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Strategies for Minimizing Defects in Offshore-Outsourced Products

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Walden University
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Abstract

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MBA, University of Detroit

MA, University of Detroit

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Business leaders increasingly grapple with longer and more complex supply chain nodes wrought by the globalization of corporate manufacturing processes. The flow of outsourced materials is also more vulnerable to high-profile product-harm crises, sabotage, product defect, and recall problems. The purpose of this single case study was to explore manufacturing strategies used by business leaders of an original equipment manufacturer (OEM) in the United States to minimize the defects in offshore-outsourced products. The sample was 2 OEM business leaders who have successfully reduced the defects in offshore-manufactured products in their Michigan facility. The conceptual framework was agency theory. Data were collected from observational field notes, company records, and transcripts of open-ended interviews. Data were coded and analyzed to identify emergent themes, which included factors the OEM considered in selecting offshore suppliers, strategies for minimizing defects, validation of the effectiveness of these strategies, and the development of trust and working partnerships with offshore suppliers. Reducing defect risks from outsourced products may decrease catastrophic fatalities and financial repercussions for businesses, and simultaneously improve consumer safety and trust as implications for social change.

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Dedication

I dedicate this study to my late father, Alhaji Chief Y. S. Layeni, Balogun Adini of Lagos State, and my mother Alhaja Wusamotu Layeni, who both drilled into the family the importance of education at very early ages in our upbringing, and provided the support and endurance to achieve our dreams. They called me Moroof and More Layeni. Special mention to my wonderful partner Nina Barber, my cornerstone, who provided extraordinary support throughout this doctoral journey, and encouraged me to press on and stay focused.

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Table of Contents

List of Tables

Section 1: Foundation of the Study

To reduce costs, many global company leaders are shifting production and sourcing of materials from local suppliers to low-cost countries (Moe, Smite, Hanssen, & Barney, 2014). Outsourcing has made business processes more challenging and difficult, resulting sometimes in the underestimation of potential product defects (Steven, 2015). For example, in 2016, National Highway Traffic Safety Administration leaders imposed the largest civil penalty in history of $200 million against leaders of Takata, a Japanese company, for selling defective air bag inflators in the United States (National Highway Traffic Safety Administration, 2016). The safety agency asserted that Takata company leaders failed to provide full information to the public. The purpose of this qualitative single case study was to explore manufacturing strategies used by business leaders of an original equipment manufacturer (OEM) in the United States to minimize defects in offshore-outsourced products.

Background of the Problem

Offshore outsourcing refers to the subcontracting of production duties to third-party vendors in other countries (Benito, Dovgan, Petersen, & Welch, 2013). IBM was one of the pioneers of offshore outsourcing in the early 1980s when company leaders outsourced many major aspects of its personal computer business (Drauz, 2014). According to Benito et al. (2013), IBM benefited from outsourcing because it was able to use the expertise of its suppliers to get its product to market more quickly, which eventually enabled the corporation to amass a 45% share of the market. Drawbacks from the IBM outsourcing decision emerged in the 1990s (Drauz, 2014). Management's desire

to reduce development costs by outsourcing to low-wage countries is often the motivation for offshoring (Moe et al., 2014). Firm leaders often underestimate the complexities involved in outsourcing and the potential for product defects, and product recalls (Steven, 2015).

Although cost savings is the most cited reason for offshore outsourcing, this strategy may have an unintended consequence, such as the potential for product defects and product recalls. In addition to exposing the public to potentially life-threatening risks, defects can lead to significant or catastrophic financial repercussions for companies (Wowak & Boone, 2015). To reduce the potential for defects, some companies have pursued strategies such as focusing on product quality and thoroughly vetting the track record of potential suppliers. In this study, I explored successful manufacturing strategies used by U.S. business leaders to minimize the defects in their offshore-outsourced products.

Problem Statement

OEMs in industrialized nations continue to highly prioritize global sourcing from low-cost countries (Subramanian, Rahman, & Abdulrahman, 2015). These companies may face supply chain complexities that may negatively affect the quality and operational performance of products, however (Subramanian et al., 2015). For example, in the 2013 fiscal year, the staff at the U.S. Consumer Product Safety Commission prevented more than 12.5 million units of defective imported products from entering the United States and reaching the hands of U.S. consumers (U.S. Consumer Product Safety Commission, 2014). The general business problem is that some U.S. business leaders who engage in

offshore outsourcing lack manufacturing strategies for minimizing product defects in outsourced products. The specific business problem is that some OEM business leaders lack manufacturing strategies for minimizing defects in offshore-outsourced products.

Purpose Statement

The purpose of this qualitative single case study was to explore manufacturing strategies used by business leaders of an OEM in the United States to minimize defects in offshore-outsourced products. The study sample consisted of two leaders of an OEM who have successfully reduced the defects in offshore-manufactured products. Implications for positive social change include decreasing exposure to defective offshore-outsourced products, increasing consumer safety, and improving trust in products that are completely or partially manufactured offshore.

Nature of the Study

The research methods considered for this study were qualitative, quantitative, and mixed methods. I determined that a qualitative design was appropriate for this study because such an approach provides for more in-depth analysis than a quantitative design (see Matthew, Huberman, & Saldana, 2013). Qualitative research enables a researcher to explore contributing factors to outcomes within a participant's setting (Eide & Showalter, 2013). A quantitative method was not suitable for this study given my study purpose. As Yin (2014) noted, such an approach is appropriate when a researcher wants to ascertain certain information or determine whether data are correlated or change between pre-and posttest measurements. Mixed methods research involves combining quantitative and qualitative methods to provide better insight than using one method only (Frels &

Onwuegbuzie, 2013). I decided not to undertake this method, given its complexity and potential requirement of a whole team of researchers for proper analysis (see Frels & Onwuegbuzie, 2013).

I reviewed the following qualitative research designs: (a) ethnography, (b) narrative design, (c) constructivism, (d) phenomenology and (e) case study. Goodrich, Hrovat, and Luke (2014) asserted that the focus of an ethnographical design is on clarifying how group members share and are affected by culture. Ethnography was therefore not appropriate for this study because my purpose was not to explore how people live. The focus of narrative design is on analyzing stories of individuals' lived experience versus their perceptions (Mardis, Hoffman, & Rich, 2014). Phenomenological research involves studying participants for their lived human experiences in a major episode and was not appropriate for this study (see Yuksel & Yildirim, 2015). Constructivism includes the assumption that individuals construct their meaning of events and experiences and their realities (Lauckner, Paterson, & Krupa, 2012). Researchers using a constructivist design aim to understand how research participants construct meanings around the phenomenon explored (Lauckner et al., 2012). Because I was not concerned with participants' construction of their realities about the phenomenon of interest, I decided that constructivism was not appropriate. After careful consideration of other designs, I opted to use a single case study design for my investigation. Case study research is a means of exploring and evaluating complex, multifaceted issues in a natural setting (Crowe et al., 2011). In a single case study, a researcher focuses on a bounded case to gain an in-depth understanding of a problem (Yin, 2014).

Research Question

What manufacturing strategies do leaders of an OEM use to minimize the defects in offshore-outsourced products?

Interview Questions

1. What are your decision criteria for outsourcing a product offshore?
2. How do your decision criteria for outsourcing a product affect the quality of the product?
3. How does the strategy for reducing cost influence your ability to minimize defects in your outsourced products?
4. What are your primary challenges in working with offshore providers to minimize product defects?
5. What strategies are you using to address product defect challenges of offshore providers?
6. What mechanism do you use to analyze the ability of various offshore providers to meet your product specifications?
7. What benchmarks do you use to gauge effectiveness in minimizing product defects?

Conceptual Framework

The conceptual framework for this study was agency theory. Eisenhardt (1989) contended that the focus of agency theory is on examining conflicts in common goals between individuals engaged in a contract. The focus is on a contract wherein one party acts as the principal and the other as the agent (Perrow, 1986). In agency theory, agents

contract to perform certain activities for the principal, and the principal agrees to reward the agents (Perrow, 1986).

According to Perrow (1986), three assumptions comprise the core of agency theory; that individuals maximize their self-interest, that social life is a succession of contracts governed by competitive self-interest or exchanges, and that internal organizational analysis should be the focal point. Monitoring contracts in organizations is costly and ineffective, which leads to opportunism and cheating (Perrow, 1986). Although agency theory was the dominant theory in my conceptual framework, transaction cost theory (TCT) also proved helpful. The reason is that both theories shed light on issues related to alignment of principal-agent interest and the ensuing conflicts of interest that may contribute to product defects. Such struggles include self-centered opportunistic behaviors by partners such as, lying and reneging on promises, struggling over power or control, and having trust management issues (Eisenhardt, 1989). These conflicts may influence the ability to monitor opportunistic behaviors in a cost-effective manner and produce quality products (Eisenhardt, 1989). The literature on agency theory and TCT indicates that several incentives and monitoring mechanisms may mitigate opportunistic behaviors among business partners that can lead to product defect issues (Oviatt, 1988). The focus of the study was to explore strategies to reduce product defects in offshore-outsourced products.

