

2017

# The Managerial Impact on Small Business Global Supply Chain

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# Walden University

College of Management and Technology

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Silvia Nigh

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Walden University  
2017

Abstract

The Managerial Impact on Small Business Global Supply Chain

by

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MBA, Jackson State University, 2004

BSBA, The University of Southern Mississippi, 2002

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

March 2017

## Abstract

In a global economy, companies that are able to engage in international trade may have a competitive advantage over others. Increased globalization is also increasing the demand for effective global supply management practices. Building on Lorenz's chaos theory, this instrumental case study explored the strategies that 4 senior managers from small and medium-sized enterprises in Indianapolis, Indiana used to reduce disruptive vulnerabilities in the supply chain continuum. Review of company documents served as the second data collection method. Rowley's 3-step analysis guided the coding process of the interview data, and the trustworthiness of interpretations was enhanced through methodological triangulation of company records. Findings revealed 3 strategies that these senior managers relied on for remaining strategically competitive in a global environment: understanding the communication challenges and addressing the issues, risk mitigation, and human capital management. Findings from this study may contribute to business practice and social change by providing business leaders with information about effective strategies to remain competitive or to explore international ventures while focusing on environmental causes. Sustainable practices lead to cost reduction for the organizations and a cleaner environment for the surrounding community.

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## Dedication

I dedicate this study to all the people who supported me directly or indirectly, especially my two loving and very energetic children, Natalie and Ayden. You two have only known your mother to be a student since you were both born into this program. Although you do not really understand the concept quite yet, you two made the ultimate sacrifice of giving up time with mommy, and for that I will be forever grateful. Natalie, I always hoped you would be too young to remember all the time I spent away from you in hopes that would alleviate some of my guilt, but I know you have the memory of an elephant and you will always remember me constantly doing homework. I just hope one day you will understand the meaning of short-term sacrifices for a long-term reward.

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## Section 1: Foundation of the Study

In this study, the qualitative research method assisted with the goal of exploring the role of managerial knowledge on the exploitation of international ventures and the issues associated with experience and knowledge limitations. I have chosen to focus the research on small and medium sized enterprises (SME). To remain competitive, organizations must recognize the importance of knowledge as a strategic resource (Hau, Kim, Lee, & Kim, 2013). I explored the impacts of the decision makers' propensity for international collaboration and the utility of multinational management based on knowledge.

### **Background of the Problem**

Managers of small firms get discouraged from venturing into international markets due to the numerous challenges and risks they encounter (Zhou, Wu, & Barnes, 2012). Besides the economic and financial risks, a manager's perception contributes to the challenges a firm may face when working in a global environment (El Makrini, 2015). Corporations with a global focus must adopt a unified, single-world mentality and reach out to an audience available in a world without borders (Bond & O'Byrne, 2014). The importance of SMEs is significant as they account for almost 96% of the exporting companies in the United States. SMEs are less represented in export markets due to the fixed costs involved in exporting activities and the required upgrades in human and physical capital, and technology (Gashi, Hashi, & Pugh, 2014).

The coordination of value chains is a challenge for managers of multinational corporations due to the amount of uncertainty involved in the process (Mello,

Strandhagen, & Alfnes, 2015). The increased intensity of competition in global markets is opening the doors to many unethical and harmful practices followed to attract customers and snatch the market share of others (Siriphatrasophon & Piriyanarak, 2013). Some of the issues young and small firms may have to face include (a) risks that hinder their competitiveness, (b) suffering from the liability of dealing with foreign policies, and (c) having limited resources and knowledge (Zhou et al., 2012).

### **Problem Statement**

Supply chains are vulnerable and, without managerial talent, the result of disruptions can be catastrophic, causing organizations to lose revenues or to have to close operations (Kumar, Himes, & Kritzer, 2014). Fifty percent of senior managers in developed countries will retire within the next 10 years, causing shortages in the talent of supply chain management skills (Hohenstein, Feisel, & Hartmann, 2014). The general business problem is that SME managers are uncertain how to deal with the numerous and complex activities and functions within the organization, creating challenges for the coordination of an effective supply chain. The specific business problem is that some SME managers lack strategies to reduce the disruptive vulnerabilities in the supply chain continuum.

### **Purpose Statement**

The purpose of this instrumental case study was to explore what strategies SME managers need to reduce the disruptive vulnerabilities in the supply chain continuum. The sample population included four international business managers located in Central Indiana. The participants answered open-ended questions to share their strategies. The

potential social impact of this study is awareness of the environmental and financial rewards of sustainable practices. By addressing the potential negative effects of the managerial actions, managers are aware of the magnitude of the impact of their actions and are mindful of the local communities. Knowledge of social issues can enable managers to make informed decisions and help them contribute to a cleaner environment.

### **Nature of the Study**

The reason I selected a qualitative research method over the other methods was to help me explore and describe data. Qualitative methods are more fitting for generating hypotheses, whereas quantitative methods are more appropriate for hypothesis testing (Lund, 2012). In mixed methods research, there is a requirement for the combination of quantitative viewpoints and analysis and qualitative research in a single study (Halcomb & Hickman, 2015), and the integration of both designs was not required to meet the research objectives. The goal of the quantitative methodology is to generalize to the larger population, and it requires different sampling techniques from qualitative research (Wester, Borders, Boul, & Horton, 2013). Qualitative research method is appropriate for this study because case study is a design that allows the opportunity for interpretation during the research process (Stake, 1995). Case study research gives a higher level of flexibility than other qualitative approaches would (Hyett, Kenny, & Dickson-Swift, 2014). Case study is the most appropriate choice since it exposes a complex issue that requires emphasis on subtle distinctions, sequential events, and individual characteristics (Stake, 1995). The use of the case study methodological approach allows for a higher level of flexibility than phenomenology or grounded theory (Hyett et al., 2014). The

focus of this study is on managers who deal with international trade and the environmental variables that affect their businesses. For this reason, qualitative research was the ideal design to enable the collection and interpretation of information, including managers' knowledge, perceptions, viewpoints, and values. Furthermore, the ultimate goal was to explore the reasons these managers are experiencing difficulties. It is important to use a design that focused on subjectivity and allowed me to incorporate personal thoughts into the findings.

### **Research Question**

In this study, I explored the reasons certain small business managers fail to develop capabilities for risk management. The research question that guides this study is as follows: What strategies do business managers need to reduce the vulnerabilities in the supply chain continuum? The phenomenon that I researched was the extent managerial knowledge and experience impact firms venturing into international trade practices and the global supply chain.

### **Interview Questions**

The following are the interview questions for this study:

1. How much experience do you have conducting international business?
2. What are the challenges you encounter managing international processes?
3. What integrated tools are a part of international operations and what manual approaches do you use?
4. How is the communication channel within and outside the organization and how can it be strengthened?



5. How do you reduce and manage risk when doing business with foreign markets?
6. What approaches do you use to meet customers' demands and needs on a global basis?
7. What type of international relations training is available to your employees?
8. What green or sustainable supply chain management practices do you pursue and how does the adoption of those environmental practices impact your performance outcomes?

### **Conceptual Framework**

I chose the chaos theory as the conceptual framework for this study. Supply chain theorists suggested that the supply chain is a complex network of relationships that managers should oversee from beginning to end (Storey & Emberson, 2006), and the performance of a firm can be affected by the globalization of the supply chain (Connely, Ketchen, & Hult, 2013). Cost reduction and efficiency have become more difficult as the supply chains are becoming longer and more complex (Mandal, 2014). Although the supply chain discipline is becoming more mature, due to its complex nature, it still lacks a formal theory. Carter, Rogers, and Choi (2015) conceptualized supply chain as an attempt to create a starting point for the development of a formal theory of the supply chain.

Chaos theory originated from the natural sciences, and researchers use it to enhance supply chain management techniques (Stapleton, Hanna, & Ross, 2006). Lorenz

identified the chaos phenomenon in 1960, and his theory posits that there is such a sensitive dependence that a small change in the initial conditions can drastically change the long-term behavior of a system (Stapleton et al., 2006). The complexities of supply chains make it frustrating for managers to forecast and react to demand patterns and satisfy customers' demands. The chaos theory helps business practitioners better understand the complex systems in which they operate (Stapleton et al., 2006).

Chaos theory has practical usefulness in business applications because it provides a structure to manage the common challenges of uncertainty, imperfect information, and disorder in the external environment (Sanial, 2014). Chaos theory attempts to explain apparent disorder in an ordered way by stating that events are complex, not random. Researchers can use chaos theory to develop an observable time series of events where these seemingly random and unpredictable events can, in fact, be predictable (Sanial, 2014). Firms must be adaptive to maintain an uninterrupted flow of goods and resilient enough to manage risks better than their competitors and profit from disruptions (Mandal, 2014).

Supply chains become even more complex with firms that opt to trade internationally. Internalization is a result of market failure and external barriers, such as tariffs that increase transaction costs (Millar, Hind, & Magala, 2012). Li and Jens (2014) suggested that managerial orientation toward internationalization reflects toward the decision to remain in its current competitive position or becoming more explorative.

## **Operational Definitions**

*Competitive scope:* Competitive scope is the range of a firm's effort to give relevance to a competitive manufacturing priority (Stock, Greis, & Kasarda, 1999).

*Geographic scope:* Geographic scope is the physical location of the market area a firm chooses to extend its coverage to reach customers (Stock et al., 1999). It is the geographical coverage within which a firm operates its market (Andersson, Evers, & Kuivalainen, 2014).

## **Assumptions, Limitations, and Delimitations**

Assumptions are conditions that are out of my control but need to be in the study to make it relevant. Limitations are potential weaknesses in my study that are out of my control. Delimitations are characteristics that limit the scope and define the boundaries.

### **Assumptions**

Assumptions are something the researcher views as being true without concrete evidence (Ellis & Levy, 2009). I assumed that participants would answer the interview questions honestly by explaining the purpose of the interview and providing the volunteers assurance that they would remain anonymous, and the name of the company would remain confidential. I also assumed that approximately eight questions were sufficient to gather sufficient data to answer the research question. The questions covered the main areas of focus of this study, including background information, perception, weaknesses, and strengths.

**Limitations**

Limitations are threats to the study that are outside the researchers' control and affect its internal validity (Ellis & Levy, 2009). One of the limitations of this study was the substantial gaps between theory and practice of supply chain management. Another major limitation was the lack of current literature. Most available sources that relate to the context of this research have a publication date prior to 2010. Researchers have revealed substantial gaps between theory and practice of supply chain management. Sample size was another limitation because the researcher may interview only two or three participants to attempt to reach data saturation. The demographic characteristics of the sample included years of experience in international business, educational preparation, and position held at the company. I used a sample that included only participants located in the state of Indiana as opposed to a random sample that includes a larger population. To deal with the sample limitations, I chose managers of different types of industries and with different backgrounds. I allocated more time for research to locate more current sources and broadened the search criteria to include all successful and unsuccessful businesses.

**Delimitations**

Delimitations are the boundaries of the study (Ellis & Levy, 2009). One of the delimitations of my study was the fact that it was limited to include exclusively managers and senior leaders of companies that trade globally. Virtual management of employees would be able to be a part of the study since it pertains to global supply chain management. The supply chain is an aggregate of the holistic relationship between

production, logistics, marketing, purchasing, service, and supply management (Storey & Emberson, 2006). Due to the nature of the study, I incorporated all the aspects of the supply chain strategy; however, I excluded large businesses. Participation in the study also delimited to only senior managers of small and medium-sized international businesses in the state of Indiana.

### **Significance of the Study**

The significance of this study is that I explored a regional aspect of a worldwide issue. The importance of studying the impact of globalization on the supply chain is much greater than its current coverage in the Midwest. Understanding the sources of challenges and issues can contribute to identifying the sources and the generation of solutions. Having a clear understanding of the internal and external factors that influence the business continuum and the global supply chain can assist managers of small business to remain or become competitive and profitable.

### **Contribution to Business Practice**

This study is beneficial for senior managers of small firms with potential for international expansion. It enables them to evaluate the potential risks associated with entering international markets and to acquire sufficient knowledge to face risks and any other factors that impede globalization. The United States has a trade deficit (Census, 2014), mainly due to the fear business managers face when entering into international ventures. Managers of SMEs have the ability to proactively acquire and create processes to deliver knowledge (Ranjbarfard, Aghdasi, Albadvi, & Hassanzadeh, 2013). Devotion to developing experiential knowledge over an extended period is not necessary (Musteen,

Datta, & Butts, 2014). This study may contribute to future research by adding to the body of knowledge of global supply chain management.

### **Implications for Social Change**

An essential element of this study is the ability to enhance the knowledge a manager needs to accomplish the foreign venture. That knowledge includes the ability to understand the nonfinancial impacts of the business decisions on society, especially when trading with developing countries. According to Kunnanatt (2013), there are benefits and disadvantages of international trades in developing countries. Not all countries reap the benefits of globalization equally. Poverty and exclusionary development are concerns that generate international discussion (Banerji, 2013). In addition to the social disparities worldwide, there is an economic gap and uneven wealth distribution within countries. Global corporations often fail to support their commitment to boost economic growth and even distribution and end up locking wealth at the top and denying opportunities to unskilled labor, causing an increase in the number of dislocated people without access to basic necessities (Banerji, 2013). Learning how to be profitable without exploiting people and disregarding corporate sustainability is of high importance for the success of businesses. Government regulations and the supply chain request demonstrations of sustainability practices (Iarossi, Miller, O'Connor, & Keil, 2013).

### **A Review of the Professional and Academic Literature**

The purpose of literature reviews is to provide readers a summarized analysis and evaluation of ideas of other authors and relate the study to the results of other studies and the wider body of knowledge (Wakefield, 2015). Literature reviews require a

considerable amount of work and the ability to multitask; however, they are necessary, and it is advantageous to rely on regular summaries of recent literature (Pautasso, 2013). When compiled in a professional way, these summaries provide adequate use and contain relevant synthesized material from various sources (Pautasso, 2013). The basis of the review is the assumption that the materials are of high quality since they had to undergo a rigorous peer review process. I selected the sources of literature based on the following research question: What strategies do business managers need to reduce the vulnerabilities in the supply chain continuum? The clear definition of the research question helps the formulation of selection criteria to identify useful articles that represent the phenomenon of study (Wakefield, 2014).

