = 6.15$, RMSEA = .25, Standardized RMSR = .15, NFI = .40, CFI = .42, IFI = .44, GFI = .71) were all unsatisfactory. In other words, the data for the single-factor model did not fit the model. Therefore, the lack of support for a single compressed factor requires a deeper examination of the data to determine if the five components of SI and RR or the presence of common method variance.

Convergent Validity

This validity for the five subscales of the instrument was assessed by examining whether each item had a statistically significant factor loading on its specified factor. Factor loadings of all factors were highly significant at .001 level which support the convergent validity of the subscales.

Discriminant Validity

The squared correlations between factors were less than the average variance extracted for each factor. Results show that there is strong support for the discriminant validity of the RSIT and RR factors.

Univariate Normality

The sample exhibited a high degree of univariate normality with skewness and kurtosis statistics well within the acceptable levels of 1 and 7 for all items. [Table 3](#) reports the means, standard deviations, unbiased estimate of reliability using strictly parallel model, indicator reliabilities, Pearson correlations, and variance inflation factor for the five variables.

Reliability Assessment

It is usual to assess internal consistency reliability (ICR) with Cronbach alpha, but we assessed the unbiased ICR with the Strict-Parallel model. This a conservative method to assess ICRs and for the present study they ranged between .77 and .96 which are considered adequate. Each item has a reported R² that measures the item's variance explained by its factor. This measure of indicator reliability (IR) should exceed .50 for each of the observed variables.

The R²s for all the RSIT and resilience items ranged between .45 and .77. These reliabilities were judged sufficient. Whereas the ICR measures the extent to which the items in a subscale are correlated with each other, IR measures an item's variance explained by a factor. The variance inflation factor (VIF) that ranged between 1.10–1.96 were lower than 10.00 which indicate that multicollinearity was not a problem.

Structural Model and Hypothesis Testing

A LISREL model was computed to test each of the three hypotheses. Results are presented in [Table 4](#). Hypothesis 1 involved the mediation effect of social skills on the relationship between cognitive empathy and situational awareness. As detailed in [Table 4](#), the two path coefficients from cognitive empathy to social skills ($\beta = .93$) and from social skills to situational awareness ($\beta = .99$) were both positive and significant. These path coefficients indicated full support for Hypothesis 1.

Hypothesis 2 detailed the mediation effect of situational awareness on the relationship between social skills and situational response. As detailed in [Table 4](#), the two path coefficients from social skills to situational awareness ($\beta = .99$) and from situational awareness to situational response ($\beta = .93$) were both positive and significant. These path coefficients indicated full support for Hypothesis 2.

Hypothesis 3 is associated with the mediation effect of situational response on the relationship between situational awareness and relationship resilience. As portrayed in [Table 4](#), the two path coefficients from situational awareness to situational response ($\beta = .93$) and from situational response to relationship resilience ($\beta = .47$) were both positive and significant. These path coefficients indicated full support for Hypothesis 3.

Discussion

This was an exploratory investigation to test a model of small business owner/managers relationship resilience with business partners based on their social intelligence. The results presented provide persuasive support for the model presented in [Figure 1](#). If the small business owner/manager possesses greater social intelligence they are likely to have more resilient business relationships. The current study contributes to the greater understanding of the connections between situational awareness and situational response and between situational response and relationship resilience. The results of this study indicate the importance of the small business owner/manager developing social intelligence in a business relationship context.

Implications for Management

As identified earlier, SMEs that are often dependent on larger organizations may experience greater vulnerability in business-to-business relationships. These vulnerabilities may be exacerbated depending upon the on specificities related to the resilience of their relationships. Proactively making key relationships more robust should allow SMEs

Table 3. Variable Means, Standard Deviations, Strictly Parallel Model α and Indicator Reliabilities, Intercorrelations, and Variance Inflation Factor

Variable	M	SD	α	IR	1	2	3	4	VIF
1. Situational awareness	4.35	.72	.96	.46					1.89
2. Situational response	4.25	.79	.79	.71	.77				1.22
3. Cognitive empathy	3.77	.84	.77	.45	.67	.75			1.36
4. Social skills	4.33	.77	.87	.67	.76	.83	.74		1.66
5. Relationship resilience	4.24	.84	.94	.77	.54	.50	.50	.51	

Note: $N = 89$. IR = Indicator reliability, VIF = Variance inflation factor. Correlations $\geq .10$ is significant at $p < .05$ (two-tailed).

Table 4. Parameter Estimates for Structural Equations

Parameter path	Statistic	z-value
Cognitive empathy \rightarrow Social skills	.93	6.46***
Social skills \rightarrow Situational awareness	.99	5.71***
Situational awareness \rightarrow Situational response	.93	6.55***
Situational response \rightarrow Relationship resilience	.47	3.90***

Note: These values are based on the causal model run on the covariance matrix. *** $p < .001$

to fortify their network and reduce potential vulnerabilities. Small business owners/managers are in a unique position to connect with the senior managers in the companies with which they interact. Owner/managers with greater social intelligence may be able to leverage cognitive empathy, social skills, and situational awareness to create stronger more resilient relationships. Social intelligence is a mostly learned skill. SI develops from experience with people and learning from success and failures in both social and business settings. Social intelligence helps to provide for the management of emotions and promotes greater self-awareness, allowing small business owner/managers to improve business interactions. The Social intelligence of the small business owner/manager could allow for the strengthening of trust between the small business and exchange partners, thereby increasing relationship resilience.

Interventions may be needed to improve an owner/managers' SI competencies with education and specific job-related training. For those small businesses that hire managers; they may should adopt the policy of recruiting managers who are likely to possess greater SI competencies. This suggests that small business owners should carefully consider their traditional criteria for selecting potential managers. Business owners also should consider voluntarily participating in SI training. Finally, it should be added that the findings support that SI training can also improve owner/managers' relationship resilience. Those owner/managers unwilling or unable to undertake SI training may consider SI an important hiring criterion.

Limitations and Future Research

While this study brings much-needed focus on a micro-level factor, SI, that this research clearly identifies the positive association between relationship resilience and small business owner/managers and their supply chain partners. One of the limitations of the study is that the measures of endogenous and exogenous variables were collected at one time with the same measure that may create the problems of common method variance. The single factor CFA shows that the fit indexes substantially deteriorated which indicates that common method variance is not justified. Another limitation of this study includes collecting data from a small sample may limit generalizability of the results.

Further research is needed to enhance the understanding of the relationships of the four components of SI on relationship resilience. A follow-on study to determine if there exists difference among owners and managers would build a deeper understanding of the role of SI within SMEs. Also, future research should examine the role of other criterion variables to include some indicators of leadership effectiveness, job satisfaction, organizational citizenship behavior, and organizational justice. Organizations should also study antecedents of relationship resilience such as organizational culture and structure and potential supplier replacement. Another area for research relates to strategies used by owners and managers to deal with their internal and external conflicts. Finally, as discussed at the end of the results section is designing a study to evaluate the effects of training upon SI to enhance the aforementioned criterion variables through either field experiments or scenario-based laboratory studies.

Conclusions and Appreciations

The overall impact of this research was positive. The study clearly supported the model and the use of SMEs provided an increase in the body of knowledge in an under examined area. Furthermore, the theoretical model provides a foundation for further research with both SI and SMEs.

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