Operational Definitions

Backshoring (or reshoring): Backshoring is the repatriation or relocation of activities, management decision making, or functions from a firm, supplier, or

independent party in another country back to a company's home country (Gylling, Heikklla, Jussila, & Saarinen, 2015).

Core competence: Core competence is an endeavor in which firm leaders excel in augmenting their organization's sustainability and competitive edge (Gunasekaran, Irani, Choy, Filippi, & Papadopoulos, 2015).

Global sourcing: Global sourcing is the setting up of production operations in different markets or the buying and amassing parts of finished products globally (Bouchet, Troilo, & Spaniel, 2015).

Offshore outsourcing: Offshore outsourcing includes delegating the defined value-chain process to a select foreign provider (Benito et al., 2013).

Offshoring: Offshoring involves shifting manufacturing to an offshore location within the same firm (Steven, Dong, & Corsi, 2014).

Original equipment manufacturer (OEM): An OEM is a company whose employees make a part or subsystem used in another company's product (Lacerda, Xambre, & Alvelos, 2015).

Outsourcing: Outsourcing refers to firm leaders' decision to contract out noncore activities previously produced internally to a separate legal entity, either domestic or offshore (Gunasekaran et al., 2015).

Supply chain: The supply chain is a network of suppliers, manufacturers, retailers, and organizations that produce and deliver products or services for end customers (Sodhi & Tang, 2016).

Supply chain risk management: Supply chain risk management is an interorganizational collaboration initiative that includes qualitative and quantitative risk management methodologies to evaluate, mitigate, and monitor unexpected events that may adversely affect part of the supply chain (Ho, Zheng, Yildiz, & Talluri, 2015).

Supply risk: Supply risk is the probability of an adverse effect related to inbound supply from an independent supplier. Such a risk affects the ability of a firm to meet customer demand regarding quality and quantity, within the allotted costs and time, and without threats to customer life and safety (Sodhi & Tang, 2014).

Assumptions, Limitations, and Delimitations

In a qualitative project, the researcher serves as the instrument for analysis. The subjective nature of this endeavor means that a researcher's perception may potentially influence data collection, interpretation, and presentation (Chan, Fung, & Chien, 2013). Researchers face various critical restrictions when conducting scholarly research. These include resource availability, which might constitute study limitations and the researcher's reasoning process as expressed in his or her key assumptions (Simon, 2011).

Assumptions

Assumptions are facts that a researcher deems to be true but does not verify (MacGillivray, 2014; Simon, 2011). As such assumptions carry some risk for researchers (MacGillivray, 2014). In all research efforts are assumptions or variables that a researcher accepts are true without solid proof (Leedy & Ormrod, 2016). When researchers conduct qualitative research, they have certain philosophical assumptions, which when combined

with their personal worldviews, may influence the direction of the research (Leedy & Ormrod, 2016).

A central assumption in my study was that participants would provide honest, insightful answers about their experiences related to the research phenomenon. I considered the interview results as representative of the firm's activities and that all selected participants have had the appropriate experience in minimizing the defects in offshore products. Another assumption was that participants did not discuss the study with one another until after the completion of the interviews. Finally, the literature review supported the research objectives adequately (Welch, 2014).

Limitations

Limitations are external situations out of the researcher's control that restrict or constrain the study's scope or may affect its outcome (Bloomberg & Volpe, 2015). Some limitations occur in each study, no matter how well the researcher conducts it (Mitchell & Jolley, 2013). Limitations and assumptions of a study typically depend on the research method employed (Leedy & Ormrod, 2016). The method used to obtain the results of a study relates to its credibility and conclusion. Factors outside my control in this research can negatively influence the credibility.

For example, the time allotted to the interviews may have limited the amount of information gathered or may have led to incomplete statements. The number of leaders who participated were small, which may affect transferability. The level of participant experiences varied. Participants may have felt uncomfortable disclosing information about their employer. Participants' potential biases and inaccurate recall of facts may

have affected the exactitude of interview findings. Qualitative research is more of an ongoing conversation than a conclusive one (Koch, Niesz, & McCarthy, 2014).

Delimitations

Delimitations refer to the restrictions or boundaries that researchers intentionally impose to limit the scope of a study (Mitchell & Jolley, 2013). Examples of delimitations include using participants of a certain age, gender, or group; sample size; conducting the research in a single setting; or being limited to a geographical location (Bloomberg & Volpe, 2015). There are other notable delimitations. A purposeful sample of participants who work at the selected organization at the time of data collection may be a limitation. The geographic location of the selected organization is in Michigan, and the participants' views may not be generalizable to other agencies or geographic locations.

Significance of the Study

The results from the study can inform U.S. OEM business leaders on how to minimize defect rates from offshore-outsourced products, which may result in higher quality products, reduced cost, and reduced risk exposure and may contribute to social change. The primary reasons business leaders engage in offshore outsourcing are the ability to concentrate on core competencies, reduce cost, access new markets and services, maintain financial flexibility, and select vendors who leverage the best competitive advantages (Simões, de Souza, Contador, & Ferreira, 2012). The purpose of the qualitative single case study was to explore manufacturing strategies used by business leaders of an OEM in the United States to minimize the defects in offshore-outsourced products.

Contribution to Business Practice

The study identified successful manufacturing strategies used by business leaders of an OEM to minimize the defects in offshore-outsourced products. The lessons learned from the study may reveal themes and patterns that may be helpful in improving the quality of imported manufactured products. This successful strategy of minimizing the defects in offshore products may lead to improved profit margins, successful offshore businesses, and benefits to the consumers and the communities where the businesses exist. The research findings may contribute to improving offshore-outsourcing business practices by informing business leaders about successful manufacturing strategies that could be helpful in addressing the product defects in offshore-outsourced products.

Implication for Social Change

This single case qualitative study may include an opportunity to emphasize the social impact of offshore outsourcing. One of the primary goals of the study was to engender positive social change by focusing on the real-world problem of product defects. Product defect issues have important social and business implications. I also explored the need for offshore vendors to comply with government regulations while showing transparency and accountability for their manufactured products. Globalized supply networks in most industries have led to heightened awareness of various risks, including product defects. Other collateral risks include terrorism, sabotage, and products exposed to elements, as products move along the supply chain in various continents (Sharma & Vasant, 2015). The vulnerability of the supply chain has resulted in high-profile product-harm crises, product safety events, and product recalls that require

attention by governments and societies (Sharma & Vasant, 2015). The implication for social change for this study is that society might experience reduced defect risks from outsourced products, which might decrease catastrophic fatalities and financial repercussions on businesses. Simultaneously, consumer safety and trust might improve.

Review of the Professional and Academic Literature

The literature review begins with a review of scholarly peer-reviewed articles that provide insights about the offshore-outsourcing decision-making process. The literature review includes two sections. The first section is an opening narrative that contains a critical summary and analysis of the sources I used to provide rigorous, in-depth data for the study. The second section is a critical analysis of literature relating to the conceptual framework which grounds the business problem. This section also includes a discussion on conceptual models that address product defects and risks in the global supply chain.

Ninety-two percent (n = 77) of my literature sources were peer-reviewed, as opposed to the DBA program requirement of 85% or 60 peer-reviewed literature sources. To ensure currency, the publication dates of 90% of the literature sources are within 5 years of my expected graduation target of December 2017. Table 1 provides a synopsis of the literature sources and categories used.

Table 1

Synopsis of Sources in the Literature Review

Reference type	Total	% peer reviewed	Total 2013-2017	% of sources, less than 5 years from approval date	Older than 2013
Scholarly journals	82	92	74	90	8
Books	6		4		2
Other references	3		2		1
Total	91	92	80	90	11

Koch et al. (2014) argued that the purpose of a literature review in qualitative research is to explore the phenomenon under study and the methodology selected for the exploration. Richey and Klien (2014) added that a literature review establishes the platform for how a qualitative study will close the gap. Handley and Gray (2013) asserted that the numbers of contract manufacturers involved in product recalls and quality-defect-related incidents in outsourcing offshoring initiatives have increased. A need exists for additional research on managing the quality of outsourced production (Handley & Gray, 2013).

I included in the literature review a critical analysis of various peer-reviewed articles found in academic databases. The databases were namely Science Direct, Business Source Complete, ABI/INFORM, ProQuest Dissertation and Thesis, SAGE Premier, EBSCO Complete, Academic Search Complete/Premier, Expanded Academic ASAP, and LexisNexis Academic. To locate scholarly literature that relate to quality defects in offshoring initiatives, I used search terms including global sourcing,

outsourcing, offshoring, product recalls, offshoring and outsourcing risks, and outsourcing best practices. Other terms I used included agency theory, transaction cost theory, stewardship theory, outsourcing defect, supply chain management, theory building, product defects, quality control management, manufacturing outsourcing, reshoring, and various combinations of these terms.

Application to the Applied Business Problem

My findings from the study may inform OEM business leaders on manufacturing strategies they can use to minimize to minimize defects in offshore-outsourced products, and improve profits. The purpose of this qualitative single case study was to explore strategies used in a successful offshore-outsourcing firm located in Michigan to minimize the defects in its offshore-outsourced products. Leaders of firms that outsource their business functions to foreign providers create value (Mukherjee, Gaur, & Datta, 2013). Other reasons business leaders outsource are to reduce developmental costs, explore new markets, and explore other innovative resources (Thomas, 2013).