I obtained sources for this study from business and management databases using the search engine in the Walden University Library. The literature review contains 77 peer-reviewed sources; 85% of these sources have a publication date of 2012 or later. The comprehensive review of works allows researchers to explore experiences and perceptions about the global supply chain and explore current trends, strategies, risks, and practices (Borges, 2015; Yu, Xiong, & Cao, 2015). The sources include primarily scholarly journals that examine the following themes: *management and leadership, challenges and strategy, the components of the supply chain, communication, technology and use of resources, outsourcing approaches, global regulatory issues, and outlook*. I organized the literature review by subcategories regarding globalization, supply chain, sustainability, manufacturing, and other themes related to the specific business problem.

Several researchers have explored various aspects of export activity small businesses conduct (Amarasena, 2013; Maldifassi & Caorsi, 2014). Some studies have identified the reasons why small businesses fail to export while others have evaluated the positive and negative impacts of their choice to export (Omer, van Burg, & Peters, 2015). An important area of emphasis in globalization research over the past 10 years has been the issue of its complexity (Andersson et al., 2014). This problem affects the majority of the businesses in the United States (Andersson et al., 2014). Since 2006, the level of complexity in the business environment has increased substantially, making it clear that knowledge, strategic thinking, and dynamic capabilities are sources of competitive advantage and closely relate to the learning ability of the organizations (Cortés, Manchón, Sáez, & Zarazoga, 2015). Managers are adopting green supply chain management initiatives as an attempt to manage the increasingly complex supply networks (Tachizawa & Wong, 2015). Knowledge and the ability to disseminate it is one of the most strategically important intangible resources an organization possesses (Jain, Sandhu, & Goh, 2015). Supply chain management deserves extra attention because the influence of globalization has been transforming supply chains since 2006 (Connely et al., 2013).

One of the objectives of this study was to explore the background, including beliefs, values, and experience of international business owners and managers. There is a need for additional research and literature on the relationship between business growth and management (Blackburn, Hart, & Wainwright, 2013). Cook and Underwood (2012) interpreted studies that have found that positive attitudes towards globalization correlate



to the amount of education. The studies addressed three questions: (a) how much people know, (b) who knows what, and (c) if knowledge affect attitudes. The results showed a positive relationship between managerial knowledge and a positive attitude towards globalization (Cook & Underwood, 2012). The test can serve as a tool to compare firms that have experienced success against organizations that have failed in the international arena. It should include firms with potential for international trade that choose or are unable to explore the potential. Determining these similarities addresses a possible explanation for the similarity of attitudes, behaviors, and interests of management with the success rate of a firm. It is probable that a positive relationship between a manager's mentality favoring globalization and the overall organizational international behavior exists (Kyvik, Saris, Bonet, & Felicio, 2013). Even if the amount of interest and knowledge consistently has an impact on the firms' international growth, it is prudent to examine external factors.

### **Chaos Theory**

The chaos theory was the foundation of this study. A mathematician and meteorologist named Lorentz coined the theory in 1960 (Ozdemir, Ozdemir, & Yilmaz, 2014). Chaos theory shows that predictable behavior exists in seemingly improbable events (Sanial, 2014). Lorentz asserted that small changes in a complex dynamic system can lead to vast and sudden consequences (Ozdemir et al., 2014). Chaos theory allows leaders to understand the process of change by allowing them to see that it is possible to predict events (Sanial, 2014). Although chaos theory's roots are in the observations made by natural science practitioners, it has been adopted by other disciplines (Adams &

Stewart, 2015). The practical usefulness of the chaos theory in business applications is the fact that it provides a structure to manage the challenges of uncertainty, misinformation, and external disorder (Sanial, 2014). Chaos theory in this study allows the analysis of the global strategic management process to help leaders be prepared for future events and create processes that will increase their preparedness for unpredictable events.

Chaos theory has a common partnership with complexity theory, which describes the interactions of complex systems and its components (Sanial, 2014). Complexity systems theory is normally used to explain chaotic behavior (Ozdemir et al., 2014). Chaos theory is a useful tool to help understand the potential impact of disasters as it seeks reorganization by finding predictability among patterns (Adams & Stewart, 2015).

### **Internationalization Theory**

Although the chaos theory was the foundation of this study, the internationalization theory provides relevant information related to this study. Buckley and Casson (1976) conceptualized the internationalization theory in 1976 by analyzing the multinational enterprise using Coase's work done in 1973 (Buckley & Casson, 2009). Coase argued that there are conditions where the transaction costs of foreign trade make it more efficient for organizations to generate local business instead of entering foreign markets and handling foreign transaction costs (Buckley & Casson, 2009). The focus of internationalization theory is on characteristics that determine the reasons, locations, and periods when firms expand overseas (Connely et al., 2013). The basis of this theory is the concept that businesses entering the market are more probable to engage in international

activities where the presence of value chain activities is higher, and there is a greater multinational existence (Acs & Terjesen, 2013).

Supply chain management research can benefit from the knowledge scholars who work from an internationalization theory perspective since those scholars possess a clear understanding of the outcomes of internationalizing the supply chain (Connely et al., 2013). Supply chain theorists suggested that the supply chain is a complex network of relationships that managers should oversee from beginning to end (Storey & Emberson, 2006), and the performance of a firm can be affected by the globalization of the supply chain (Connely et al., 2013).

### **Globalization**

Globalization is a process of industrialization that expands globally, and it has an integrating function (Stros, Coner, & Bukovinski, 2014). It is a set of continuous social, economic, political, and legal transformations and growing interdependence of states regarding domestic and international activities (Kagitci, Vacarelu, & Fratila, 2013).

Globalization is also the exchange of technology, economy, politics, and culture among nations, organizations, and individuals (Awuah & Mohamed, 2011). Much of the literature available contains an examination of the concepts and processes of globalization within a single perspective in seeing all processes as leading to increasing economic integration (Bond & O'Byrne, 2014). Research on multinational enterprises (MNEs) is the primary focus of internationalization theories (Acs & Terjesen, 2013). An MNE is a firm that manages operations and strategies in more than one country (Tece, 2014). MNE economists use market failure to explain internationalization.

Zinkina, Korotayev, and Aleksey (2013) discussed the high complexity of attempting to measure globalization due to its varying definitions and no uniform method of globalization measurement. The existing indices in research to study the phenomenon of globalization frequently study its relation to economic, political, and social processes. These indices omit relevant methodologies that prevent the elaboration of a systemic vision of globalization (Zinkina et al., 2013). The two stages of the internationalization process are the preinternationalization and postinternationalization stages (Khojastehpour & Johns, 2014). The focus of the first stage is on overcoming the psychic distance, whereas the focus of postinternationalization is on market entry and positioning (Khojastehpour & Johns, 2014). It is particularly a more gradual entrance process for new ventures. Glowik and Sadowski (2014) attempted to define international new ventures by formulating three categories: (a) the age at international entry, (b) the amount of export involvement, and (c) the number of export markets. The number of years it takes a company to make its first sale after foundation determines the age at international entry. The amount of export involvement is the share of foreign sales in comparison with the total revenue. The latter is the firm's ability to reach multiple countries (Glowik & Sadowski, 2014).

Globalization has facilitated the pursuit of international business strategies due to the liberalization of trade among nations, causing an enormous reduction in trade barriers. Reduced trade barriers have also generated improved technologies, communication systems, transportation systems and logistics, facilitating the exchange relationships

between firms and buyers, suppliers, and other actors across the globe (Awuah & Mohamed, 2011).

### **Global Supply Chain**

The supply chain is a network of linked organizations with upstream and downstream relationships in the diverse business processes and activities across functional silos within a company and the cooperation between parties with the objective of producing value in the form of products or services (Winter & Knemeyer, 2013). On a global scale, the challenge related to global supply chain operations is figuring out how to develop a global strategy and manage multiple external factors that influence the supply chain, such as political and economic factors, culture, costs, infrastructure, technology, and competitive rules (Borges, 2015). There are multiple business processes identified by the global supply chain framework from customer, supplier relationship, and demand management, order fulfillment, manufacturing flow management to product development and commercialization, and returns (Winter & Knemeyer, 2013). Supply chain management involves the planning and management of all activities related to sourcing and procurement, the creation of demand, order fulfillment, and logistics management (Borges, 2015).

Global supply chain managers deal with the relationship between companies from different countries, with different developments (Borges, 2015). These interdependent relationships create added challenges and the need for firms to evaluate managerial attributes. Management behavioral components, such as methods, leadership, risk,

culture, attitude, trust, commitment, and knowledge are not tangible, making it challenging to coordinate across firms in a supply chain (Winter & Knemeyer, 2013).

### **Global Management and Knowledge**

Small businesses owners and managers start the business for different reasons-- they have different aspirations, different organizational characteristics, and are located in a range of sectors and locations (Blackburn et al., 2013). A managerial position in global terms is very demanding and uncertain since managers must keep up with constant new findings in the global market and make sound decisions based on them (Stros et al., 2014). To maintain a competitive advantage, managerial knowledge is crucial. Knowledge is the primary way to achieve superior performance (Del Giudice & Maggioni, 2014). In fast-paced and increased rapid development of new technologies, managers are forced to adjust rapidly and take action (Stros et al., 2014). The challenges posed by globalization increase the need to create new knowledge and improve learning processes (Del Giudice & Maggioni, 2014). Globalization requires the urgent adoption of new economic decision-making procedures (Radoi & Olteanu, 2015). Lack of managerial specialization causes organizations to display a lower level of technical expertise and the development of low-quality logistic activities, leading to lower productivity and competitiveness (Cano-Olivos, Orue-Carrasco, Flores, & Mayett, 2014).

Several companies demand knowledge management processes that capture information from international markets to generate innovations (Del Giudice & Maggioni, 2014). Entrepreneurs face the challenge of having to create more innovative solutions and flexibility to impose their products (Stros et al., 2014). Knowledge

management can lead to innovation and improved business performance (Del Giudice & Maggioni, 2014). To keep pace with constant changes, management must make an internal and external analysis using SWOT analysis, strategic plans, and short and long-term strategies (Stros et al., 2014). Knowledge about the industries travels extremely fast across continents; therefore, communication is a key component to efficient information sharing (Maranga & Sampayo, 2015). Improved communication leads to sustainable learning and improved overall processes and decision-making systems by increasing awareness of crucial information that transforms individual knowledge into organizational knowledge (Ceptureanu, Ceptureanu, & Tudorache, 2015).

Various factors, such as the reduced costs of international transportation, decreased consumer confidence in domestic firms, and the need for more than an internal demand contribute to the need to create new knowledge to reply against a changing economic environment (Del Giudice & Maggioni, 2014). Managers must find optimal solutions that are profitable for the companies they manage and meet the distributors and consumer expectations. This process incorporates numerous segments of the supply chain, and it is a solution that demands managers achieve continuous improvement and education to be in line with global requirements (Stros et al., 2014). Due to the interaction with a series of entities within the global supply chain, managers need be able to break geographical boundaries to create and transfer knowledge (Ceptureanu et al., 2015). It is necessary that organizations allow the exchange of knowledge through relational networks and relationships between internal and external agents to cooperate and acquire resources (Del Giudice & Maggioni, 2014).

Knowledge management is a competitive necessity that generates value by incorporating knowledge into the firm's decision-making processes (Ceptureanu et al., 2015). Liu and Abdalla (2013) established a model to assess and measure knowledge management performance and effectiveness. According to the authors, previous research has revealed that the concept of knowledge management has different categories depending on the research. A consensus in the literature is that management's ineffective decision making in management support, technology, culture, and other factors lead to poor knowledge management (KM) implementation (Liu & Abdallah, 2013).

Their model integrates the sense-making methodology into KM to cover the elements of KM implementation. In the sense-making methodology, there is a gap between people, things, spaces, and times, and the attempt is to understand the ways people make sense out of information under changing circumstances (Liu & Abdalla, 2013). The three sense-making modules Liu and Abdalla (2013) suggested are (a) the understanding of what is currently happening in the organizational environment, (b) the process of managing knowledge through four sense-making modes, and (c) the alignment of KM with the overall business strategy. After completing an environmental analysis, activity planning, and KMI decision making, the outcome is the knowledge management index. Managers can use this empirical approach to predicting the firm's performance and properly adjust their strategy based on the most critical factors (Liu & Abdallah, 2013). Although management should follow the organization's deliverables, the results of knowledge management efforts are often not quantifiable and do not directly relate to final results (Ceptureanu et al., 2015).



## **Small Business**

Small organizations are the most common type of firm found in the global economy (Soriano & Dobon, 2009). There is no universally accepted definition of small business (Westrenius & Barnes, 2015). The current definition of SMEs varies considerably across countries, ranging from enterprises with fewer than 500 employees in some of the most developed countries, such as the United States and Canada, to 50 employees in many developing countries (Soriano & Dobon, 2009). Most of the 5.7 million firms in the United States have fewer than 500 employees (Rolleri, Nadim, & Lussier, 2016). Small businesses affect the lives of a large number of people as they are major providers of employment and goods and services (Westrenius & Barnes, 2015). Approximately 99% of all registered U.S. firms are regarded as small businesses (Rolleri et al., 2016). Small businesses are often a personal affair and may include family and friends as stakeholders (Westrenius & Barnes, 2015).

Numerous governmental initiatives financially support small business investments. Supportive actions include loan guarantees, term loans, lines of credit, and support for foreign investors seeking to support innovative companies for expansion (Rolleri et al., 2016). It is difficult to measure and assess the effectiveness of these initiatives since there are no operational measures of before and after and no breakdowns of how much is invested towards creating new small business and how much is spent in keeping them in business (Rolleri et al., 2016).

Maldifassi and Caorsi (2014) asserted that SMEs have a large and underexploited potential to engage in export activities. The promotion of exports within SMEs

contributes to the creation of jobs and hard currency input in the local economies. The social benefits of the creation of sales caused by SME's exporting activities include the employment of generally less qualified workers and middle and low-income social groups and business opportunities for entrepreneurs (Maldifassi & Caorsi, 2014).