According to Wiengarten, Humphreys, Gimenez, and Mclvor (2015), many business leaders react to the opportunities and threats of globalization through global production practices that increase supply chain complexity and risk without putting adequate risk mitigation systems in place. Zu and Kaynak (2013) noted there is a need for an effective quality management system in maintaining a seamless supply of high-quality product to customers. Information about how to design effective supply chain management is lacking (Zu & Kaynak, 2013). In this study, I used agency theory and TCT as a conceptual framework to explore the power conflicts between principals and

agents, and the resulting effect of the struggle on product defects. I conducted interviews with leaders of an OEM to ascertain the strategies that company leaders use to minimize defects in their offshore-outsourced products.

Conceptual Framework

A robust conceptual framework forms the foundation for high-quality research and provides a venue or lens through which researchers can assess events and generate coherent explanations of their discoveries (Flynn & Zhao, 2014). I used two economic theories, agency theory and TCT, for my conceptual framework. Research on the two theories indicates that use of incentives and monitoring mechanisms may reduce opportunistic behaviors among business partners that can lead to product defect issues (Oviatt, 1988). Agency theory and TCT are premised on the economic model of human behavior, which incorporates the assumption that individuals are opportunistic and have an interest in satisfying their personal goals (Chaudri & Seo, 2012). These traits can result in mistrust among contractors and sometimes in defective products (Chaudri & Seo, 2012).

Hirsch, Michaels, and Freidman (1987) supported using multiple theory approaches as a framework. Hirsch et al. noted the need for economists and sociologists to work together to develop assumptions underlying economic models. Hirsch et al. contended that inquiries into relationships among firms, markets, and states must also include the sociology about individual participants. A fruitful collaboration and dialogue between economists and sociologists may eliminate potential fatal flaws in a conceptual theory by including the reality of the empirical world around the theory. Although agency

theory and TCT were the cornerstones of my conceptual framework, I also drew from stewardship and models of human behavior theories.

Agency theory overview. Agency theory was the central conceptual foundational framework for this study. I used TCT as a companion theory because both theories share the same assumptions of self-interest among principals and agents engaged in contractual relationships (Cuevas-Rodriguez, Gomez-Meija, & Wiseman, 2012). Business managers use agency theory, described as an empirical orientation for examining principal–agent relations, as a platform for examining contractual relations (Cuevas-Rodriguez et al., 2012). Fayezi, O'Loughlin, and Zutshi (2016) contended that agency theory provides valuable insight for understanding the dynamics surrounding supply chain behaviors and relationships where political, social, legal, and behavioral forces dominate, thereby potentially affecting product quality. Fayezi et al. added that managers must understand and mitigate abnormal behaviors across the supply chain to minimize product quality concerns. Agency theory serves this purpose by providing managers with a tool to address transaction cost dilemmas by using contractual and noncontractual remedies (Fayezi et al., 2016). Eisenhardt (1989) asserted that agency theory presents a valid but partial view of the world because the theory ignores information about the complexity of organizations.

The premise of agency theory is that the agent attempts to maximize personal profit by adhering to the principal's economic objectives of profit (Jensen & Meckling, 1979). Using agency theory, a researcher contemplates events where information asymmetry and interest misalignment exist between a principal and an agent (Eisenhardt,

1989). The assumption in agency theory is that the buying firm has inadequate information about the intention and effort levels of the seller at the beginning of a transaction. This assumption creates doubt about potential opportunism in the minds of the buying firm's leaders (Mitnick, 2015).

Donaldson and Davis (1991) criticized agency theorists' concentration on individualism, and disregard for other research. Jensen and Meckling (1979) asserted that agency theory influences management and business policies. The assumption in agency theory is that managers acting as agents will not act to maximize returns to shareholders unless firm leaders implement an oversight governance structure (Jensen & Meckling, 1979). To protect the interests of stockholders, the chief executive officer (CEO) should not be the same person as the chair of the board (Williamson, 1975). An exception is if incentives provided to the CEO align the CEO's interest to that of the shareholders (Williamson, 1975).

The models of human behavior theory stand in contrast to agency theory. Dahlgaard-Park (2012) asserted that in the models of human behavior, staff in organizations is not as obsessed by opportunism and principal-agent self-interest conflicts, as they are in agency theory. Dahlgaard-Park added that staff gains intrinsic satisfaction from tackling challenging roles and gaining recognition from peers without any financial incentives. Long-tenured managers who have shaped the direction of a corporation can identify with the firm and merge their self-esteem with corporate prestige. In this case, a manager may undertake actions out of a sense of duty to the firm,

which may not be financially rewarding personally. The term for this action is *taking one for the team* (Mitnick, 2015)

Another relevant contrasting theory is stewardship theory. In this theory, a manager wants to be a good steward and a hard worker as opposed to the opportunistic shirker portrayed in agency theory. According to steward theory, if the CEO of a firm is also the chair of the board and is allowed to exercise complete authority over the corporation, the organization will enjoy the benefits of the unity of direction and strong control (Kakabadse, Knight, & Kakabadse, 2013). Donaldson and Davis (1991) refuted stewardship theorists' emphasis on the favorable effect on shareholder returns in authority structures where one person holds the dual role of CEO and chair of the board. Donaldson and Davis conducted a study on the relationship between the duality of the CEO role and the performance of the organization. They concluded that corporations that had independent chair-CEO structures had a higher return on investment, return on equity, and profit margin (Donaldson & Davis, 1991).

While the focus of agency theory is the problem the principal has in controlling the agent, the focus of TCT is on the cost of transactions in the exchanges. TCT centers on the merits of eliminating outside market contracts by incorporating distributors and suppliers into one entity (Coase, 1937). According to Coase (1937), the focus of TCT is on whether a firm produces or procures outside suppliers (i.e. outsources), which is something that depends on the firm's transaction cost of managing a contract through the market or the cost of production within the firm. When the cost of conducting the economic exchange in a market exceeds the cost of coordinating the exchange within a

firm, the firm will produce the product and grow. If the external transaction costs are lower than the internal costs of production within the firm, the company will downsize by outsourcing (Mitnick, 2015).

In conclusion, some scholars view agency theory as being radical and having an authoritative foundation (Jensen & Meckling, 1979). Other scholars, such as Donaldson and Davis (1991), contended that agency theory is a narrowly defined motivational model which features little regard for other research and which devalues work ethics. The effectiveness of agency theory assumptions is contextual (Eisenhardt, 1989). For example, in a foreign country like Japan, the close working relationships and long-term contracts between Japanese companies and their suppliers promote trust between the partners and minimize conflicts, rendering the assumptions in agency theory ineffective (Abo, 2015).

Transaction cost theory. Although agency theory was the central theory from which I drew, TCT was a compelling companion theory. This is because it shares many similarities with agency theory regarding self-interest of the principal and agent and opportunistic behaviors by partners. These behaviors include business partners lying about product quality and product source, which may lead to product defects (Anderson, 1988). Oviatt (1988) contended that there are practical advantages of using agency theory and TCT in exploring the relationship between shareholders and top managers regarding goal congruence. Other factors explored in TCT include outsourcing decisions based on associated transaction costs (Alaghehband, Rivard, Wu, & Goyette, 2011).

Numerous factors motivate offshore outsourcing, but cost savings is the central driving force (St. John, Guynes, & Vedder, 2014). Often too late in the offshoring process, decision makers may discover that they failed to estimate accurately associated costs. They later find substantial hidden costs not accounted for in the initial cost estimations (Alaghehband et al., 2011). These hidden costs can negatively affect firm performance or affect product quality (Larsen, Manning, & Pendersen, 2013). Decision makers' abilities to consider all the important factors that lead to product defect underestimations and associated cost compounds the complexity of offshoring (Alaghehband et al., 2011). Larsen et al. (2013) noted that in offshoring, hidden costs could be unanticipated costs associated with product defects as well as administrative and technical services that support domestic and global operations from abroad. Hidden costs are also unforeseen costs in various stages of strategic decision making, including training, monitoring of performance, negotiating of cultural differences, and handling of technological transfer costs (Larsen et al., 2013).

Apart from monitoring the opportunistic behaviors between principals and agents, an additional goal in TC is to align transactions with accompanying costs in an economic way (Jain & Thietart, 2013). Agency theory and TCT are similar regarding shared assumptions of self-interest by the contracting parties and shared dependent variables regarding contractor behavior (Alaghehband et al., 2011). TCT had existed for seven decades and received prominence when theorist Ronald Coase received the Nobel Prize in Economics in 1997 for his work on transaction cost (Mishra & Zachary, 2013). The focus in TCT is on whether a firm makes or procures outside suppliers (outsources),

depending on the firm's transaction cost of managing the contract through the market or cost of production within the firm (Coase, 1937).