### **Logistics Management**

Logistics can provide a firm with an advantage to be competitive in today's market (Stock et al., 1999). Supply strategy encompasses logistics and other aspects of the coordination of complex operations including management of services and operations, purchasing, and marketing (Storey & Emberson, 2006, p. 755). Logistics activities are becoming more integrated as the management of foreign trade become a part of a natural evolution (Kalinicheva et al., 2016). To compete successfully, firms must be flexible, responsive, and agile in the supply chain (Gonzalez-Loureiro, Dabic & Kiessling, 2015). Technological advancements and enhanced managerial abilities enable logistics to integrate activities within stages of the supply chain efficiently (Stock et al., 1999). Despite the value added in integrating the supply chain, the diversity causes ambiguity about international competition, and managers become confused on how to define a global strategy and the importance of choosing a global strategy (Roh, Hong, & Min, 2014). The appropriate integration of supply and demand chains into a value chain can offer customers maximum value (Bustinza, Parry, & Vendrell-Herrero, 2013).

In global exchange of relationships, the development of trust becomes a key factor in achieving performance expectations and improving efficiency (Kiessling, Harvey, & Akdeniz, 2014). There is a strong correlation between trust and the financial

performance of supply chain members (Kiessling et al., 2014). Trust increases willingness to cooperate and reduces transactions costs. As an effort to learn more about their customers; gain valuable information, and build trust, companies are moving closer to foreign customers to better fulfill their demands (Khojastehpour & Johns, 2014). Supply chain managers' roles will expand to include the ability to develop networks of trusting relationships as sources of knowledge (Kiessling et al., 2014).

One of the issues logistics managers of SMEs face is the lack of formal procedures and proper planning to respond to constant changes (Cano-Olivos et al., 2014). Managers of multinational corporations need to develop a supply chain strategy that will reorient their supply chains into global networks (Kiessling et al., 2014). Included in a firm's strategy are its competitive priorities, the competitive scope and the geographic scope, and the integration of logistics can affect a firm's performance and logistics integration (Stock et al., 1999). Enterprises increase efficiency and expedition of product and information flows by seeking optimization of its logistic management within the entire supply chain (Cano-Olivos et al., 2014). Customs regulations and procedures are a source of concern in the global logistics world. Customs activities aim to ensure the economic security of countries; however, without efficient customs systems, time spent on customs formalities cause the delay of goods and the increased traffic time lead to higher costs (Kalinicheva et al., 2016).

### **Impediments to Globalization**

Small businesses face numerous challenges and barriers to entry (Kahiya & Dean, 2015). Challenges international trade can be internal or external. Export barriers include

attitude, structure, and institutional impediments that discourage domestic ventures from international expansion, active exporters from long-term international success, or frustrations that cause business owners/managers to abandon the idea (Kahiya & Dean, 2015). Specific potential impeding factors include international laws, economic issues such as currency fluctuation, country's financial stability, trade barriers, costs associated with international documentation, and others. Foreign direct investment is costly due to the complexity of the administrative components (Torriti & Ikpe, 2015). These administrative costs relate to the uncertainty associated with foreign administrative costs, such as bureaucratic and juridical hurdles, regulations, and requirements (Torriti & Ikpe, 2015). Other contributing factors include differences in language, education, business practices, culture and industrial development (Khojastehpour & Johns, 2014). Firms often target a market limited to their immediate neighbors since geographic proximity is likely to imply more knowledge about the foreign market and greater ease in obtaining information (Khojastehpour & Johns, 2014).

Although international market entry is challenging to most SMEs, current exporters also face difficulties. The implication of barriers on continuing exporters includes the negative impact on performance and ultimately the discouragement from pursuing exporting activities (Kahiya & Dean, 2015). A major impediment is the managerial capability of the firm. The exporting capabilities of SMEs are mediated by factors related to their owner's personal characteristics and experience (Maldifassi & Caorsi, 2014). The success or failure of the internationalization activities is a result of external and internal factors. To develop a successful strategy, managers must consider

internal factors such as workers' productivity and supply, and external factors such as international exchange rates, tariffs, and restrictions (Maldifassi & Caorsi, 2014).

One central challenge is managing the supply chain (Stock et al., 1999). The trends working for a more robust role for supply management fail to deliver the claim of many advocates (Storey & Emberson, 2006). A major limitation of this study is the lack current literature (Andersson et al., 2014). Most available sources that relate to the context of this research have a publication date prior to 2010. Stock et al. (1999) suggested that logistics integration could lead to strategic implications. The authors emphasize the importance of a new and more advanced approach to logistics management (Stock et al., 1999).

The nature of the industry has an impact on international presence and the process of new venture creation suffers from influences of international environments (Andersson et al., 2014). Barriers can hinder international expansion in different industries (Andersson et al., 2014). Companies moving abroad must compete by capitalizing on the strategy of expanding or moving abroad (Andersson et al., 2014). The industry life cycle has a significant impact on the internationalization process. The emerging or evolutionary stage precedes the growth stage where resources opportunities become available, and the competitive pressures diminish. Mature industries are more established; however, the growth rate is slow (Andersson et al., 2014). Firms within the same industry tend to display a certain level of internationalization synchronization (Andersson et al., 2014). Although the similarity of the industry type demonstrates a relationship between the nature of the industry and the impact on the international presence, there is still a need for

additional research to validate the relationship between export barriers and export intensity. Information available in literature demonstrates inconsistent results associated with barriers and firms' size, age, industry, experience, and adoption of information technology (Kahiya & Dean, 2015).

### **Cross-Cultural Leadership**

Global leadership is a comprehensive structure that includes the ability to understand important differences between people and to exercise influence to affect success (Maranga & Sampayo, 2015). Talent management is not keeping pace with the growing global workforce (Arora, 2014). Global leaders face interconnected issues that may be reliant on sources controlled by other countries with different cultures and different worldviews (Maranga & Sampayo, 2015). Leaders without international experience face additional challenges when working with diverse teams. Global leaders are required to be aware of differences in cultures, motivating beliefs, and behavior systems (Maranga & Sampayo, 2015). Global leaders must be able to understand personal and external challenges involved in working with people and apply strong conflict management skills to work together and accomplish organizational goals (Maranga & Sampayo, 2015).

Most organizations struggle with preparing their managers for future leadership positions by failing to expose them to different business and cultural environments (Arora, 2014).. It is important for leaders to obtain international experience and exposure to learning the emotional dimensions of working in different cultures (Maranga & Sampayo, 2015). Eisenbeiß and Brodbeck (2014) identified the ethical leadership

evidenced in different international executives and their perception of it. Ethical research is still limited in the multicultural arena and the importance of ethical leadership is the primary focus of most leadership theories (Eisenbeiß & Brodbeck, 2014). The authors chose a qualitative explorative approach to examine how others view ethical leaders. The findings show that societal and sectoral cultures perceive high integrity among leaders as the equivalent of ethical behavior (Eisenbeiß & Brodbeck, 2014).

### **Strategic Human Capital Management**

The origin of Human Capital Management derives from the increasing human capital shortages that were becoming one of the biggest human resources concerns for multinational organizations (Arora, 2014). A chaotic economic climate causes global managers to focus on short-term decisions and fail to use resources fully (Richey et al., 2011). Employees' knowledge, competencies, and skills are a primary source of competitive advantage; therefore, it is important for organizations to maximize human capital efforts and make it a strategic priority (Arora, 2014). Knowledge as a source of competitive advantage continues to gain strategic importance since the application of knowledge is necessary to improve performance (Ceptureanu, Ceptureanu & Tudorache, 2015). Strategic human resource management and supply chain are interconnected and it is beneficial to have human resources systems that support collaborative supply chain relationships to establish a tight strategic fit (Lengnick-Hall, Lengnick-Hall, & Rigsbee, 2013). To add value and increase performance, organizations have to manage the chain and the relationships (Menon, 2012). These relationships occur within the organization and externally. External operational resources are the aspects that global managers

cultivate with suppliers and internally imply the organization's set of cross-functional processes (Richey et al., 2011). A seamless internal integration of work is a requirement for external integration across the organization (Menon, 2012). Organizations are measuring present and future ability to compete globally by using human capital as a metric (Richey et al., 2011). HR leadership is responsible for assisting the organization in assessing long-term workforce needs that will lead to achieving the organizational planned future (Arora, 2014). Due to the dependency on providers of resources, firms must manage relationships with suppliers to reduce vulnerability (Menon, 2012). Managers who familiarize themselves with effective human capital management, find and cultivate human capital and allow the business to maintain one of its most valuable assets. Within supply chain performance, benefits such as flexibility, teamwork, training, and performance metrics to establish rewards relate to job satisfaction (Menon, 2012). Failure to take action and appropriately plan and execute human capital strategies can be risky. Managers face the risk of negative impacts of the failure to address human capital gaps and develop planned strategies (Arora, 2014).

Organizations must achieve a dynamic between scale and local responsiveness to maintain an effective strategic global level of human capital management (Arora, 2014). Human Resources should help companies reach or maintain its competitive advantage by creating value and providing HR practices that enable the creation of better products and services than competitors (Maruyama & Braga, 2014). Shifting customer and supplier demands that are becoming more service-oriented than product-oriented are forcing global managers to refine their spectrum of service competencies (Richey et al., 2011).



To respond to new market challenges and transformations, managers need to remain knowledgeable about strategic people management because there is a relationship between strategic human resources practices and knowledge management (Maruyama & Braga, 2014).

The cost of labor is a major factor. It is costly for employers to consider international economic factors such as exchange rates. When the transaction costs are denominated in the foreign countries' currency, households face the complexity and costs associated with exchange rates and its volatility (Li, 2014). It is also costly to identify the right labor and wage while facing the risk of not knowing if the employee has the intention or ability to provide a high-quality contract (Hong-Yu, 2014). In reality, it is costly for the employer to identify the right labor and relevant wage rate each time.

### **Disruptive Management and Supply Chain Risk Management**

The rise of events that are outside of managerial control and the change in the design of the supply chains make supply chain risk management a main managerial challenge (Brandon-Jones, Squire, Autry, & Petersen, 2014). Turbulent environments and unpredictable disruptions are becoming more common, making it more difficult for supply chains to respond to changes and causing them to become more vulnerable and risky (Zhao, Huo, Sun, & Zhao 2013). Disruption risks are rare but severe, and events such as bankruptcy, natural disasters, and terrorist attacks are some of the causes. Operational risks occur more frequently, are easier to manage and reduce, and are related to supply and demand coordination and uncertainty (Zhao et al., 2013). Disruption management strategies have associated costs and the challenge to companies is to choose

and implement economically viable methods for managing disruption risks while maintaining supply network efficiency (Kessler, McGinnis, Bennett, Bello, & Bovell, 2012). Many startup businesses fail every year, making the odds of having a profitable venture appear to be a high risk. Predicting entrepreneurial fate is important since bankruptcy is costly and disruptive to stakeholders (Rolleri et al., 2016). In addition, risk is when companies expand into global markets. As a corporate growth strategy, numerous companies desire the access to cheap labor and raw materials, larger product markets and other benefits of entering foreign markets (Soni, 2013). Along with the enticing benefits, managers must face the risks that the expansion exposes the network in the process, such as supply disruption, delays, demand and price fluctuations (Soni, 2013).

Kessler et al. (2012) identified a level-setting effort aimed at capturing buyer perspectives on the relationships between the focal firm and supplier firms. This first of three phases is the only one completed to date (Kessler et al., 2012). The second phase is a matched supplier survey that aims to facilitate a full understanding of the relationships between the focal manufacturing firm and its supply partners (Kessler et al., 2012). The third and final phase involves a longitudinal investigation into these relationships sometime in the future (Kessler et al., 2012). After a period of disturbance, organizations work with other organizations within their supply chains to create a resilient and robust environment (Brandon-Jones et al., 2014). Supply, process, and demand risks are some of the types of supply chain risks. Supply risk and demand risks are the most important types since the risk is associated with changes in customers' demands, the failure to

deliver or supplier inability to meet demand, or threat to customers' safety (Zhao et al., 2013).

Globalization increases business risks. Supply chains are particularly more vulnerable to external influences due to its numerous participants and various links. Although supply chain risk management (SCRM) is a topic that presents problems to supply chain managers, only 10 percent of organizations have detailed plans on how to deal with disruptions (Chang, Ellinger, & Blackhurst, 2015). Supply chain disruptions interrupt normal business operations by causing interruptions in the flow of goods and service. These disturbances may show in the form of shutdowns, production stoppages, and a variety of other disruptions (Chang et al., 2015). Supply chain managers' risk mitigation strategies should focus on accommodating multiple approaches to control different sources that can spark risks and apply one primary strategy to effectively alleviate all risks (Chang et al., 2015). Trust plays a critical role in reducing the perception of risk and increasing the customers' confidence (Khojastehpour & Johns, 2014).

### **Impact of Globalization on Developing Countries**

Globalization has an impact on the competitiveness of SMEs, but the extent of the effects depends on the capability of firms to learn and innovate (Awuah & Mohamed, 2011). Despite the numerous opportunities, globalization also presents numerous challenges and creates intense competition, decreases domestic job opportunities and revenues, creates economic volatility, spread of pandemics, security issues, and other challenges (Awuah & Mohamsaed, 2011). There is a disagreement about the relationship

between globalization and global inequality between countries; therefore, more research is required (Elmawazini, Sharif, Manga, & Drucker, 2013). Recent tendencies show that the average personal income grew for some countries and it decreased for others (Radoi & Olteanu, 2015). Less developed countries and firms are less capable of handling changes, and poorer countries lack the ability to work without a leveled playing field (Awuah & Mohamed, 2011). Reports show that the global number of poor people is going to increase and inequalities between industrialized and developing countries will become more evident (Radoi & Olteanu, 2015). On the other hand, some studies defend the hypothesis that international trade reduces poverty and income inequality (Elmawazini et al., 2013). Globalization is a progressive contribution to the improvement of global living conditions since it provides transparency and high-quality standards and environmental protection (Radoi & Olteanu, 2015). It gives poor and developing countries a chance to grow economically by exporting not only capital and workplaces but also new technologies and working standards (Radoi & Olteanu, 2015).

Another factor international managers must take into consideration when trading with developing countries is corporate social responsibility (CSR). Azmat and Ha (2013) focused on the increasing need for businesses in developing countries to consolidate CSR as a mean to obtain leverage in their supply chains. With the expansion of production networks on a global scale, MNEs force their subsidiaries and suppliers in developing nations to abide by CSR (Azmat & Ha, 2013). Nearly half of the world's middle-class customers live in developing countries; however, due to the lack of protection of customer rights, consumer skepticism remains high (Azmat & Ha, 2013). The analysis

contains ramifications for government policies to promote and encourage CSR initiatives; it encourages the community to be conscious of their rights, and the civil society to create an ultimate level of awareness (Azmat & Ha, 2013).

Lee (2011) analyzed the impact of the increasing demand for resources on the wealth of emerging economies. Such demand for growth is altering the landscape for resources. Investment decisions are likely to become increasingly more dependent on natural resources such as water and land (Lee, 2011). Regional production networks will likely expand due to the constant growth of manufacturing hubs worldwide (Lee, 2011). Companies that become aware of the environmental significance will obtain competitive advantage, as there is a boost of investment on green products (Lee, 2011). The linkage between global supply chains causes the market power of green consumers to control sustainable business practices and innovations strategies (Lee, 2011).

### **Information Technology and Use of Resources**

A wave of globalization that occurred in the 90s relies on various technologies that have created a knowledge-based economy (Radoi & Olteanu, 2015). Ahmed et al. (2014) asserted that as a form of gaining competitive advantage, firms are outsourcing IT to reduce their operation costs and reallocate those costs to core operations. Globalization has increased competition by demanding the use of innovative technologies and learning processes (Mahajan & Chaturvedi, 2013). Start-ups with high technological skills internationalize more quickly due to the dynamic nature of the industry (Andersson et al., 2014). Smaller enterprises tend to contribute impressively to innovation because of certain advantages they possess compared to large-size corporations. Some of the

strengths include reduced bureaucracy without layers of blocking agents found in a more highly structured organization and the fact that many advances in technology accumulate upon a myriad of detailed inventions involving individual components, materials, and fabrication techniques (Soriano & Dobon, 2009). One of the major shifts in the development of software to meet an organization's Information Technology (IT) needs has been the move to outsourcing (Zeile, 2014). Global management is a very demanding job since managers must constantly acquire knowledge and make decisions based on the findings that appear in the market (Stros et al., 2014). It is critical for managers to understand and acquire new knowledge related to new techniques and technologies in order to disseminate this knowledge to their subordinates (Mahajan & Chaturvedi, 2013).

Risk is an intrinsic part of business operations, and IT outsourcing can expose businesses to many risks that could affect a firm's operational growth (Ahmed et al., 2014). An intellectual risk that companies face when dealing with countries without a strong patent protection is the potential of local competitors stealing their proprietary technologies (Zeile, 2014). An effective manager embraces changes and attends to external realities. The skills needed to be an effective manager play an important role in the smooth operations of an organization (Mahajan & Chatrvedi, 2013).

Nassim (2014) discussed the firm's need to focus its capabilities when integrating information systems and providing the appropriate information systems due to organization objectives while obtaining the advantage of global competition. IT must keep up with changes and the evolutions, and maintain the concept of organization agility and the ability to react (Nassim, 2014). Achieving agility is necessary for the

organizations that want to create a time-based competency management, faster innovation and deal with the complexity of their business (Nassim, 2014). The modern organizations also believe that technology enhances the skills of employees and has a remarkable stake in improving the efficiency, and considers the application and performance methods, as a competitive strategy (Nassim, 2014).

### **Sustainability in the Supply Chain**

The concept of sustainability derives from the environmental movement led by activist groups in the 1960s that highlighted consumer and social issues and concerns with the impact of traditional business models on our global ecology (Millar et al., 2012). The development of globalized supply chains present challenges for sustainability (Hasle & Jensen, 2012). Managers are realizing that multiple entities across supply chains are accountable for their company's social and environmental responsibilities (Winter & Knemeyer, 2013). The more complex the chain, the more difficult it is to control the activities, which may leave regulatory gaps between different units in the chain (Hasle & Jensen, 2012). The increased globalization process that supply chains have undergone has created a need for literature for different approaches for organizations sourcing globally (Gualandris, Golini, & Kalchschmidt, 2014).

Hasle and Jensen (2012) have identified five significant challenges from global supply chains especially related to the social aspects of sustainability. Those challenges include (a) developing criteria for social sustainability, (b) the role of key performance indicators in managing supply chains, (c) the frequent changes, (d) the issues with establishing participation, and (e) the development of agency and regulatory mechanisms

(Hasle & Jensen, 2012). It is more difficult to monitor sustainability activities of suppliers located far away and to assess their commitments to sustainability (Gualandris, et al., 2014). Organizational change to support sustainable practices demands management leaders to have a vision, set priorities and take the steps required to increase sustainable practices (Millar et al., 2012). These leaders must be aware of their social, environmental, and financial responsibilities and explicitly drive sustainability into their daily practices and strategies on a large scale (Millar et al., 2012).

Possible avenues to solve the challenges from supply chains include acquiring a greater understanding of the challenges and studying examples of supply chains where interesting initiatives have taken place, and on this basis, identify and develop strategies that combine social and long-term business sustainability (Hasle & Jensen, 2012).

Managers can implement sustainability performance measures that require an assessment of a set of indicators (Gualandris, et al., 2014). Managers can evaluate multiple environmental and societal issues across the supply chain. Some of these indicators include environment, working conditions, and human rights (Gualandris, et al., 2014).

Business managers need to take the challenges and opportunities into consideration when referring to sustainability, but mostly they need to care. There is a need for global leaders who are not only aware of the problems in the world but who also aspire and are willing to make a positive contribution and devote themselves to act upon seeking solutions for global problems (Millar et al., 2012).



## **Globalization in Indiana**

In the state of Indiana, firms with fewer than 100 employees make up 97.2 percent of all employers (SBA, 2015). 9,016 establishments opened in 2013 and 79.3% survived through 2014 (SBA, 2015). Over 8,000 companies exported goods in 2012. Of these, 85% were small businesses that generated about 16% of the state's total export value (SBA, 2015). The majority of Indiana's exports is medicaments and transportation equipment (SBA, 2016).

The majority of the Indiana labor force is employed in manufacturing (highest proportions in the United States), and the largest portion accounts for by steel, automobile and aerospace industry (Samavati, Adilov, & Dilts, 2015). Goods exports support one in 5 Indiana manufacturing jobs and over 187,000 of all jobs in 2014 (Hall & Rasmussen, 2015). Transportation equipment manufacturing accounts for almost 15% of all U.S. exports (Slaper, 2012). Indiana's medium household income is below the national medium and the unemployment rate and labor force participation are higher than the national average (Samavati et al., 2015). As an attempt to attract businesses into the state, create jobs, and make the economy grow, economic development efforts spent thousands of Dollars to attract business from Illinois (Mitra, 2014). The main objective of this comprehensive economic development strategy was to secure a competitive position in the national and international economies (Mitra, 2014). The loss of jobs caused by plant and steel mills closings have a direct impact on unemployment rates due to the state's heavy presence of manufacturing firms (Samavat et al., 2015). Although Indiana also has a significant amount of coal mining, coal mining is an export industry and has

little impact on the local economy (Samavati et al., 2015). The structure of the local economy is the foundation for the economic structure of the 92 Indiana counties. Counties that rely heavily on manufacturing tend to experience higher unemployment rates even 10 years after the closures (Samavati et al., 2015). Table 1 shows the employment rate in the state of Indiana based on the number of employees.

Table 1

*Indiana Employment by Size of Firm*

Number of Employees	Employment
1-19	16%
20-99	16%
100-499	15%
500+	53%

Despite the generous contributions, Indiana is still exporting below its full potential. The iron and steel and ferroalloy industry's share of Indiana's employment is more than 20 times its share of U.S employment; however, it exports only 2.7 times its share of U.S. exports (Slaper, 2012). One cause of this failure to reaching full potential is a lack of diversification in export destination countries (Slaper, 2012). Global economic pressure has led to market-driven reforms as attempts by states to be competitive and retain current investments (Aman, 2013). Export promotion and direct expenditures to lower the costs of exporting by the state have little impact on firms' decision to export.

Programs that bolster exporting revenues have a bigger impact (Slaper, 2012). A market reform brought to the state of Indiana in many areas of state government including the welfare system due to its low rank in the nation, high criticism, and fraud. The state of Indiana relied on modernization reforms to replace traditional government approaches. The modernization attempt relied on business approaches and the efficiencies of private corporations to welfare eligibility decisions by outsourcing the program (Aman, 2013).

The purpose of this instrumental case study is to explore what strategies SME managers need to reduce the vulnerabilities in the supply chain continuum. The review of the professional and academic literature establishes a conceptual framework for my study, identifies studies supporting the topic and the relationship between the literature and the study, and the work is providing evidence-based recommendations based on findings that will add to the body of knowledge of the field. Based on the research of the literature, global supply management is a demanding and complex role that requires increased collaborative coordination with various departments, management of mission-critical activities, forecasting, and risk mitigation (Borges, 2015).

### **Transition**

Small and medium enterprises face issues and challenges towards the successful implementation of Supply Chain Management (SCM). In section 1 I provided background information, stated the problem statement, purpose statement, the nature of the study, and research question. Section 1 also contained the conceptual framework, operational definitions, assumptions, limitations, delimitations and the significance of the

study. A comprehensive review of the professional and academic literature concluded Section 1.

In Section 2, I will restate the business project purpose, provide the role of the researcher, discuss participants, identify the research method and research design, describe population and sampling, and the ethical research process. Data also becomes the focus of Section 2. I will discuss data collection instruments and technique, data organization techniques, data analysis, reliability, and validity. Section 2 ends with a transition and a summary containing key points.

In Section 3, I will present the findings of the study based on the overarching research question. I will also compare my findings with other peer-reviewed studies. In addition, I will provide a discussion of the application of my study to professional practice, the implication for social change, recommendations for action and further research, reflections and conclude the study.

## Section 2: The Project

In Section 2, I identify the main points of my study, including the purpose statement to explore what strategies SME managers need to reduce the vulnerabilities in the supply chain continuum. I state my role as the researcher and the participants I interviewed. Next, I describe the qualitative research method and case study as the design, followed by the population and sampling, and an explanation of how I conducted ethical research and its importance. Also, in the data portion, I describe the instruments, data collection techniques, data organization techniques, and data analysis technique.

### **Purpose Statement**

The purpose of this instrumental case study was to explore what strategies SME managers need to reduce the disruptive vulnerabilities in the supply chain continuum. The sample population included four international business managers located in Central Indiana. The participants answered open-ended questions to share their strategies. The potential social impact of this study is awareness of the environmental and financial rewards of sustainable practices. By addressing the potential negative effects of the managerial actions, managers are aware of the magnitude of the impact of their actions and are mindful of the local communities. Knowledge of social issues can enable managers to make informed decisions and help them contribute to a cleaner environment.

### **Role of the Researcher**

In qualitative study design, I am the primary instrument for data collection (Xu & Storr, 2012). My role as the researcher is to select the appropriate research methodology and the method of inquiry for qualitative data collection, to review the literature, and to

analyze the data. Using a qualitative model, the researcher is the main data collecting instrument who interacts with the participants and gains access to insightful data using interviews as a data collection method (Dikko, 2016). The one-on-one interviews provided me with knowledge about the managerial perspective of the entire global supply chain continuum to develop a theory. Researchers should develop expertise in relevant topic areas to ask informed questions and collect interview data useful for research purposes (Qu & Dumay, 2011). I gathered information from the interviews and secondary data materials.

I conformed to ethical principles of research on humans. The Belmont principles emphasize the protection of human subjects in research. To abide by the Belmont protocol, I followed ethical principles for human research. Belmont Report outlines three principles: justice, respect for persons, and beneficence (Brakewood & Poldrack, 2013).

I used semistructured interviews to explore the issue and develop the research process. During the interview process, to help guide the interview, I used questions guided by preidentified themes and explored the answers to extract comprehensive responses (Qu & Dumay, 2011). I framed the inquiry around seven open-ended questions. Appendix A contains the interview questions. I invited participants from as much of a wide variety of contexts as possible to enhance the validity in the study. I selected participants with the same type of position and with the international business focus; however, those participants are from different industries and they perform at different experience levels. Even when the interviewee and the interviewer seem to be on the same page, communicating can be difficult when people have different worldviews,

and words may have different cultural meanings (Qu & Dumay, 2011). I acknowledge my personal view of the world, and I used strategies to mitigate the use of my own personal lens during the data collection process. To reduce the risk of misinterpretation, when asking participant(s) about the personal journey to their current position, the global aspect of performance, and the impact on the supply chain, I remained impartial, did not express my thoughts, and avoided probing questions since the interviewer should stay neutral to what interviewees' responses (Qu & Dumay, 2011). I then analyzed the interviews by listening to the recordings and transcribing them.

After collecting and interpreting the data, I was able to evaluate my conceptual frameworks. As part of my role as a researcher, I should uncover my values and beliefs and their impact on the research process. It is a challenge for researchers to demonstrate that their personal interest, experience, and philosophies will not bias the study (Smith & Noble, 2015). My interest in the international aspect of business comes from my professional experience working for multinational corporations for almost 5 years and being directly involved in the entire process. Although I have never been an international business owner or manager, I have worked with international suppliers, customers, managed transportation, inventory, forecasting, product plans and schedules, finance, and accounting with customers worldwide. Seeing and experiencing the challenges that SME face when working on a global scale was one of the main factors that motivated me to pursue this research. I was intrigued to discover how other SMEs manage the global supply chain. I chose Central Indiana because that is the area where I currently reside, and it was more convenient to conduct individual face-to-face interviews locally.

## **Participants**

Who to interview, how many interviewees are required, what type of interview to conduct, and how to analyze the data are some of the decisions that researchers must consider when conducting interviews (Qu & Dumay, 2011). For this case study, I used small census sampling and selected participants located in Central Indiana for my interviews. The sample population was top managers or chief executive officers (CEOs) of multinational SMEs that have developed successful strategies to manage disruptions in the supply chain. Purposive sampling commonly appears in case study research (Suen, Huang, & Lee, 2014), and it is appropriate for qualitative studies where the researcher seeks the most knowledgeable informants about a particular topic (Elo et al., 2014). Researchers use this technique expecting that each participant will add value to the study by providing unique information (Suen et al., 2014). I used purposive sampling and selected the participants intentionally to represent the predefined conditions of my study. I determined the sample size using data saturation. The use of data saturation instead of statistical analysis is appropriate triangulation in qualitative studies (Hu et al., 2014). I chose the participants based on the following criteria: (a) size of the business—only SMEs are included, (b) position held in the company— supply chain managers or CEOs were desired, (c) location—participants were physically located in the state of Indiana, and (d) firms needed to conduct business on a global scale. Dealing only with local senior management during interviews helps avoid potential ethical issues, including the risk of exploitation and setting incentives appropriate for each location (Molyneux, Mulupi, Mbaabu, & Marsh, 2012). Since data gathering involves traveling to the participants, the



target population constitutes the geographically accessible population. The process of interviewing managers requires the interviewer to be sensitive and to possess interpersonal skills (Qu & Dumay, 2011). To maintain the quality of the interview and the process, I interviewed each participant individually and maintained a positive relationship with them. I obtained the interviewees' informed consent to participate in the interview process. It is important to inform participants of the interviewer's role as a researcher, participant basic rights, and how the interview data are used (Qu & Dumay, 2011). Once I received written approval from the potential interviewees, I made additional contact via e-mail and followed up with a phone call to maintain a relationship with the participant and to schedule the interview date, time, and location.