Transaction cost is a cost incurred in the process of making an economic exchange. There are different types of transaction costs. These include: (a) the costs incurred in searching for the lowest product price on the market, (b) the cost of bargaining with parties, and (c) the cost of monitoring other parties (Alaghehband et al., 2011). When the cost of conducting economic exchange in a market outside the firm exceeds the cost of coordinating the exchange within a firm, management will produce the product internally and grow (Buckley & Strange, 2015). Conversely, if the external transaction costs in the market-based governance structure are lower than the internal costs of production within a firm, company leaders will downsize by outsourcing (Buckley & Strange, 2015). The micro analytical framework of TCT, which creates transactional difficulties, rests on the interplay between two key assumptions of human behavior: *bounded rationality* and *opportunism* (Williamson, 1975).

Bounded rationality refers to the cognitive limitations of the human mind, which results in difficulties in fully comprehending the complexities of the possibilities of a decision (Merkert & Hensher, 2013). In the case of a principal and agent with an ongoing relationship with turbulence and uncertainty, there may be a need to modify continuously and negotiate the contract, which could result in product defect issues and additional transaction costs (Merkert & Hensher, 2013). The second assumption, opportunism, is the assumption that given the opportunity, human actors in the exchange relationship may unscrupulously seek to serve their self-interests, which make it difficult to know whom to

trust (Handley & Benton, 2013). Opportunism increases transaction cost because of the costs incurred for monitoring behaviors to ensure product performance expectations (Yang, Zhao, Yeung, & Liu, 2016).

In TCT, the potential for opportunistic behavior exists most likely when both parties make heavy investments in transaction-specific initiatives (Handley & Benton, 2013). In this case, it becomes costly to redeploy the assets for other transactions when the asset has less value in a second-best use, given the specificity. A bigger problem occurs if different firms own the assets, which may lead to protracted bargaining. In this situation, the parties are no longer competing with the entire market because of the customization of the transaction with the two parties (Chang, 2013). A transaction that becomes lengthy or that reoccur, may lead to a continuous power struggle between the principal and agent regarding gains attained from the transaction (Chang, 2013).

The best constraint on this type of opportunism is reputation rather than the law because reputation damage affects the agent's future dealings (Li & Martin, 2016). In spite of the diverse opinions among scholars about the simplicity of TCT, the theory still offers an important theoretical lens for business operations management problems and methodologies, as well as associated quality risks (Mclvor, 2013).

Application of the Foundation Theories to the Business Problem

The purpose of this qualitative single case study is to explore strategies used by leaders of a U.S. business to minimize the defects in offshore-outsourced products. Offshore outsourcing entails the transfer or sharing of management control or decision making of a business function to a vendor located in a different country (Mukherjee et al.,

2013). The transfer entails a degree of two-way information exchange, trust, and coordination between the overseas supplier and the client firm (Mukherjee et al., 2013). A party of two has an agency relationship when the two parties cooperate, and one party (the principal) delegates work or decisions to the other party (an agent) so that the agent acts on the principal's behalf (Zu & Kaynak, 2013). When the principal delegates decisions to the agent, the principal (contractor) is the offshoring company, and the supplier (vendor) is the agent. Important agency theory underpinnings reveal that (a) every party pursues its own self-interest, (b) principal and agent goal conflict exists, (c) frequent asymmetric information between principal and agent exists, and (d) the agent is more sensitive to risk than the principal (Eisenhardt, 1989; Zu & Kaynak, 2013).

In a multidisciplinary analysis of agency theory, the managerial implications range from establishing relationships to developing and terminating them (Fayezi et al., 2016). Agency theory includes a method used to explain how players, both principal, and agent, engaged in a business transaction respond to transaction cost dilemmas, either rationally or nonrationally (Fayezi et al., 2016). Agency theory includes a prescription for two management mechanisms to resolve agency and risk-sharing problems in the principal–agent relationship (Roh, Whipple, & Boyer, 2013; Zu & Kaynak, 2013). The first management mechanism is an outcome-based one that emphasizes results where both principals and agents can observe outcomes and the principal rewards the agent based on performance. The second management mechanism is outcome behavior-based controls whereby the principal monitors the agent's behaviors and efforts (Roh et al., 2013; Zu & Kaynak, 2013). A critical issue of deciding which management mechanism

to use in both agency theory and TCT is the cost of acquiring the information for monitoring the outcome and behavior of the agent and the ability to transfer the risks to agents (Eisenhardt, 1989; Zu & Kaynak, 2013).

A focused understanding of agency theory provides business executives with the needed ethical grounding and basis for moral thinking because of high levels of trust, as well as strict confidentiality, are the basis of agency relationships (Hannafey & Vitulano, 2013). Many organizational leaders also use agency theory as an important management development practice, where executives collaborate with a management-level client-coach to assist the executives in becoming successful managers (Hannafey & Vitulano, 2013). Agency theory is at the center of executive coaching. The theory is an important management development activity that can positively influence normative executive thinking and provide specific ways to manage conflicts of interest and moral problems (Hannafey & Vitulano, 2013).

Agency theory and TCT have similar ties regarding shared assumptions of self-interest by the business parties (buyer and supplier) and bounded rationality and share similar dependent variables. Both agency theory and TCT have strong commercial applications (Hannafey & Vitulano, 2013). In TCT, the focus is accounting for all organizational costs to reduce hidden or unaccounted for costs, thereby minimizing an organization's financial exposure to costs (Larsen et al., 2013). The managerial significance of agency theory is the provision of a foundation for establishing relationships between business partners and a method for explaining how business players (both principal and agent) engaged in a business transaction respond to

transaction cost dilemmas, either rationally or nonrationally (Fayezi et al., 2016). Agency theory is a conceptual framework that underlies factors used by business leaders to manage supplier quality and investigate supply chain relationships (Zu & Kaynak, 2013).

Relevant Prevailing Offshore Trends

Offshore outsourcing is the practice of moving or contracting out of in-house activities or management decision making from a company's home country to a firm or independent party in a different country (Gylling et al., 2015). Outsourcing started in the 1700s and shifted to a fiercely competitive stature in the 1980s (Mboga, 2014). Oshri, Kotlarsky, and Willcocks (2015) noted that by the end of 2013, the value of outsourcing contracts for business and information technology (IT) services was $648 billion, but by the end of 2014, the value exceeded $700 billion. The prevailing estimate is that the IT outsourcing market will experience a 4.8% compound annual growth by the end of 2018 (Bhimani & Wilcocks, 2014). Offshore outsourcing is a popular operations strategy that company leaders use to focus on their core competencies and reduce capital costs and expenses. Company leaders can also simultaneously be more responsive to the changing global marketplace and improve their performance (Gunasekaran et al., 2015).

Although a business motivation for offshore outsourcing has numerous factors, cost savings is most often the driving force (Adams, Yan, & Thomas, 2014). Offshore outsourcing offers many other benefits to businesses, such as (a) concentration on core competencies, (b) increasing business quality and agility, (c) accessing new markets, and (d) using offshore vendors to leverage competitive advantages (Simões et al., 2012). Benito et al. (2013) conducted an analysis of offshore outsourcing and concluded that a

firm's involvement in the foreign market generates new learning in various forms. This new learning provides a foundation for eventual organizational change, even outside of the outsourcing specific context (Benito et al., 2013).

Benito et al. (2013) contended that offshore outsourcing is an important part of international business operations and is likely to grow rather than diminish. Firm leaders consider offshoring to be an intricate part of a firm's internalization strategy (Benito et al., 2013). During the economic recession in various developed countries, leaders of offshore-outsourcing organizations faced pressures to keep jobs in their countries. Global antioffshoring campaigns and antioffshoring legislation have been in effect in developed countries (Khan & Lacity, 2014).

Steven et al. (2014) warned that when managers decide to outsource in offshore locations, the managers must take necessary preventive actions to limit breakdowns that may result in costly product recalls. Lee (2013) asserted that firms with predominant outsourcing strategies should diversify their outsourcing among multiple firms and not depend on a single outsourcing vendor. Obloj and Zemsky (2014) contended that when choosing contracting partners, firms should consider the benefit of productive efficiency against the potential cost of contracting. Firm leaders must also ensure that contracts with partners are complete to minimize appropriations, exploitations, and moral hazards, especially in countries where the market and legal institutions are weak.

Khan and Lacity (2012) conducted a survey of 84 organizations that purchased or engaged in offshore outsourcing of business services operations and IT to gauge how the organizations responded to antioffshoring pressures. The survey result showed that

respondents reported strong satisfaction with offshore outsourcing of their business services and IT services. The respondents reported favorably on the associated cost savings and increased flexibility. A majority of the respondents did not plan to alter how they selected their service providers or service locations because of the antioffshoring pressures (Khan, & Lacity, 2014).

Defect Risks and Other Risks in Offshore Outsourcing

While cost saving is the commonly cited reason for outsourcing, such a cost reduction strategy often results in unintended consequences, such as the potential for product defects, which is a risk factor frequently encountered by offshore outsourcing companies (Steven et al., 2014). Madupalli, Pannirselvam, and Williams (2014) contended that despite the growth in outsourcing, vendors and clients admitted that some issues, including product quality, led to less-than-satisfactory results. Researchers in a study of 294 service personnel working at a customer's offshore locations discovered that differences in organizational culture and processes negatively influence the quality of the relationship in customer–supplier interactions and may affect product quality (Madupalli et al., 2014).