### **Research Method and Design**

I selected a qualitative research method over the other methods to help me explore and describe data. Qualitative research methods can lead to enhanced and better quality efforts (Bradt, Burns, & Creswell, 2013). Mixed methods research besides the qualitative elements, requires quantitative viewpoints and techniques (Halcomb & Hickman, 2015), and the integration of both designs was not required to meet the research objectives. The goal of a quantitative methodology is to generalize to the larger population and requires different sampling techniques from qualitative research (Wester et al., 2013).

### **Research Method**

Qualitative research method is appropriate for this study because it allows for more flexible than quantitative research due to the inclusion of historical narratives (Gorylev, Tregubova, & Kurbatov, 2015). Researchers can use qualitative research in

diverse research contexts and the ability to observe objects in their natural settings allow researchers to understand the phenomena (Lach, 2014). The phenomenon that I investigated was appropriate for this type of research since it allows for the subjective experience of the research participants. The data are the rich, deep, and thick descriptions of the individuals or groups in the specific context of the study, which are not amenable to numerical transformation or analysis (Lach, 2014).

Mixed-methods research combines the use of both quantitative and qualitative methods (Adil, Nunes, & Peng, 2014). Combining qualitative and quantitative methodologies to a study often requires a systematic approach to integrate qualitative and quantitative datasets (Bradt et al., 2013). Quantitative research requires the extraction of data using standard methods that put emphasis on statistical information (McCusker & Gunaydin, 2015). Numerical data collected in quantitative research are measured using mathematical methods (Lach, 2014). Such level of objectivity and the need for mathematical rigor is not a requirement for the purposes of this study. Qualitative research allows for a deeper level of discovery, which enables a better understanding of a significant problem (Bratucu & Bratucu, 2015). I applied methods to a small number of cases that may be considered inefficient but can be rewarding, such as narratives and additional questions based on responses received from interviews to receive a meaningful representation.

### **Research Design**

A case study is an investigation of a single or collective case and it is the common approach to studying real-life phenomena (Hyett et al., 2014). It is a design that allows

the opportunity for interpretation during the research process (Stake, 1995). Case study research offers a greater level of flexibility than the other qualitative approaches (Hyett et al., 2014). Case study is the most appropriate choice since it is expected to catch the complexity of an issue that deserves emphasis of episodes of nuance, the sequence of happenings in context, and the wholeness of the individual (Stake, 1995). Case studies capture the particularity of a case that the researchers explore in depth (Hyett et al., 2014).

Researchers study cases in detail to gain a better understanding of a particular case and improve the understanding of events (Hyett et al., 2014). The focus of this study was on managers who trade on a global scale and the environmental variables that affect their businesses. For this reason, qualitative research was the design of choice to enable the collection and interpretation of information including managers' knowledge, perceptions, viewpoints, and values. The objective of this study was to explore the reasons these managers are experiencing difficulties when venturing into international markets. It is important to use a design that focuses on subjectivity and allows the incorporation of personal thoughts into the findings. The use of a case study as a qualitative approach allows for the investigation of a phenomenon and analysis of a real situation when there are no clearly defined boundaries (Cacheche, Santos, Santos, & Akabane, 2015). To reach data saturation, I extracted information from my interviewees until no new themes arose. Interviews should continue until there is no evidence of developing new themes (Gladwell, Badlan, Cramp, & Palmer, 2015)

### **Population and Sampling**

The sample for this qualitative study was a small selected population of business owners or managers in Central Indiana. The uniqueness of each participant and the richness of the information provided added value to this study in the form of purposive sampling (Suen et al., 2014). Using the purposive approach, I selected three businesses that operated within my desired area, that are small to medium in size, and that trade internationally. With purposive sampling, researchers use their judgment to determine the sample (Brink & Nel, 2015). Purposive sampling is generally an appropriate choice in case study research (Suen et al., 2014), and it is appropriate for qualitative studies where the researcher seeks the most knowledgeable informants about a particular topic (Elo et al., 2014).

A sample size of four business managers from three different businesses was expected to be sufficient to reach data saturation. Data saturation occurs when there is sufficient information, and although data saturation is the desired outcome, other factors should be considered when selecting a sample size. Data saturation is directly related to the estimation of adequate sample sizes (Marshall, Cardon, Poddar, & Fontenot, 2013). The goal of the study should be the driver of the sample size determination (Malterud, Siersma, & Guassora, 2016). All studies reach data saturation using the same process (Zapellini & Feuerschütte, 2015). The data are likely to be saturated in small studies and using studies with multiple in-depth interviews more quickly than in more robust studies (Malterud et al., 2016). Data saturation is a tool that researchers use to ensure the adequacy and quality of the data collected (Marshall et al., 2013). A researcher reaches

data saturation when sampling more data does not lead to more information (Fusch & Ness, 2015). Guidelines for sample size vary amongst qualitative research methodologists, and case studies are the most difficult to classify (Marshall et al., 2013). To help ensure the data validation, I used methodological triangulation and structured the interview questions to ask the same questions to multiple participants (Fusch & Ness, 2015). Methodological triangulation is a combination of different data collection methodologies used to analyze the same phenomenon (Zapellini & Feuerschütte, 2015). It helps validate research due to the use of multiple methods of research and consequently helps to ensure a deeper understanding of the phenomenon under investigation (Zapellini & Feuerschütte, 2015). Participant observation and collection of artifacts and texts facilitate validation of data through triangulation.

The main criteria for selecting participants for this study included top managers or CEOs of multinational SMEs over the age of 18, the geographical location is limited to Central Indiana, and the enterprises must conduct business on a global scale. It is important to select an interviewee who is in a position to answer questions properly and who has sufficient authority and knowledge (Rowley, 2012). I asked in-depth questions to each interviewee due to the small number of participants to enrich the data. Interviews should take place in a private area at a location that suits the availability and convenience of the interviewee (Rowley, 2012). I allowed the participants to select a private area of their choice, preferably at their place of employment.

### **Ethical Research**

I conducted this study after receiving approval from the Institutional Review Board (IRB); the approval number is 09-28-16-0456030. University research ethics committees are responsible for the oversight and review of research proposals involving human participants (Gallagher, McDonald, & McCormack, 2014). I asked the participants for a contact e-mail address and then sent them an electronic invitation to participate that contained an explanation of the purpose of the study to their desired e-mail address. Additional information in the e-mail included the assurance that the participants and their employers would remain anonymous. I informed participants that their participation was voluntary, and I provided no type of compensation for their participation. I also informed them that though their knowledge is valuable to the research, I could not promise that the study would be published. It is unethical to promise that participation in a study will help others and then to fail to disseminate the study (Gennaro, 2014). In addition, participants had the right to withdraw from the study at any time using any written method of communication they desire. After acceptance, I contacted the participants to schedule the face-to-face interviews. Constant changes to qualitative research make the direction of the research to a certain extent unforeseeable and difficult to foresee the risk to the participant before the study begins (Gibson, Benton, & Brand, 2013).

In the consenting process, researchers must state if and how they will secure the confidentiality of the information supplied (Hiriscou, Stingelin-giles, Stadler, Schmeck, & Reiter-theil, 2014). I informed all participants that I would maintain all written data in a safe and secured place for 5 to protect rights of participants. After 5 years, I will destroy

all data collected. I reassured participants of their anonymity and emphasized that their names or the names of the organizations are confidential. Ethical issues arise with protecting anonymity while presenting the data accurately and sufficiently detailed (Gibson et al., 2013). American Psychological Association guidelines and the law emphasize the importance of maintaining confidentiality, except under extreme circumstances (Rosales, 2014). Guidelines and the law place emphasis on the importance of maintaining confidentiality, except under extreme circumstances (Rosales, 2014). To maintain confidentiality, researchers should not release the name or any other identifying characteristics of the individuals (Adinoff, Conley, Taylor, & Chezem, 2013). Researchers who include identifiable information must seek prior consent of the individual, and the consent forms are not always clearly understood; therefore, anonymization of the data is useful in protecting privacy (McGraw et al., 2015).

### **Data Collection Instrument**

Research instruments are the tools for data collection. In qualitative studies, the researcher is the data collection instrument (O'Sullivan, 2015); therefore, I was the collection instrument of this study. It is an accepted stance to have the researcher as the instrument in qualitative studies (Xu & Storr, 2012). Researchers use interviews as an instrument that enables the interviewee to provide narratives and descriptions of their life world and allows the interviewer to gather, interpret, and report those descriptions of the life-world of the interviewee according to his or her research interests (Anyan, 2013). It is necessary for researchers to monitor their personal biases to the research topic, remain

sensitive to their own profile, and gain participants' trust during all stages of the research (O'Sullivan, 2015).

Individual semistructured interviews offer the interviewer and the interviewee, a mean of communicating freely about the subject of the study (Anyan, 2013). Individual, face-to-face semistructured interviews ensure the personal dimension to research (O'Sullivan, 2015). The interviewer seeks to understand central themes in the life of the interviewee and the interviewer tries to remain open to new unforeseen phenomena (Qu & Dumay, 2011). Interview situations are characterized by power shifts between interviewers and interviewees and during the data collection, interviewers are expected to control this power shift (Anyan, 2013). Maintaining control of the interview helps the research reach goals and obtain reliable data. It is important to prevent the interview sessions from turning into conversations in which inquirer and participants share experiences (O'Sullivan, 2015). Qualitative inquiries are ambiguous, and factors such as the number of interviews per participant and researcher experience can influence data saturation (Marshall et al., 2013). I planned on inviting the participants to a second interview if I find additional information and need to obtain additional insights; however, that was not necessary. I applied member checking technique in which I returned and discussed the results with the subjects as discussed by Wiens, Kyngäs, and Pölkki (2016). Member checking methods establish trustworthiness (Goodman et al., 2010).

Theoretical bias occurs when researchers only notice aspects of the data set that they view through the theoretical lens of their choice (O'Sullivan, 2015). To avoid theoretical bias, I used a broad base of theoretical constructs and a deductive approach to



data analysis. This approach helps examine every day processes that managers experience and take for granted (O'Sullivan, 2015). I also used this approach to avoid theoretical bias. If there is a concern about possible bias, when reviewing the interview scripts, the conceptual lenses evolve, and researchers can determine if the questions were leading or if there was a fear to ask certain questions to refrain from possible bias (Huang, 2015). The interview questions may provide answers to the research problem. Interview questions are in Appendix A. The interview protocol is in Appendix B.

### **Data Collection Technique**

The ability to establish a research question based on a phenomenon is a characteristic of qualitative research (Klüber, 2014). I collected data via in-depth, semistructured, open-ended interviews, transcribed verbatim, and analyzed it via a case study. I also performed a review of company documents. The following research question guided the interview questions: What strategies do business managers need to reduce the vulnerabilities in the supply chain continuum? During interviews, it is important to manually record information about proxemics, kinesic, chronemic, and nonverbal communication into the reports to attain a deeper meaning (Denham & Onwuegbuzie, 2013). I used a notepad to annotate additional information. The interviews were face-to-face and I conducted them in a private setting. This method allowed me to extract the tacit knowledge accumulated by the interviewees. In-depth interviewing provides an understanding of a specific setting within the culture and the possible shared meanings and attitudes of individuals with similar social characteristics (Goodman et al., 2010). Open-ended questions are ideal in qualitative interviews when exploring experiences,

values, and knowledge (Ibrahim & Edgley, 2015). To allow the research to be meaningful and representative of the project, it is important to choose respondents that have sufficient knowledge and to capture the information (Onggo & Hill, 2014). Interviewing is the most commonly used natural technique to elicit knowledge from experts. Natural techniques are those that the experts are familiar with as part of their area of expertise (Akhavan & Dehghani, 2015).

To ensure accuracy, I recorded the data during the interview using a main recording device and an alternate method as a backup to record the verbal interaction. Qualitative research allows the researcher to collect and analyze data simultaneously (Goodman et al., 2010). I determined the time and location of the interview based on the participants' availability and convenience. I asked interviewees eight questions. Appendix A contains the interview questions. I transcribed the data recorded from all verbal interaction with the interviewees. I reviewed public documents and attempted to obtain non-confidential company documents to review that address my research question.

Qualitative researchers utilize member checks to obtain credibility (Reilly, 2013). I completed member checking to improve the reliability of my study. Member checking gives participants a chance to correct errors, challenge interpretations, and assess results (Reilly, 2013). Member checking helps researchers in achieving validity of qualitative analysis (Jones, Steeves, Ropka, & Hollen, 2013). During member checks, researchers may obtain additional clarifying information that may deepen the extent of the original understandings and analysis and confirm and disconfirms particular aspects of the data (Reilly, 2013).

### **Data Organization Technique**

After receiving approval from the Institutional Review Board, I conducted interviews. In-depth, semistructured interviews can serve as the primary form of data collection for its capacity to generate rich data (Gladwell, Badlan, Cramp, & Palmer, 2015; Goodman et al., 2010). I used recording devices during the face-to-face interviews for data tracking, a pen and a notepad to annotate comments, verbal and non-verbal cues. Conducting interviews requires the use of intensive listening, note-taking skills, and preparation (Qu & Dumay, 2011). For organization purposes, I stated the date, location, and the name of the interviewee during the beginning of the interview and ensure that I recorded the information.. I notified the participant that his or her name and the location were exclusively for my reference and would not be disclosed. The intent of confidentiality is to assure research populations that their participation is protected from disclosure (Adinoff et al., 2013). I also collected company documents for data evaluation and review.

An important step in developing a qualitative research approach is to create a manageable coding scheme before beginning the analysis (Xu & Storr, 2012). I entered the data into NVivo 11 software for the purposes of analyses and did not grant anyone access. All data will be stored for 5 years. Physical data will be stored in a secured file cabinet and then disposed of using a shredder. I will store digital data on a password-protected folder on my personal desktop or an external removable storage device, and place it in the secured file cabinet.

### **Data Analysis**

The data analysis process involves formalized steps of organizing, coding, searching, and modeling interpretation (Sinkovics, Penz, & Ghauri, 2008). To organize the data, I used qualitative research computer software NVivo to develop a common coding scheme and other textual analyses. The analysis of the complex and subjective qualitative data involves identifying coding, categorizing, classifying, and labeling patterns in the data to evaluate the significance (Xu & Storr, 2012). The coding process is an ongoing interpretation of textual data from multiple perspectives (Sinkovics et al., 2008). Researchers utilizing software as a tool must be vigilant of the fact that the tools are only a facilitator and not the ending result – these programs require the researcher to maintain the creativity, sociological views, and common sense during the interpretation process (Klüber, 2014). Analysis of qualitative data should be equivalent to the complexity of the research question (Xu & Storr, 2012). In the data collection and analysis process, researchers should consciously look for saturation of data to ensure that there is no new information and the researchers are only exposed to the same information (Goodman et al., 2010).

### **Reliability and Validity**

Researchers who want their findings to reflect the relevant truth, report the reliability and validity of their measures (Tamilselvi, 2013). Quality has to be demonstrated for case study-based research to be rigorous based on reliability and validity criteria (Pedrosa, Naslund, & Jasmand, 2012). Reliability and validity are terms related to the accuracy and precision of research (Gheondea-Eladi, 20104). The quality

assessment for case study-based research requires criteria that include four dimensions: (a) credibility, (b) dependability, (c) confirmability, and (d) transferability (Pedrosa et al., 2012).

### **Reliability**

Reliability is the degree of consistency and stability a research instrument produces (Tamilsevi, 2013). The most common criteria to assess the rigor of qualitative research include credibility, dependability, confirmability, and transferability (Houghton, Casey, Shaw, & Murphy, 2013). The intent of credibility is to establish a match between the constructed realities of the respondents and those realities represented by the researcher (Sinkovics et al., 2008). To ensure dependability, it is important to follow protocols, such as providing the interviewee a summary of the interview, digitizing the data, tape recording it, and transcribing in its original language (Sinkovics et al., 2008). I used more than one type of method of data collection and analysis to study the phenomenon to obtain methodological triangulation. Triangulation is an approach used to confirm the value of the findings and establish importance (Manganelli et al., 2014). I used data from earlier studies and company data as supplementary sources. Methodological triangulation is common in qualitative studies, and the use of more than one data source can lead to a better understanding of the phenomenon (Eriksson, 2013). Researchers conducting case studies need to consider the complexity of the uncontrolled environment where the study is taking place. Complementing data sources are useful to triangulate the analysis (Nilsson, Castro, Rivas, & Arts, 2015). In qualitative research, reliability can be internal and external. Internal reliability refers to the link between

theory and observation, whereas external is the replicability of the study (Gheondea-Eladi, 20104). Threats to reliability include problems concerning the homogeneity of the testing sample, researcher's interpretations (Lakshmi & Mohideen, 2013).

Since there will be no additional observers to compare the data, I solely relied on my observations and recordings. Communication tends to be more difficult when people have different worldviews (Qu & Dumay, 2011). To mitigate this issue, I ensured I practiced my listening and note-taking skills, and put in an effort to understand the meaning of what the interviewees said. Conducting qualitative research interviews requires intensive listening, careful planning, and preparation to attain a rich set of data (Qu & Dumay, 2011). When the researcher is an instrument, he or she can influence the type of data generated and quality observation and field notes will enhance the depth of the data (Xu & Storr, 2012). Qualitative researchers use member checks to obtain credibility (Reilly, 2013). I completed member checking to improve the reliability of my study. I used this technique because member checking gives participants a chance to correct errors, challenge my interpretations, and assess results (Reilly, 2013). Member checking helps researchers in achieving validity of qualitative analysis (Jones, Steeves, Ropka, & Hollen, 2013). During member checks, researchers may obtain additional clarifying information that may deepen the extent of the original understandings and analysis and confirm and disconfirms particular aspects of the data (Reilly, 2013).

Data saturation is crucial for quality research to enhance the reliability of the study results with thick and rich data (Fusch & Ness, 2015). Marshall et al. (2013) recommended the specification of minimum samples based on expected reasonable

coverage of the phenomenon based on the purpose of the study. Despite the practical reasons for estimating sample size, most qualitative research methodologists do not provide a guideline for estimating sample size for purposively sampled interviews (Marshall et al., 2013). The use of software programs, such as NVivo, supports the analytical process of coding and analyzing textual data making it easily accessible to collaborators and strengthening credibility, replicability, and substance of research results (Sinkovics et al., 2008).

### **Validity**

Validity refers to the appropriateness of an instrument to measure a particular phenomenon (Tamilselvi, 2013). The validity of the research outcome is important for qualitative research studies (Wang & Lien, 2013). The most common criteria used to assess the rigor of qualitative case study research are credibility, dependability, confirmability and transferability (Houghton et al., 2013). These four measures indicate validity in qualitative studies (Kim & Li, 2013). To guarantee construct validity, it is significant for the researcher to name multiple sources of evidence, chain of evidence, and feedback to key informants (Sinkovics et al., 2008). My comments, observations, and my review of any other visual materials such as documents from the company will serve as sources of evidence. Methodological triangulation supports the confirmation and completeness of findings, more comprehensive data, and increases data validity (Heale & Forbes, 2013). Triangulation is the combination of multiple methods and data sources in qualitative research to determine whether they are complimentary and serve as a source of validity since it generates additional knowledge (Hoflund, 2013). It is a strategy to test

validity using information from different sources (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). There are four types of triangulation: (a) method, (b) investigator, (c) theory, and (d) data source triangulation (Carter et al., 2014). I used method triangulation and collect data using in-depth interviews with individuals, observations, and field notes. Method triangulation involves using multiple methods of data collection (Carter et al., 2014).

Credibility evaluates whether the original data source matches the author's interpretations. Dependability is attributable to a logical, traceable and clearly documented research process (Munn, Porritt, Lockwood, Aromataris, & Person, 2014). Confirmability refers to the integrity of the findings (Pedrosa et al., 2012). Confirmability is the degree others will be able to corroborate the studies. The use of documentation helps ensure dependability and confirmability (Nourian, Farahnaz, Kian, Rassouli, & Biglarian, 2016). Transferability refers to the ability to transfer the findings to other contexts in future research (Pedrosa et al., 2012). Researchers should provide a detailed description of the process of research to facilitate future assessment to ensure transferability (Nourian et al., 2016). I strived to provide detailed descriptions to assist transferability to future research.

Member checking contributes to the interpretive validity. It helps establish veracity on qualitative research by sharing researchers' interpretations of the interview data with interviewees for validation (Reilly, 2013). I used member checks as an opportunity to allow participants to reflect their thoughts on my interpretations, confirm my assumptions, and provide additional input. Interpretive validity is the act of



reconfirming with interviewees the real meaning of their behaviors by observing and asking interviewees to explain non-verbal actions (Wang & Lien, 2013). To meet the criteria of transferability, the researcher should annotate each interview transcript with descriptions of interviewees' nonverbal responses (Lin, Han, & Pan, 2015); however, readers decide about transferability.

### **Transition and Summary**

In Section 2, I identified the main points of my study, which included the purpose statement to explore what strategies SME managers need to reduce the vulnerabilities in the supply chain continuum. I also stated my role as the researcher and the participants I will interview. Next, I described the qualitative research method and case study as the design, followed by the population and sampling, and an explanation of how I conducted ethical research and its importance. In Section 2, the data portion described the instruments, data collection techniques, data organization techniques, and data analysis technique. The protocol I followed to assure reliability and validity concluded section 2.

In Section 3, I present the findings, analyze the data, and interpret the results of the interviews and documents review. I show how the conceptual framework related to the findings, and I discuss the relationship between my findings and the existing body literature. I mention the implications of my study to social change and the recommendations for action and future studies. My reflections precede the conclusion of the study.

### Section 3: Application to Professional Practice and Implications for Change

Section 3 begins with an introduction of the study, which includes its purpose, the research question, and a summary of the findings. In addition, Section 3 contains the presentation of the findings, application to professional practice, implication for social change, recommendations for action, recommendations for further research, reflections, and a conclusion.

#### **Introduction**

The purpose of this instrumental case study was to explore what strategies SME managers need to reduce the disruptive vulnerabilities in the supply chain continuum. Complexities in the supply chain make it difficult for organizations to coordinate their supply chains and adapt to changing markets (Hearnshaw & Wilson, 2013). The overarching question of this study was as follows: What strategies do business managers need to reduce the vulnerabilities in the supply chain continuum?

I conducted semistructured, face-to-face interviews with senior managers of SMEs located in Indiana. All four managers had global supply chain experience of at least 5 years. I selected the participants based on their managerial status, international business experience, and location of the businesses. Supply chain managers often come from a logistics, transportation, procurement, and sales field (de Abreu & Alcantra, 2015). The managers were representatives from different key business processes of the supply chain, including logistics, production, purchasing, and marketing.

Managers must overcome the numerous challenges of the global trading environment to compete effectively (Ibrahim, Zailani, & Tan, 2015). All managers I

interviewed agreed that the global environment adds pressure to the business due to new conflicts not as commonly found on a regional scale. I asked each participant eight main questions that allowed him to share experiences, issues, and tactics to remain competitive.

I was able to analyze the data after transcription by using QSR International's Nvivo11. This software allows the researcher to organize and analyze varied data types from different sources of information, including interviews and to code data around themes (Castleberry, 2014). Using the software and my field notes, I was able to identify three main themes. The main themes include (a) communication, (b) risk mitigation, and (c) human capital management. After careful analysis of the main themes, subthemes emerged.

### **Presentation of the Findings**

The following research question overarches the study: What strategies do business managers need to reduce the vulnerabilities in the supply chain continuum? The phenomenon that I intended to research was the extent managerial knowledge and experience impacts firms venturing into international trade practices and the global supply chain. I achieved data saturation after four interviews when the answers from the interviews became repetitive. Additional findings from member checking and the analysis of company records enhanced the data validity. The interview participants were identified by the pseudonyms Participant 1 (P1), Participant 2 (P2), Participant 3 (P3), and Participant 4 (P4). The participants' responses to the interview questions (see Appendix A) and member checking led to three main themes. Review of company

documents contributed to the findings, and they were consistent with the literature.

Communication was the main theme and proved to be the number one challenge encountered by global managers.

The subthemes that emerged from communication were (a) technology, integration, and automation (b) interpretation and clarification, and (c) a proactive approach. The next major theme was risk mitigation. This theme led to two subthemes: (a) understanding internal issues/weaknesses and facing external challenges/threats and (b) building relationships and gaining trust. The final major theme was human capital management, and three subthemes were: (a) workforce acquisition, (b) providing training, and (c) instilling organizational values and commitment to sustainability. Table 2 illustrates all the nodes related to the themes I identified.

Table 2

*Nodes Related to Themes*

Themes	Sources	Frequency
Automation	4	12
Communication	4	27
Culture	4	23
Education	3	4
External challenges	4	19
Internal issues	4	18
International business experience	4	5
Risk mitigation	4	22
Strategies	4	57
Sustainability	4	15
Training	4	20

The conceptual framework for this study was the chaos theory. The chaos theory was conceptualized in 1960 by Lorenz, and it indicates that small deviations in initial data can cause chaos in the entire system (Stapleton et al., 2006). Due to the interlinkages in the supply chain, complications in certain variables can cause deviations and negatively impact the chain. Managers have to deal with unexpected market behaviors, and the supply chain structure becomes a balancing act where they must understand market demands, transportation and logistics, customer service, and pricing constraints (Stapleton et al., 2006).

Managerial experience in international business was a requirement for participation in this study. Although all participants have at least 5 years of professional experience in the field, none of the participants had any academic training in international business. Table 3 shows the amount of international relations experience from each participant.

Table 3

*Amount of International Business Experience*

References	Number	Percentage of total
5 – 10 years	4	100%
11 – 15 years	3	75%
16 – 20 years	1	25%
21+ years	1	25%

Several issues that challenge organizations' abilities to profitably deliver quality products promptly impact Supply chain management performance. Difficulties such as a breakdown of trust, different goals and priorities, and lack of compatible communication structure affect the development of collaborative culture (Singhry, 2015). The factors found in literature corroborate with the themes I identified during my research.

### **Emergent Theme One: Communication**

The first core theme I identified was communication. Communication is an issue all four managers encounter both internally and externally. Interview Question 4 explored the communication channel within and outside the organization. Participants 1 and 4 described approaches used to improve the communication struggles. Participants 2 and 3 stated that communication is their biggest challenge. In a supply chain perspective, the information that an organization exchanges with its trading partners is among the most important of its assets (Sindhudja, 2014).

From the second data source, I confirmed that communication is an issue that affects the entire supply chain, and it is aggravated on a global scale. P3 emphasized the communication issues caused by different time zones. The subject derived from interviews, member checking, and literature. Time difference between countries due to different time zones seems to be one of the main causes of conflict. Many customers and suppliers occupy distant locations, and immediate communication is difficult with people located in those countries. P1 mentioned that it is particularly more challenging to do business with countries such as China where they are approximately 12 or 13 hours ahead, and it normally takes 24 hours to receive a response. P1 stated that sometimes his

employees stay at work very late, come in very early in the morning, or sometimes work during the weekends to expedite the process of getting the information from and to their customers. P3 expressed the same concern with the time differences when attempting to find a feasible time to host virtual meetings with participants from Asia, Europe, and the Americas. Finding a window where everyone is within their work hours is nearly impossible.

Anderson (2014) posited that time differences between countries affect trade because it reduces the amount of time that simultaneous communication can occur during traditional work hours. P2 and P3 struggle with issues involving miscommunication, and they try to ensure that the information conveyed during meetings are annotated, summarized, and distributed with minimal interpersonal misunderstandings. The increasing trend of globalization and acculturation requires text summarization techniques to work equally well for multiple languages (Litvak & Last, 2013). P2 and P3 inferred that the true meanings of certain words tend to get lost in translation.