St. John et al. (2013) contended that 50% of the organizations that have shifted their production processes offshore did not attain the expected financial benefits or quality performance. Schwartz (2014) observed that despite the pervasiveness of outsourcing, many outsourcing ventures had not achieved success. The primary reasons for terminating outsourcing contracts are unmet product quality needs, cost reduction expectations, and the need to protect intellectual property (Moe et al., 2014). The

researchers also revealed in the same study that despite outsourcing growth, vendors and clients admitted that some issues and complications have led to less-than-satisfactory results. The opponents of offshore outsourcing cite the opportunistic behavior of offshore contractors, rising transaction and coordination costs, higher procurement costs, and integration challenges (Gunasekaran et al., 2015).

The most frequent concerns about offshore-outsourced products are (a) poor product quality, (b) lack of transparency in the supply chain at foreign locations, and (c) high transportation costs (Dachs & Zanker, 2015). Product defect and safety issues affect public trust in manufacturers and the governments in their abilities to ensure the safety of food and other products (Marucheck, Greis, Mena, & Cai, 2011). Gray, Roth, and Leiblein (2011) noted that the quality control problems in offshoring are attributable to a vendor's inefficient management and leadership styles, as well as difficulties in controlling a wide range of factors that affect quality defects in the manufacturing process. While global sourcing can result in many benefits to a firm, it can also expose a firm to some product defect issues.

Benito et al. (2013) contended that interaction intensity and interaction distance, including language differences, might ameliorate the magnitude of the hidden costs and the viability of an outsourcing partnership. The involvement of contract manufacturers in offshore outsourcing initiatives is increasingly in product recalls and quality-related incidents (Handley & Gray, 2013). As a result, there is a need to improve the practice of reducing the defects in offshore-outsourced products (Handley & Gray, 2013). Labor cost

reduction is still the single dominating motive for relocating production abroad, followed by the proximity to key customers and access to foreign markets (Kinkel, 2014).

Niranja and Rao (2011) contended that despite the tremendous adoption of outsourcing and a long history of its use, it remains a contentious matter because cost savings may not always happen. A major threat associated with outsourcing is the opportunistic behavior of a vendor who can take advantage of a client who has divested from redundant assets related to the outsourced function. The client firm loses its organizational and knowledge capital, which makes the firm more dependent on the vendor and vulnerable to coercive pressure (Niranja & Rao, 2011). In certain cases, the client firm may have exaggerated cost savings from outsourcing. The cost may evaporate when considering product defects and transaction costs associated with offshoring (Niranja & Rao, 2011).

Successions of various product scandals that range from peanut butter to toxic toys to a recall of Ford Pinto vehicles point to the exposure of firms and consumers alike to quality defects and risks in a global supply system (Tan, Tse, & Chen, 2014). Sodhi and Tang (2016) contended that supply chains are vulnerable to disruptions with large unexpected consequences because supply chains have more points of possible disruptions compared to the past. Longer supply chains also have less visibility, which causes slow decision making in response to a disruption. Marucheck et al. (2011) added that government and manufacturers' inability to ensure product and food safety shakes consumer confidence. Globalization has led to heightened attentiveness to risks and vulnerabilities of products as they move through the supply chain, from sourcing to

manufacturing, and ultimately to the consumer (Sharma & Vasant, 2015). The global supply network is long and complex, and many of the outsourcers located in emerging countries, such as China, handle some of the products as they move across their borders, which poses product safety risks (Sharma & Vasant, 2015).

To support the claim that China has product defect and quality problems, a European Commission study on recalls in 2012 named Rapid Alert System concluded that most of the global supply network recalls coming into Europe emanated from China (European Commission, 2012). Rapex, established in 2003, is the European Union rapid alert system for dangerous products to guard Europeans against unsafe nonfood products such as toys, cosmetics, machines, chemicals, and other products. According to the report, China made 62 (72%) of the 86 consumer products recalled in the United Kingdom in 2008. China made 58% of the 1,686 consumer products recalled in the European Union in 2009. Tan et al. (2014) noted that the quality risk problem exacerbated by the low visibility of quality defects, often hidden in manufacturing processes, raw materials, or the supply network.

A central issue in product defect is the fact that the product a company manufactures also depends on the quality of the materials supplied by the vendor. Given the low traceability of material origin, the quality of a supplier's product is unobservable, which leads to quality risk in the product (Tan et al., 2014). When firm leaders rely on extended networks of suppliers to produce and deliver products to customers, it becomes difficult to control events in the supply chain outside the firm's boundaries that may affect the risk of product defects (Zu & Kaynak, 2013). In exploring issues between

scholarly work on product safety and security challenges, Marucheck et al. (2011) conducted a study that identified primary safety challenges in five highly globalized regulated industries: (a) food, (b) medical devices, (c) consumer products, (d) pharmaceuticals, and (e) automobiles. The conclusion from the study was that in each of the cited industries, the security or safety concern was traceable directly to conditions in the global supply chain. In the food industry, a major challenge was contamination; in the pharmaceutical industry, the challenge was counterfeiting. In the medical device industry, the challenge was rapid technological change. In the automotive industry, the problem was product design issues, and in consumer products, the problem was product safety from defects.

Flynn and Zhao (2014) concurred with Tan et al.'s (2014) assertion that an important source of product safety issues is the supply chain. Leaders of manufacturing firms do not often reveal the true origin of the product from their suppliers or the quality of the materials (Flynn & Zhao, 2014). In 2008, a Formica chemical also used as fire retardant in paint, paper, and plastic appeared in the milk supply of leading Chinese milk producers (Flynn & Zhao, 2014). An investigation by the leading milk purchasers in China revealed that some farmers intentionally added melanin to their milk after the farmers discovered that doing so simulated a boost in the protein levels of raw milk, which enabled the farmers to pass inspection with large dairy producers (Flynn & Zhao, 2014).

The tainted milk resulted in kidney stones among the infants who consumed the formula, which killed six Chinese babies. The tainted milk incident demonstrates the

problem with visibility in the supply chain (transparency) given the impossibility of determining the party responsible for tampering with product quality (Flynn & Zhao, 2014). The melamine incident resulted in Cadbury recalling its chocolate bars from Asia because of a suspicion of contamination in the upstream supply chain. Zhao, Li, and Flynn (2013) cited another Chinese firm, Sanlu, whose management filed for bankruptcy proceedings because of mounting health care bills from contaminated consumers related to the tainted milk. Zhao et al. asserted that although estimating the short-term impact on the wealth of shareholders is easy, the long-term damage to brand equity and reputation is difficult to quantify.

Ni, Flynn, and Jacobs (2014) contended that the focus of the financial impact of product quality risk is mostly from the perspectives of manufacturing firm leaders. Retailers do not receive much attention given their importance as the link between consumers and the upstream supply chain. For a manufacturing firm experiencing a recall, future sales may decrease because of consumer perception related to product safety concerns (Ni et al., 2014). Retailers sell brands manufactured by other manufacturers. Consequently, retailers may not be directly impacted by product recalls (Ni et al., 2014). Consumers may shun a retailer that sells recalled merchandise under a private label; conversely, for a national brand, consumers may attribute the recall to the product manufacturer rather than the retailer that distributed the product (Ni et al., 2014). Consumer perceptions often do not necessarily reflect reality, and investors should consider consumer perceptions about a retailer following product recall announcements and incorporate the information into their valuation (Ni et al., 2014).

Gray et al. (2011) researched whether drugs manufactured offshore posed quality risks in the United States compared to domestically manufactured drugs. The findings indicated the associations between the offshore location of manufacturing activities and quality risk and expounded on why such differentials in quality risk exist. Gray et al. selected a sample of 30 pairs of onshore units located on the mainland of the United States and offshore units located in Puerto Rico. The 30 units selected were drug manufacturing factories run by the management team of the same U.S. parent company in the regulated pharmaceutical industry. The research results indicated that Puerto Rican plants operated at a higher quality risk rate than matching plants located in the United States, even though the same U.S. firm operated the two companies (Gray et al., 2011).

The investigation revealed the difficulty of implementing quality control by companies when employees are in distant offshore locations with different cultures, languages, and values (Gray et al., 2011). Global sourcing can bring many benefits to organizations, but it can also expose these firms to some risks (Martin, Carlos, Omera, & Oznur, 2011). Martin et al. (2011) interviewed frontline managers directly involved in 15 different offshoring industries to understand how the managers assess global sourcing risks across the supply chain and the options needed to mitigate the risks. The study's finding revealed that the leaders of most firms do not have a well-thought-out risk management supply chain and mitigation system, although the leaders implement informal systems to address risks (Martin et al., 2011).

Strategies presented to mitigate global sourcing defect risks include (a) reengineering the supply network to respond with agility to unpredictable change in

demand and supply in the supply chain and (b) embedding risk management throughout the organizational structure (Martin et al., 2011). Vendors' capabilities are critical and one of the most important factors for success in offshore outsourcing. The ways vendors manage their capabilities throughout the outsourcing process is not clear (Prunovic, Christoffersen, & Mefford, 2012). Vendors used a different portfolio of competencies in the right combinations for achieving their outsourcing objectives in a multiple case study of three contract electronic manufacturers (Prunovic et al., 2012). Capabilities responsible for offshore outsourcing success were technical competence, relationship management, and a clear understanding of the business of the customer (Prunovic et al., 2012).