**Technology, integration, and automation.** Effective means of communication expedite processes and enhance communication channels. Supply chain performance in dynamic markets can have a strategic capability by using electronic business technology to meet competitive priorities (Storer, Hyland, Ferrer, Santa, & Griffiths, 2014). The fast means of communications have enabled managers to save time and money conducting business. Automated tools and systems are also creating more expedited communication transactions. Most managers use Systems Applications and Products (SAP) to manage multiple functions within the organization. All four participants used electronic business

applications and they are all in a current state of continuous development and implementation of improved platforms.

P1 mentioned that “communication is the key” and emphasized how technology has allowed communication to occur more effectively:

E-mail is the primary way of communicating with our customers, with our overseas agents, with our steamship lines friends, with our trucker pals, so that’s the main way that we communicate... the speed of communicating with email has speeded up the process so I can communicate with a customer or an office overseas on a Saturday afternoon, Sunday morning, holidays, I can do it from my house, I can do it from my phone, so it’s really pretty dynamic how we’re able to communicate back and forth with folks.

P2 has allowed technology to automate inventory levels for various parts of the world. Once the inventory drops below a certain level in a country, an order is automatically generated in the United States by the system.

P3 stated that employees use the same enterprise resource planning platform throughout the subsidiaries around the world, and the ability to work under the same system allows them to abide by the same principles. Despite the fact that each company has a local database, they all speak the same language and follow strict processes and tools. Innovation requires a collaborative partnership when using industry-led technologies to create flexibility and efficiencies (Storer et al., 2014). Information technology is prevalent in supply chains; however, the human element still exists since human decision makers still make routine decisions (Macdonald, Frommer, &



Karaesmen, 2013). P4 uses a hybrid approach between the tools that are built around the domestic market and trying to modify them for the global market: “When you start automating for the whole world you find of exceptions in every country and special needs in every country and it's hard to build all that and not to customize it.” Supply chains seeking to improve outcomes from innovation need to possess the ability to adopt and implement the innovation across key supply chain operatives and customers. When using industry-led innovation, supply chains need to be prepared to adapt and change if they are seeking better performance and greater levels of supply chain and industry competitive advantage (Storer et al., 2014).

Technology and innovation have enabled P2 to strategically analyze the local audience and deliver digital material where the market has gone digital. The challenges of delivering hard copies of books to certain customers have caused them to explore what the technology environment looks like in certain areas:

What kind of phones do people have? So, if people have computers, what kind of internet access do they have? And that will then guide decisions about how we deliver the product. Can we deliver the product via mobile? Or do we need to deliver a CD that they load into their computer? Whatever it is, we have to adapt to the local market to be able to deliver a customized product.

That practice reduces the very high costs of shipping and delivering heavy books and increases profitability. I was able to verify the fiscal success of the strategy by reviewing the company's Fiscal Quarter Year 2017 Report. According to the data, digital solutions business posts double-digit revenue growth rates, whereas traditional publishing is under

considerable market pressure. Additional information in the report included the fact that half of their revenue comes from outside of the United States, and foreign exchange was adverse to first quarter revenues since the company is exposed to currency fluctuations.

**Interpretation and clarification.** The challenges of communicating with people from multiple physical locations go beyond finding the adequate time to schedule meetings. According to P3, after he gets past the initial challenges of dealing with multiple time zones, the next issue is to ensure everyone comprehends the content of the meetings. He spends the majority of the time following up and ensuring that the information that everyone has agreed upon is accurate and there are no misunderstandings. The excessive reassuring concerns him not only because it is time-consuming but because he is afraid that people feel micromanaged. His solution is to find a balance where the managers avoid assumptions and verify that the information has been comprehended by all parties involved and be cognizant of cultural differences.

P2's company hosts a monthly global senior leadership meeting not only to provide updates on the business but also to raise specific issues and translate what they mean to organizations across the globe. He used high performance as an example and explained how each organization does things differently around the world. High performance might have different meanings. He explained, "If we want to be able to communicate through the organization globally one vision of high performance looks like, well, let's explore what high performance is like in each culture and within each business." During member checking, P1 stated that the combination of his employees' experience and the clarification of expectations with the customers early on in the process

helps alleviate this miscommunication issues. Global supply chain managers are in a position to deal with a variety of challenges and issues in the continuum; therefore, they must possess technical and interpersonal skills, especially interpersonal communication (Prajogo & Sohal, 2015).

**Proactive approach.** One of the main strategies the four managers use to facilitate communication within and outside the organizations is proactivity. Their anticipatory behavior allows them to communicate more effectively. The complexity of the internal and external environments causes a firm's performance to rest on the interrelation between firm features, stakeholder pressure, and external factors (Primc & Cater, 2015). Proactivity is a trait that develops over time, and adaptivity is a foundation that enables individuals to engage in anticipatory behavior during organizational change and initiate activities such as creative problem solving and crises management (Al-faouri, Al-nsour, & Al-kasasbeh, 2014; Strauss, Griffin, & Mason, 2015). Vitality, training, teamwork, and participation in decision making are variables related to employee productivity (Tummers, Kruyen, Vijverberg, & Voesenek, 2015). The authors described proactive behavior as taking action and anticipating future events and asserted that employee productivity and vitality are important assets for organizational change (Tummers et al., 2015).

P1 asserted that the extensive amount of experience enables his company to have a competitive advantage during crises situations. According to him, the more experience that people have, the more they will be capable of handling different shipments and more difficult situations. During member check, P1 also emphasized the numerous factors that

can cause problems or delays and the correlation between the amount of experience and the ability to react, respond, and proactively take care of customers because they do not have to spend time searching for an answer they already know. P2's strategy was to completely change the way they do business. They are becoming much more a custom-solution organization rather than one that essentially creates the product and tells people that this is what they want or need. P3 involves all regions in the decision-making process. He states that decisions in the supply chain cannot be done in silo because a single regional company decision can have a negative impact on all the tiers.

Although the communication channel is slowed down significantly when all parties are involved, he deals with the complexity by managing the aspects that affect the business locally and builds that up on the remaining tiers and networks. In addition, he emphasized the importance of a proper stakeholder analysis when dealing with changes. Communication management includes stakeholder identification and communication. Communication that allows for stakeholder involvement and allow them to participate in the decision-making process can effectively build relationships and maintain credibility (Moshodi, Coetzee, & Fourie, 2016). P3 stated that it is important to get the right people involved when attempting to make changes. That requires countless meetings within the networks to ensure that they are properly communicating decisions and the stakeholders on board are not waiting.

Managing global supply chain businesses involves collaboration with stakeholders on a worldwide basis (Fisher, McPhail, You, & Ash, 2014). Due to the high level of customization required for P4's customers, he encounters challenges with

different specifications worldwide. His approach to meet customers demand and communicate effectively is to adhere to the corporate's core values and remain open and transparent with the customers and explain difficult situation and work towards a resolution that is good for all sides without bending the truth.

Table 4

*Nodes Related to Theme 1: Communication*

Nodes	Sources	Percentage of total
Automation	4	100%
Proactivity	3	75%

**Emergent Theme Two: Risk Mitigation**

The next major theme I identified was risk mitigation. Risk and vulnerability are a common challenge for the global supply chain network due to the constant changing nature of the global environment that causes the risk propensity to increase (Yu, Xiong, & Cao, 2015). Risks make the supply chain more vulnerable and susceptible to disruptions (Aigbogun, Ghazali, & Razali, 2014). The focus of supply chain risk management is to create approaches to manage disruptions (Ghadge, Dani, Chester, & Kalawsky, 2013). To maintain a healthy supply chain, managers need to manage risks (Aigbogun et al., 2014).

The intent of risk management is to meet organizational objectives, which may include the minimization of losses and the costs associated with losses, reduction of volatility, and implementation of actions to treat exposures (Akotey & Abor, 2013).

Communication also plays a role in risk mitigation. Participatory communication allows stakeholders to help develop possible risk reduction interventions (Moshodi et al., 2016). There are numerous processes from raw material until a product is delivered to a customer and these processes expose potential points where supply chains are vulnerable to disruptions (Ghadge et al., 2013). All four managers understand the risks associated with global business and they have their own strategies to mitigate such risks. The respondents suggest that risk mitigation involves a comprehensive and proactive approach. During member check, P1 asserted that there are many unforeseen circumstances that he cannot prevent but he can minimize the risks with the proper strategies. The basic principle of the chaos theory is that there is random order and disorder in human society and phenomena are often in a temporary chaotic state (Jiao, Chen, Sun, & Wang, 2013). There will always be numerous risks, uncertainty, complexities, and chaos in the global supply chain continuum; however, with the proper risk mitigation strategies, managers can alleviate the issues.

**Understanding of internal and external challenges.** P1 reduces the risks associated with financial transactions by maintaining an insurance policy and working with other members of a cargo alliance that provide financial protection. P1's strategy corroborates with Fiksel, Polyviou, Croxton, and Pettit's (2015) observation that insurance and active mitigation of supply chain risks are the main systematic approaches adopted to manage enterprises risks. Risks are not limited to financial losses; they also include reduced quality in production, damages, decreased customer reputation, and delays in delivery (Soni & Kodali, 2013).

P1 mentioned that he has to maneuver around external risks that affect his business. He gave his recent experience dealing with a steamship line that went bankrupt as an example. Before the bankruptcy took place, he felt that the steamship line's financials did not look good and pulled business away from them to avoid the risk. Their exposure was greatly reduced, but it still caused problems that had to be managed. He also mentioned other external common risks that affect operations and the movement of cargo, such as weather. P1 said, "ports will shut down, there are ice storms, truckers can't make deliveries." Healthy trading partner relationships, the ability to deal with unexpected delays and disasters, and the maintenance of communication channels to manage crisis can help minimize global supply chain disruptions (Sindhudja, 2014).

P2 ensures their contracts are in good states by maintaining a really strong legal team home that is involved whenever they are setting up with new suppliers or creating new partnerships. P2 stated that there is such need for a legal team because of a lack of alignment of what things mean in different parts of the world, and mentioned delivery dates as an example. P3 mitigates risk by being extremely diligent in the analyses he makes up front. He puts plants in places where they can absorb the risks and they try to put contingency plans in place so that they have a backup supply chain stateside. Soni and Kodali (2013) recommend a tool for managerial strategic planning to find the least risky location for manufacturing facility based on risk factors that can be found by different ways. The results give an idea to the manager about the individual risk associated with respective categories like labor, market, transport, finance, living condition and natural conditions (Soni & Kodali, 2013).

**Building relationships and gaining trust.** P1 travel and visits their main agents and customers worldwide as an effort to maintain a good relationship with them. He stated that the cargo transportation industry is very relational, especially with his Asian clients, and that has caused him to build long term relationships and even friendships over the decades. P3 also believes in the importance of having a good business partner relationship within the supply chain. He mentioned that in his organization, they keep a more expensive, low volume, backup supply chain stateside just to maintain the relationship that are useful in the event of crisis situations. His company also makes some low volume purchases from a high-cost country, and they keep to a minimum just in case there is a fall out within his global supply chain, he will have the opportunity to purchase from a local supplier.

P4 also acknowledges the importance of building relationships. He ensures that when overseas customers or suppliers are in the United States, that they visit them and get to know them personally. He has experienced situations where they had very tough working relationships with certain business partners and just taking the time to make calls and teleconferences and just getting to know each other on a personal level made a huge difference. Close, collaborative, long-term relationships increase partners' willingness to share risks and rewards (Prajogo & Sohal, 2015). P3's strategy to overcoming challenges and maintaining a good relationship is to be open-minded and try to understand the culture of the different regions.

The result of building a long-term business relationship with partners within the global supply chain continuum is a higher level of trust. The three interrelated dimensions



of social capital are structural, relational, and cognitive (Yim & Leem, 2013). Structural dimensions are properties of network. Relational dimension is the ongoing personal relationship that is strengthened through trust and norms. Cognitive dimension includes shared value, interpretations, shared language, shared codes, and systems of meaning among parties (Yim & Leem, 2013). Trust and intra-organizational constructs have been the subject of very few studies, and many writers have stressed the need to develop trust and collaboration within supply chains have (Tejpal, Garg, & Sachdeva, 2013). Past researches on supply chain relationship show that relation variables such as trust and commitment are very important to the establishment and maintenance of a long-term relationship (Wang, Liu, Cheng, & Huang, 2016). It is important for enterprises trying to collaborate in a business partnership to build trust (Fischer, 2013). Effective communication affects trust levels because it helps the assessment of actions, provides relevant information, and increases transparency (Fischer, 2013). The collaboration between supply chain planning and trust-based relationship create a more solid partnership that allows companies to cooperate and achieve better operational performance outcomes (Ely, Teixeira, Vieira, & Finger, 2014).

Table 5

*Nodes Related to Theme 2: Risk Mitigation*

Nodes	Sources	Percentage of total
External challenges	4	100%
Internal issues	4	100%
Strategies for risk mitigation	4	100%

### **Emergent Theme Three: Human Capital Management**

Scholars in human resources have suggested the importance of supply chain management and much is available in the perspective of supply chain (Bulut & Atakisi, 2015). The supply chain management industry is growing at a rapid rate and the role of SCM strategic planning is intensifying the need for talented supply chain professionals. The industry is experiencing a serious talent shortage that is attributable to many firms placing more emphasis on cost reduction and improving relationships with customers and suppliers than on developing people to achieve SCM objectives (Ellinger & Ellinger, 2014).

In my problem statement, I mentioned an issue that exacerbates the SCM talent shortfall. In addition to the limitations of the specific talent skills, 50% of senior managers will retire within the next 10 years (Hohenstein et al., 2014). High attrition rates have been a major Human Resource concern for many years, for many organizations; however, it is an alarming situation for industries such as SCM. Research suggests that human resource development interventions in SCM contexts are associated with beneficial outcomes, such as the potential benefits of relationship-based HR strategies in SCM contexts (Ellinger & Ellinger, 2014).

Employees are key drivers and they are strategically important to a firm's success. The firm's performance relies on the employees' ability to perform and fulfill supply-chain related tasks (Bulut & Atakisi, 2015). The authors asserted that the internal areas to gain control to achieve supply chain human performance include: (a) selection, (b)

compensation, (c) training, and (d) evaluation. My interview questions covered selection, training, and evaluation (Bulut & Atakisi, 2015). Supply chain managers face challenges juggling the flow of product, service, and information through the entire chain and developing skills to manage relationships and selecting the right people for supply chain responsibilities to meet the organization's objectives (Rahman & Qing, 2014).