Given the global competition, the need for speed, and increased domestic costs, most pharmaceutical firms outsourced critical parts of their value chain activities into emerging global markets (Ippoliti, 2013). Some of the emerging markets have weak institutional environments, which compounds ethical issues associated with outsourced medical research (Ippoliti, 2013). Governments in the destination countries need to recognize cultural, social, and economic contexts as they design medical research regulations, and develop continuous collaborations (Ippoliti, 2013).

Abdullah and Verner (2012) contended that there is an abundance of literature on risk and risk management, but limited and unclear research is available on outsourcing product defects and risk in IT development, especially from the buyer's perspective. Abdullah and Verner developed a literature-based conceptual risk framework to address the IT system development initiative from the client perspective. The risk framework

developed to help identify critical factors that affect outsourcing of IT system development projects included ten categories: complexity, contract, execution, financial, legal, environment of the organization, planning, scope and requirement, team, and user. The developed risk framework may assist leaders of offshoring businesses to conduct feasibility studies to minimize product defects and failures.

Ouabouch and Amri (2013) provided a comprehensive assessment of main logistics and supply chain risk factors based on a sample in the Moroccan pharmaceutical manufacturing industry. The aim was to contribute to the extant literature on supply-chain risk management by evaluating the pharmaceutical supply chain dimension. The findings indicated that managers should focus on the demand side and supply side sources of risk, including product defects, and excel in chain management, supplier relationship management, and cooperative information sharing with customers and suppliers.

Ellram, Tate, and Petersen (2013) used the results from a 2012 survey to gain a better understanding of the drivers of offshore-outsourcing manufacturing location decisions by company leaders. Ellram et al. focused on how companies view different regions of the world, either favorably or unfavorably, and the risk associated with each region. In the study, Ellram et al. applied the location aspect of internalization theory to provide an understanding of the factors that organization leaders take into consideration when making manufacturing location decisions. Internalization theories, developed by Coase in 1937, entail a make "or" buy decision. The theory involves viewing the manufacturing location decision from a global perspective as influenced by a host of cost

and risk-related factors (Ellram et al., 2013). Coase (1937) noted that various drivers of manufacturing locations decisions have differential impacts across various regions. Although some leaders view North American trade policies favorably, they also view the trade policy as a risk because of partisan politics and conflicts (Ellram et al., 2013).

Ellram et al. (2013) concluded that organizations were starting to look at their manufacturing location decisions through broader perspectives, including other strategic marketing objectives. Firm leaders give considerable weight to supply chain and strategic factors (Ellram et al., 2013). Fine (2013) took the offshore-outsourcing manufacturing location discussion to a higher level by noting that there has been an evolution in the view of sourcing and global manufacturing. Fine noted price consideration is no longer supreme, for the emphasis has shifted to increased complexity and transparency, which leads firm leaders to focus on intelli-sourcing, thereby balancing economics while protecting the company's reputation for delivering quality products (Fine, 2013).

Intelli-sourcing, in this context, meant that the company with the best sourcing team would be the most successful. Best sourcing involves combining local knowledge and a global network with the ability of parties to forge relationships in the supply chain (Fine, 2013). The relationship enables a collaborative reduction in cost, regardless of fluctuations in the currency exchange rates. The management style at Li and Fung, a Hong Kong supply chain coordination company founded in 1906 that provides logistics, distribution, services, and management services for companies globally, typifies successful intelli-sourcing. Li and Fung management has a core team of hundreds of managers and experts that comprises a multitude of nationalities, each with experience in

running businesses in multiple countries. Each of these experts has an in-depth understanding of at least two countries across the company's global network. The broad geographic spread and expertise of Li and Fung employees, customers, and suppliers render the question of onshoring or offshoring a moot issue. The only constant is sourcing of manufacturing, distribution, and logistics in a global multilayered setting (Fine, 2013).

Backshoring. Backshoring (or reshoring) refers to repatriation or relocation of activities or management decision making or functions from a firm, supplier, or independent party in another country back to a company's home country (Gylling et al., 2015). Gylling et al. (2015) asserted that since the mid-1990s, a large number of manufacturing firms in Europe offshored their manufacturing processes outside of Europe toward locations with lower costs. Bringing the once offshored manufacturing processes back to the home country (backshoring) is becoming a notable phenomenon, although not much research exists in this regard.

To understand offshore outsourcing and backshoring from the standpoint of small and medium enterprises, Gylling et al. (2015) conducted research on consecutive offshoring and backshoring decisions of a bicycle-manufacturing firm located in Northern Europe. Gylling et al. identified an over 30% cost advantage gained by the firm from offshore outsourcing during a 2-year period. The company leaders duplicated the more than 30% cost advantage gained from offshore outsourcing in the firm's own manufacturing in the home country using multiple steps: (a) keeping better track of processes for allocating costs, (b) focusing on supplier costs and exchange rate variation,

and (c) growing sales volume (Gylling et al., 2015). The insight from the study was how company leaders might overvalue offshore-outsourcing advantages and the need to calibrate an offshoring decision matrix carefully.

Steven et al. (2014) conducted a different study to explore how using foreign suppliers with serious product defects negatively affects a firm's performance. They concluded that offshore outsourcing has a greater impact on recalls than offshoring without outsourcing. Some researchers have contended that offshore outsourcing is becoming less popular than insourcing and backshoring. Insourcing is the internal collaboration within the firm, and backshoring is the repatriation of production back to a company's home country (Jalali & Wohlin, 2012). Although opportunities for cost savings from wage differentials from offshoring still exist, they are decreasing as the wages of offshore suppliers continue to rise (St. John et al., 2013). The offshoring trend continues to grow at a phenomenal rate, but the success rate of offshoring ventures is not growing at the same rate (St. John et al., 2013).

Kinkel (2014) noted that offshore outsourcing is the major future trend in spite of the difficulties associated with offshoring. For example, the European Manufacturing Survey revealed that only 4% of all European firms moved production activities back to their home country between 2010 and 2012 (Dachs & Zanker, 2015). Dachs and Zanker (2015) further contended that for every backshoring firm, there are more than three offshoring firms. Backshoring will not be a dominant force in bringing back hundreds of thousands of jobs to the industrial countries in the immediate future (Kinkel, 2014).

Kinkel (2014) conducted a study on the dynamics of German backshoring activities over the past 15 years, in response to the current research gap and prevailing debate that backshoring might help restore industrial competitiveness in low-wage countries. Kinkel also assumed that wages would increase in low-wage countries such as China between 2020 and 2025, which will erode their cost advantage. Kinkel and Zanker (2013) noted that approximately 400–700 German companies perform backshoring activities per year, and 2% of all German manufacturing were active in backshoring from 2010 to 2013. The European Manufacturing Survey data of 2006 revealed that approximately 12,000 manufacturing jobs returned to Germany, while approximately 86,000 jobs get offshored each year (Kinkel, 2014).

Fratocchi, Di Mauro, Barbieri, Nassimbeni, and Zanoni (2014) noted that labor-intensive activities are subject to backshoring in the case of efficiency-seeking investments, whereas market-seeking investments are more resilient and do not include cost considerations alone. The conclusion of the study was that backshoring does not seem a dominant force in bringing hundreds of thousands of jobs back to industrial countries in a short time frame. Still, backshoring could be a reasonable strategy for businesses to adapt to constantly evolving global markets (Kinkel, 2014).

Existing practices. Although there is a lack of literature and information on best practices in the offshore-outsourcing industry, scholars have given various suggestions on factors critical to success. Practitioners need to consider three drivers, such as the business strategy objectives, cost, and defect risk (Patil & Wongsurawat, 2015). Instead of focusing exclusively on costs, a better approach is to focus on a company's long-term

strategic business objectives and commitment regarding the offshore location selected (Patil & Wongsurawat, 2015). Zu and Kaynak (2013) noted that instead of relying on a single supply chain for all suppliers, companies need to use different management approaches based on their relationships with their partners.

Contract flexibility, competitive bidding, trustworthy relationships, and quality management are critical success factors for outsourcing vendor organizations in managing and executing outsourcing contracts (Khan & Khan, 2013). Niazi, Ikram, Bano, Imtiaz, and Khan (2013) identified factors such as better communication, face-to-face-meetings, knowledge sharing, and better client–vendor relationships as critical for establishing trust in offshoring relationships. Yang, Zhang, and Liu (2013) contended that successfully implementing offshore information systems requires all parties to both cross the boundaries of the different countries and organizations and confront the consequential challenges brought by intercultural differences.

Lacity and Wilcox's (2014) research findings on business outsourcing revealed that while outsourcing can deliver value to a client organization, detailed management and scrutiny are essential to derive the expected benefits. Rahman, Khan, Alam, Mustami, and Chang (2014) noted that knowledge sharing management plays an important role in offshore-outsourcing relationships and that a need exists to identify various types of risks, including product defect risks, in knowledge sharing management from the vantage point of participating partners. Bairi, Manohar, and Kundu (2013) asserted that a critical success for an IT service provider is for the provider to understand the end user of the firm's customer, including the customer's employees. Offshore

outsourcing is complex, especially among certain lines of products in IT support. Therefore, focusing exclusively on cost is risky (Patil & Wongsurawat, 2015).

Transition

Highlights of Section 1 included the problem statement, purpose statement, nature of the study, research questions, and conceptual framework. The focus of the problem statement and purpose statement was on global sourcing complexities faced by leaders of OEMs engaged in global offshore outsourcing. Section 1 also included a discussion on the suitability of case study design as the most appropriate and insightful strategy to explore and answer the study question. The scope of the literature search comprised a conceptual framework that included critical analysis with supporting and contrasting insights into the underpinnings of offshore-outsourcing decision-making processes.

Section 2 includes discussions on the purpose statement, the role of the researcher, participants, research design, population sampling, ethical research, data collection and analysis, population sampling, and research design. Section 3 includes a summary of the research process and findings, implications for social change, and a call for action.

Section 2: The Project

Section 2 provided a comprehensive, rich description of the single case research design used in the study. The section begins with a purpose statement, description of my role as the researcher, data organization and analysis techniques and the data collection instrument. The section also included detailed information on the role of participants, purposive sampling method, the design for reliability and validity of the study, along with details on ethical research considerations.

Purpose Statement

The purpose of this qualitative single case study was to explore manufacturing strategies used by business leaders of an OEM in the United States to minimize defects in offshore-outsourced products. The study sample consisted of two leaders of an OEM who have successfully reduced the defects in offshore-manufactured products. Implications for positive social change include decreasing exposure to defective offshore-outsourced products, increasing consumer safety, and improving trust in products that are completely or partially manufactured offshore.

Role of the Researcher

Using a qualitative single case study, I explored the strategies used by the management of the OEM to minimize defects in their outsourced products. According to Denzin and Lincoln (2011) in qualitative research, the researcher is an instrument of data collection, since data pass through a human instrument, rather than through questionnaires or machines. Simon (2011) noted that a qualitative researcher is a content mediator situated within the research and is an integral part of the research process. In

this regard, the typical ambition of most researchers is to discover the objective truth untainted by their personal interests, values, or beliefs (Thomas, 2003). However, subjectivity can be manifested in questionnaire designs, classification of data, and researchers' personal relationships with participants, among other areas of the research process (Thomas, 2003).

In the early part of my career, I worked at various branches of a major automobile manufacturer located in Michigan. I worked in both direct-line automobile production as well as quality control units. Similar to all other automobile manufacturers, the company I worked for imported some of the parts it used for automobile production from offshore OEMs. Like other manufacturers, it experienced product quality challenge issues. As a former manufacturing industry employee who has worked with OEM products, I had the potential for bias during my interviews with OEM leaders. My work experience and familiarity with the industry might also have enabled me to gain acceptance with participants, and collect data that are more robust.

To counter bias, I used bracketing to mitigate the potential for introducing my personal interpretations of experiences into the research process. Bracketing is a scientific process wherein a researcher suspends personal biases, assumptions, presumptions, or prior experiences when describing research or a phenomenon (Chan et al., 2013). Chan et al. added that bracketing increases a researcher's clarity by improving his or her engagement with participants and ability to maintain a focus on research questions. My role as the researcher for this study was to represent accurately how participants described their experiences, while not to inserting my personal experience of the world.

In conducting this research, I planned to ask probing questions, listen attentively, have a firm understanding of the issues explored, avoid biases, and conduct the research ethically. These goals are consistent with the *Belmont Report* protocol. An interview protocol includes a set of substantive questions, which reflects a researcher's line of inquiry (Yin, 2014). This protocol includes interviewing procedures, including scripts of comments for the conclusion of the interview (Jacob & Furgerson, 2012). The protocol also includes prompts for a researcher to collect informed consent forms and for other information needed from the participants. The interview protocol goes beyond the set of interview questions and becomes a procedural guide for directing the researcher through the interview process (Jacob & Furgerson, 2012).

Participants

In qualitative research, participant selection is purposeful which entails finding participants who can best inform the research questions based on their interests in the questions, and their understanding of the research findings (Young, Gropp, Pintar, Waddell, Marshall, & Thomas, 2014). The most important task in the study design phase is to identify suitable participants (Sargeant, 2012). Tramm, Daws, and Schadewalt (2013) indicated that recruitment and retention of eligible participants increase research validity. Simon (2011) recommended that researchers select participants who have an interest in the questions posed.

I selected two participants for this single case qualitative study who have strategic experience in minimizing product defects in outsourcing products. A high priority of mine was selecting an appropriate sample of participants who met my eligibility criteria.

These included working for the selected company and having an influential role in successfully addressing problems with imported parts. The two participants I selected were trained engineers in quality management with extensive experience minimizing product defects with the OEM.

Gatekeepers allow research to take place by giving access to participants (Stark, Garza, Bruhn, & Ane, 2015). For this research, I mailed a letter to the gatekeeper, who is the operations manager, and followed with a phone call to gain access to participants. In this communication, I explained the purpose of the study and solicited the participation of the employees of the company. Lyons et al. (2013) suggested that after gaining access to the participants, researchers should use interpersonal skills to promote positive interactions with participants and empower the participants by engaging them as cocreators of the study. Lyons et al. noted that engaging participants in a study encourages them to contribute better to the research solutions, which can improve the quality of the analysis deduced. Torto (2011) stressed the importance of interpersonal relationships in gaining access to participants.

Selection of participants in qualitative study is purposeful and based on who can best inform the research questions and augment the understanding of the phenomenon under study (Sargeant, 2012). The two selected participants for my study provided useful data and perspectives related to the research phenomenon under study. A key strategy for establishing a working relationship with participants is to link participants' interest to the study findings, which may deepen their curiosity about the research (Simon, 2011). The inability to recruit and retain the necessary number of participants in a project poses an

equally grave threat to the internal and external validity of a research project (Tramm et al. (2013). For this research, I selected study participants purposely. The selected participants were management leaders with influential roles in minimizing defects in imported parts.

Research Method

In this section, I expand my discussion in Section 1 of the nature of my study. In this study, I explored manufacturing strategies used by business leaders of an OEM in the United States to minimize the defects in offshore-outsourced products. Three research methods considered were (a) qualitative, (b) quantitative, and (c) mixed methods (Onwuegbuzie & Corrigan, 2014). Crotty (1998) asserted a researcher must understand three framework elements in order to select the ideal research method for a study. These include: (a) philosophical assumptions about the knowledge claims, (b) strategies of inquiry, and (c) detailed procedures for collecting, analyzing, and writing. Qualitative, quantitative, and mixed methods researchers frame each of these elements differently (Crotty, 1998).

Caruth (2013) noted one basic difference between qualitative and quantitative research is that the objective of qualitative research is to produce a hypothesis, whereas the goal of quantitative research is to recommend a hypothesis to accept or reject. Researchers conducting quantitative research strive to identify and isolate particular variables inside a context and to make correlative relationships (Laws & McLeod, 2004). The focus of qualitative research is on a holistic view of the target studied via interviews, observations, and documents. I chose a qualitative research method because the approach

involves exploring topics in more depth and detail than in a quantitative design (Matthew et al., 2013). Using a qualitative research approach in this study led to a better understanding of the concept or phenomenon for successful strategic experience in minimizing product defects in offshore products (Wowak & Boone, 2015).

The quantitative approach is not appropriate for this study because the method does not include a focus on meaning or experiences or provide an in-depth description of participant experiences (Yin, 2011). A quantitative method, in contrast to the qualitative method, follows a systematic and objective process with numbers used to express relationships between variables (Simon, 2011). The idea of mixed methods, which includes both qualitative and quantitative methods, originated in a study by Campbell and Fiske (1959), who used multiple methods to evaluate the validity of psychological traits. Caruth (2013) defined mixed methodology as including both qualitative and quantitative methods in the same research study, developed in response to the perceived limitations of qualitative and quantitative designs. Both methods combined provide additional insight into research problems and questions (Frels & Onwuegbuzie, 2013).

Research Design

Single case study design is most appropriate for this study and aligns well with answering the central research question regarding what strategies leaders of a U.S. OEM use to minimize the defects in offshore-outsourced products. The exploratory single case study was most appropriate for this study. Yin (2014) noted that in a single case study, the researcher focuses on a problem or concern, chooses a bounded case, and delves into an in-depth understanding of the problem. A case study is a popular approach among

qualitative researchers that includes methodological flexibility with the incorporation of different exemplary positions, methods, and study designs (Hyett, Kenny, & Dickson-Swift, 2014). Crowe et al. (2011) contended that case study is a method to explore and assess multifaceted issues in a natural setting. As such, the business leaders of an OEM will add insight to the research question, and a manufacturing facility is an appropriate site for the research.

An intrinsically nonbounded phenomenon could not be a case study (Merriam, 2013). Yin (2014) noted that the form of research questions asked could provide an important clue regarding the appropriate research design for a study. Researchers can answer questions such as what, how many, and how often without using a case study, but to respond to how or why questions, researchers would lean toward using a case study or a field experiment (Yin, 2014). Yin noted that case studies differentiate into single case studies and multiple case studies, but both designs are variants within the same methodological framework.