Recommended strategies for managers include hiring top supply chain talent, rewarding behavior that benefits the entire organization, and investing personal time in learning about industry innovations and new technologies (Ellinger & Ellinger, 2014).

Member checking allowed me to confirm that managers value knowledgeable employees and make efforts in maintaining their skillsets. Literature recognizes that human capital is a strategic asset and the management of strategies such as retention, succession planning, knowledge transfers, and higher performance teams as a requirement to achieving the desired organizational goals (Arora, 2014; Chung, Park, Lee, & Kim, 2015; Đekic, 2015).

**Workforce acquisition.** Since the organizational strategies rely mainly on the employees, people and their ability to perform supply-chain related activities to meet the organizational goals are vital to a firm's success (Bulut & Atakisi, 2015). Social media is becoming a main mean of attracting talent. The prediction is that Generation Y (persons born in the 1980s), will make up about 75% of the world's workforce by 2025 and this population is expected that members of generations Y and Z will use social media as means of addressing the employee markets (Fisher et al., 2014).

Participant 1 stated that despite the advanced technological efforts, he does not use social media to its full potential yet. P1 described the hiring process as unique since the nature of their work is different from other freight forwarders. His organization has hired individuals formerly employed with other forwarders that did not work out. P1 explained that their process is so different that previous freight experience is almost irrelevant. Therefore, he looks for a specific set of skills on new hires: math skills, attention to detail, and a demanding customer service background, proactivity, and a caring personality. Since the interview questions did not contain any keywords related to the topic, the remaining participants did not discuss the employee acquisition process.

**Training.** Increasing human performance in supply chain activities is done by developing knowledge that will reinforce the uniqueness of a firm's human capital (Bulut & Atakisi, 2015). Since learning and thinking are not linear processes, the application of chaos theory to today's complex systems provides a significant opportunity for change and transformation (Akmansoy & Kartal, 2014). I asked the participants to provide information about the type of international training relations that is available. P1 provides the most extensive and lengthy training to his employees. The new hire training process lasts at least 18 months. Employees are engaged while that year and a half process is going through, but they have backups within the department that helps them learn as it goes through.

P1 asserts that the key to successfully train new personnel is to hire really good people. During member check, I asked if the newly hired employees can contribute to the company during this lengthy training process. P1 replied that although takes a while for

them to become fully trained in handling customers shipments in all aspects, they are still engaged during the training period, and they are assigned less difficult tasks. P2 focuses on cultural-specific education; particularly around India because they offshored so many things they used to do themselves to India. Cultural training is also P3 and P4's priority. There is a variety of training available in his organization depending on the need and the desire of the employee. Options available vary from webinars, online self-paced training, to coaching and mentoring. P4 also mentioned language training and mentorship. Learning foreign languages is a part of cultural assimilation. Asasongtham and Wichadee (2014) asserted that doing international business transactions is a difficult task and to be able to export and maintain competitiveness SMEs need to be ready in many aspects, particularly foreign languages, to reach full potential.

Although training is available in most organizations, there are factors that make the flow of information ineffective. Lack of willingness to learn and share, poor organizational strategy and planning, and human resources policies are barriers to limit knowledge transfer (de Abreu & Alcantra, 2015). Human performance drives supply chain strategy and that has to be managed effectively to improve its effectiveness (Bulut & Atakisi, 2015). Table 6 shows examples of the type of training available for each organization.

Table 6

*Type of Training Provided to the Workforce*

Participant	Type of training
1	On the job training, external courses, certifications and re-certifications
2	Culture-specific education, internal cross-cultural courses
3	Personal coach, classroom training, webinars, online training, cultural training
4	Mentorship, language training, cultural training

Employees of MNEs may have to use foreign languages in meetings, to read documents written in the foreign language, to write reports, and to engage with human resource practices (Bordia & Bordia, 2015). However, employees may vary on how willing they are to adopt the foreign language and the socio-linguistic factors affecting employees' willingness to adopt a foreign language remain under-researched (Bordia & Bordia, 2015). During member check, I asked P4 how he evaluates the foreign language competence of the employees who take the training offered by the organization. He stated that the company pays for it, so they would like to be able to evaluate the return on investment; however, there are no metrics in place to quantify it. They just know it works based on their ability to provide good customer service. Company documents for P3 and

P4 show that they also share experience with customers by providing seminars that provide a mix of theory and practice.

**Instilling company values and commitment to sustainability.** Many companies are realizing that they can focus on environmental issues and use sustainable practices to gain competitive advantage and achieve sustainable development (de Abreu & Alcantra, 2015). Three of the four participants put special focus of sustainability. P1 admits that his industry is not forward thinking environmentally and the major efforts to reduce carbon footprints are due to regulations. He tends to use more efficient means of transportations; however, those decisions are more rate-driven. P2 pursues International Organization for Standardization certifications and follow stipulations in order to bid on certain contracts.

Suppliers must be on an approved sustainable supplier list. Sustainable practices affect the entire supply chain since they must search for the source of the raw materials and that creates overhead, but it also creates opportunities because it enables them to bid on contracts that they would otherwise not be able to bid on. Sustainability ranks extremely high on his organization's priority list. It is one of their core and their vision. It is extremely high on their agenda to ensure that they make environmentally correct decisions. After reviewing the company's Sustainability Progress Report, I learned that employees are their key element. The report shows that the organization successfully instills a sustainable mindset within its employees. Leaders of the organization created an Employee Development Dialogue, which is an academy that provides the framework and setting to develop competencies. P4 emphasized that decisions from all areas from product development to sales are based on efficiency to reduce electricity consumption.

Table 7

*Nodes Related to Theme 3: Human Capital Management*

Nodes	Sources	Percentage of total
Training	4	100%
Culture	3	75%
Sustainability	4	100%

**Applications to Professional Practice**

The results of this study provide strategies for managers of supply chains to manage the complexities related to the regional and global aspects. The crucial role in ensuring the continued firm competitiveness, formulating strategies and monitoring the execution has caused the role of supply chain managers to become increasingly prominent (de Abreu & Alcântara, 2015). Business leaders may attain insights about the internal issues, external challenges, and risks involved in the global supply chain, and use the strategies provided to reduce the vulnerabilities.

Supply chain technology influences transformation and distribution and helps the supply chain reduce the cost of transaction and communication (Singhry, 2015). The cost and incentive alignment is the least impactful relationship integration factor for both agility and flexibility development across the supply chain (Fayezi, & Zomorodi, 2015). Collaborative communication, dialogue, mutual understanding, and transparency are fundamental to relationship integration efforts in organizations that help reduce risks (Fayezi & Zomorodi, 2015).



The main goal of managers involved in global supply chain should be to mitigate the vulnerabilities by identifying the capabilities that match the vulnerabilities and then strengthening them (Aigbogun et al., 2014). Managers must be assertive in order to deal with the risks involved in the supply chain. Proactiveness is considered a part of human capital (Halim, Ahmad, Taghizadeh, Ramayah, & Mohamad, 2015).

Human capital management plays an intricate role in the global supply chain. The objective of Human Capital Management global strategy is to facilitate a dynamic balance between scale and local responsiveness. Organizations that operate in multiple locations worldwide are still a single business and its core should store and control certain values (Arora, 2014). Human capital resources, organizational strategy, and exchange rate change are related, and a strategic maximization occurs when appropriate human capital implements subsidiary strategies (Chung et al., 2015).

### **Implications for Social Change**

The results of this study may lead to an increased understanding of the relationship between social contributions, employee involvement, and economic benefits. The findings show that businesses are focusing more on sustainable practices and the benefits are not limited to financial rewards. Workers employed by organizations with ethical and social values tend to absorb the core values and perform with an environmentally friendly orientation. The implementation of strategies to decrease the negative impact on the environment lead to the reduction of costs and a chain reaction that motivates the entire chain to follow the same procedures. Reduced environmental liabilities will cause organizations to reduce the amount of money spent to clean up after

damages. The implementation of ethical behaviors will prevent employees from seeking harmful and unethical practices to gain market share. Furthermore, with proper knowledge sharing, the experienced workforce will be able to leave their legacy to the new generations upon retirement causing companies not to suffer from limited skillsets and the workforce to be more prepared for future leadership positions.

### **Recommendations for Action**

Communication is the most common issue MNEs face. Effective communication is critical in the regional level and the presence of a global environment increases the complexity of the supply chain channels and the communication challenges. My recommendation is that business leaders focus their strategies on improved electronic methods. The Internet has expedited processes and technology enables an instantaneous global communication throughout all channels and levels of the supply chain. The challenges of dealing with different time zones will always be existent; however, global organizations will have to either incorporate those challenges into their routine or find alternatives.

The results of the study indicate that managers should use soft and analytical skills when attempting to deal with global issues. For instance, (a) be aware of cultural differences, (b) be flexible and open-minded, (c) communicate consistently with customers and suppliers, (d) hire skilled employees, and (e) provide proper training and mentorship. Strategic workforce planning will allow managers to match their employees' competencies with the organization's strategic goals.

### **Recommendations for Further Research**

The purpose of this instrumental case study was to explore the strategies SME managers need to reduce the disruptive vulnerabilities in the supply chain continuum. Researchers should accurately describe limitations of the data and the implications for study validity when reporting the results (Boyko, 2013). Although I was able to reach data saturation with a sample size of four participants in Indiana, I would recommend future research to take place in other geographical locations and studying a larger sample size.

Another limitation in global supply chain management is the substantial gap between literature and practice. I recommend a quantitative or mixed method study to complement the findings of this qualitative study and the evaluation of the effectiveness of managerial strategies. I chose managers of different types of industries and with different backgrounds. I recommend future studies to be contained to one specific industry to narrow the focus. All participants in this study emphasized the importance of communication within the global supply chain; however, there is a limited amount of peer reviewed academic literature that provides strategies to deal with communication issues. Additional studies on communication strategies for global supply chain managers should be conducted to fill that gap. I intent to share the results of this study via literature related to global supply chain management.

## Reflections

My experience within the DBA Doctoral study process has been demanding, yet rewarding. I have gained insights about small and medium-sized local businesses and learned the global impact of local decisions and activities. I had initially chosen the internationalization theory, but after reviewing the participants' responses and additional sources of information, I found that the chaos theory related more to the themes and the overall study. The focus of the internationalization theory is on characteristics that determine the reasons, locations, and periods when firms expand overseas (Connely et al., 2013). My study did not put as much emphasis on firms entering the international market as it did on companies that already possess an established global supply chain. I did not expect all participants to have very successful businesses despite the numerous challenges SME global supply chain managers encounter.

Using purposive sampling, I interviewed four senior managers that possessed sufficient knowledge to provide me with rich data and enabled me to understand the managerial aspects of an industry that I have non-managerial experience. Due to my global supply chain background, I had to be careful to avoid bias and any preconceived thoughts. It is imperative that researchers recognize the potential for bias and attempt to minimize it in the design and analysis (Boyko, 2013). In addition to the knowledge specific to the subject of my study, I feel that I have also enhanced my writing skills and ability to conduct research and report findings succinctly.

During the interviews, I observed the physical environment, body language, and other non-verbal cues that I initially thought would be irrelevant to a study. I learned to

pay attention to small gestures, and that helped me maintain control of the interviews and to obtain quality data. I was also afraid that since senior managers have extremely busy schedules, they would not make themselves available to academic research that offered no type of compensation or benefits. Nonetheless, I was pleasantly surprised by the participants' kindness, willingness to participate and share detailed experiences.

### **Conclusion**

High risks and challenges discourage managers of new business from entering the global environment and cause current international managers to deal with challenges of global proportions. Senior managers are retiring at a fast pace contributing to an alarming reduction in the already scarce skilled workforce. The findings of this study show the results of strategic and innovative managerial techniques to maintain and improve supply chain performance.

Three main themes emerged when I transcribed and analyzed the data obtained from interviews, performed member checking, and reviewed company documents: (a) communication, (b) risk mitigation, and (c) human capital management. The findings revealed that communication was the most prevailing theme and that it affects the entire supply chain. Barriers to effective and accurate communication increase tremendously with the additional challenges of foreign factors, such as language, culture, and different time zones. Organizations have been able to improve communications due to the advancements in technology and enhancements in information transfer.

Business leaders should implement strategies that increase the communication channels, reduce risks and vulnerabilities, and properly acquire, and train the workforce.

To remain competitive in a dynamic global market, supply chains must take a strategic approach to increase the relationships and capabilities (Storer et al., 2014) and improve their global operations (Ibrahim et al., 2015). The recommendations from this study may provide a framework to address how the emergent themes influence the global supply chain.

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### Appendix A: Interview Questions

I will ask all participants the following interview questions:

1. How much experience do you have conducting international business?
2. What are the challenges you encounter managing international processes?
3. What integrated tools are a part of international operations and what manual approaches do you use?
4. How is the communication channel within and outside the organization and how can it be strengthened?
5. How do you reduce and manage risk when doing business with foreign markets?
6. What approaches do you use to meet customers' demands and needs on a global basis?
7. What type of international relations training is available to your employees?
8. What green or sustainable supply chain management practices do you pursue and how does the adoption of those environmental practices impact your performance outcomes?

## Appendix B: Interview Protocol

- I. Introduce self to participant(s).
- II. Present consent form, go over contents, answer questions and concerns of participant(s).
- III. Participant signs consent form
- IV. Give participant copy of consent form.
- V. If using a recording device, turn on device.
- VI. Follow procedure to introduce participant(s) with pseudonym/coded identification; note the date and time.
- VII. Begin interview with question #1; follow through to final question.
- VIII. Follow up with additional questions.
- IX. End interview sequence; discuss member-checking with participant(s).
- X. Thank the participant(s) for their part in the study. Reiterate contact numbers for follow up questions and concerns from participants.
- XI. End protocol.

## Appendix C: Letter of Cooperation

## LETTER OF COOPERATION

Community Research Partner Name  
Contact Information

Date

Dear Silvia Nigh,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Exploring the Managerial Impact on Small Business Global Supply Chain within the Insert Name of Community Partner. As part of this study, I authorize you to collect company documents, conduct face to face interviews with employees from this organization, perform member checking, and publish the results of the research. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: allow sufficient time to participate in the interview and provide a safe and private room on site for approximately an hour. No local supervision of the research activities will be provided. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely, Authorization Official  
Contact Information

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).