A single case study takes place within an organization, and the aim is to make significant contributions to knowledge and theory building and help refocus future investigations (Yin, 2014). Marshall and Rossman (2014) noted that unlike single case studies, multiple case studies have the advantage of allowing researchers to explore differences among cases with the objective of replicating the findings across the cases and understanding the phenomenon. Evidence from a multiple case study is more compelling compared to a single case study. Yin (2014) observed that conducting a

multiple case study could require extensive resources and time beyond the means of a single researcher.

Before selecting a design for the study, I reviewed the five top commonly employed qualitative design methodologies and focused on the central purpose of each design. The designs evaluated were (a) phenomenology, (b) ethnography, (c) case study, (d) constructivism and (d) narrative design (Merriam, 2013). Although the four types of research designs differ from each other, they all share the essential characteristics of qualitative research. The shared characteristics include a search for meaning and understanding, the researcher as the primary instrument of data collection and analysis, an inductive investigation strategy, and a richly descriptive conclusion (Merriam, 2013).

A phenomenological research design is appropriate when the goal of a study is to understand the meaning or essence of human experiences concerning a phenomenon, as described by study participants (Moustakas, 1994). Rennie (2012) noted that phenomenology entails studying the participants' world. Moustakas (1994) claimed that the focus in phenomenology is an understanding of the lived human experiences through a procedure of studying a small number of subjects in an extensive engagement to develop patterns and the meaning of relationships. The phenomenology research design was not appropriate for this study because this study did not involve studying participants for their lived human experiences (Reiter, Stewart, & Bruce, 2011).

Ethnography usually involves examining the culture of a specific group within a community (Laws & McLeod, 2004). Ethnography is a sociocultural interpretation of the data that involves recreating for the reader the shared practices, beliefs, folk knowledge,

behaviors, and artifacts of some clusters of people (LeCompte, Preissle, & Tesch, 1993). The focus of ethnography is culture sharing in groups and the influence of the culture (Goodrich et al., 2014). Ethnography was not appropriate for this study because the focus was not on interpreting a culture-sharing group.

Clandinin and Connelly (2013) noted that in narrative design, the researcher studies the lives of individuals and asks a few individuals to provide stories about their lives, thereby actively involving the participants in the research. The researcher, in turn, retells the story in a narrative chronology by combining the participant's life story with the researcher's, resulting in a collaborative narrative. Pinnegar and Daynes (2007) noted that the focus of narrative design is on stories of individuals' lived and told experiences; this focus makes the narrative approach challenging to use in research because the researcher must collect extensive information about the participant that explains the multilayered context of life. A narrative design was not appropriate for this study because the focus of narrative design is in understanding human motivations and behaviors and on interpreting experiences and stories (Clandinin & Connelly, 2013). Constructivism includes an assumption that individuals construct the meaning of events and experiences. Therefore, people construct the realities in which they participate (Lauckner et al., 2012). Research with the constructivism design involves an attempt to understand how research participants construct meanings around the phenomenon explored. This study was not about participants constructing their realities about a phenomenon of interest. Therefore, constructivism was not appropriate for this study.

Population and Sampling

In this single case study, because the selected company is a manufacturing firm whose leaders have experience minimizing the product defects in outsourced products, a large sample size was not necessary. Thomas and Magilvy (2011) advocated small sample sizes in research that consists of elite or expert participants to provide robust insight. Patton (2015b) contended that case study sampling involves choosing a small number of important cases to produce the best information and have the greatest impact. Agyepong and Adjei (2008) asserted that sample size is smaller in case studies, and chose two participants for their case study to document their experiences with national health insurance in Ghana. To ensure the achievement of data saturation and establish rigor in the study, I chose a minimum purposeful sample of two participants and collected data until data saturation occurred. The selected sample size was sufficient to answer the research question. Morse (2015) added that smarter and more cognitively astute researchers need smaller sample sizes. Suri (2011) claimed that a higher likelihood of reaching data saturation occurs if the data collection is purposeful and the research question is precise.

After obtaining permission to perform the research (see Appendix A), I conducted a semistructured face-to-face interview in person in a conference room setting at the firm's location. Face-to-face meetings provide researchers the opportunity to observe participants' expressions, which add depth to the interview process and the ability for the researcher to adapt the questions as necessary (Borrego, Douglas, & Amelink, 2009). The

interview took place in a meeting room locked from the inside, and other people were not able to see the ongoing interview.

The scope of the population and sampling argument serves to justify decisions regarding participants and the sampling method, as well as to ensure data saturation (Sandelowski, 2007). The purpose of this qualitative single case study was to explore the manufacturing strategies used by business leaders of an OEM. The selected research population was two business leaders of an OEM who have reduced the defects in offshore-manufactured products. Morris (2014) suggested selecting participants who have expert and current exposure with the topic and interest in the research findings, due to the alignment of their professional goals with the study goals. For the purpose of this study, I defined a leader as an individual who influences the selected firm's strategy in minimizing defects in offshore-manufactured products.

Sargeant (2012) noted the importance of selecting a target population with authentic experience on the research topic. Adhering to the opinion of Sargeant, the population I selected for this study was management leaders with an OEM that had strategic manufacturing experience in successfully minimizing product defects in outsourced products. I started the study with purposive sampling that ensured the right mix of well-informed expert participants. Marshall and Rossman (2014) noted that well-developed sampling decisions influence the soundness of any research study, including participants who meet a specified criterion. Suri (2011) added that participants should meet all prescribed, required experience to ensure the data generated from the study answer the research question. Field-oriented research studies similar to the current study

do not include statistical generalizability as a focus and often use nonprobability purposive samples. Patton (2009a) noted that up to 16 different types of purposive samples exist, but the common element is that the participants meet specific criteria relevant to the research objective. In this study, participants' strategic experience in minimizing product defects in outsourced products was the major criterion for selection. This criterion also ensured the resulting data answered the central research question.

In qualitative research, purposeful sampling entails recruiting participants who have experienced the key phenomenon explored in the study (Sargeant, 2012). Patton (2009a) noted that in qualitative inquiry, there are no rules for sample size and the sample size is a function of the purpose of the investigation. Mason (2010) added that sample sizes for qualitative case studies are much smaller than samples in quantitative research.

Ethical Research

The Walden University Institutional Review Board (IRB) provides the ethical parameters for the research to ensure researchers address ethical issues at each phase of a study. Institutional review boards are a comprehensive global ethical system whose primary goal is to safeguard participants and communities from harm resulting from research (Sikes & Piper, 2010). The study's ethical research foundation incorporates respect and justice by maximizing potential benefits to organizations and participants and simultaneously reducing exposure to unintended harm (Cordner, Ciplet, Brown, & Morello-Frosch, 2012). Nishimura et al. (2013) noted that while obtaining informed consent is a cornerstone of research, participants' comprehension of the information presented in the consent form is often low. In compliance with the Walden Doctor of

Business Administration study process, I received IRB approval number 10-28-16-0363188.

Potential participants received an informed consent form to complete, sign, and return to participate in the study. The consent form indicated that interview responses and all personally identifying information would remain confidential. The interview procedure safeguarded the anonymity of the participants during the study because the procedure did not involve any attempt to disclose contact data or names. Stahl (2013) claimed that researchers should hold nonmedical research to the same standard as medical research regarding beneficence, justice, and respect. Participants acknowledged their willingness to participate in the study by reading and signing the consent form. Coleman and Bouesseau (2008) claimed that participants should understand the potential benefits and risks from participating in the study. I advised participants that they were granting permission for audio recording the interviews and that I would erase the recordings after transcription to safeguard participant confidentiality. Holland, Browman, McDonald, and Saginur (2013) noted that participants might interpret consent forms differently. To ensure understanding, participants returned the signed consent forms or confirmed verbal consent at the beginning of the interview.

The participants received invitations to participate with detailed information on the purpose of the study, my role in the study, and participants' expectations (see Appendix A). Participation in the research was voluntary with no incentives provided. There was no payment to participants for participating in the study or threats of job loss for not participating. Mitchell and Jolley (2013) recommended following an ethical and

valid research process. The consent form indicated that participation was voluntary. The stress or risk associated with the interview was considered minimal and akin to daily life activities. Participants could cease to answer questions or request withdrawal at any time during an interview or after the completion of the interview.

Selby and Krumholz (2013) claimed that the consent process ensures participants have sufficient information to make knowledgeable decisions. The consent form contained both my e-mail address and phone number so that a participant could withdraw from the research study at any time. The words *voluntary participation* appeared on the consent form. I tagged all the research data collected from participants, including notes, using an alphanumeric code for each participant such as Participant 1, Participant 2, and so forth. The alphabetic code replaced participants' names and departments, and I kept a list that matches participants' codes and identities separately. The purpose of the list was to identify participants in the event a participant wished to withdraw. Gelfond, Heitman, Pollock, and Klugman (2011) asserted that lapses in integrity could lead to public distrust of a study. In line with Walden University's research protocol, the research data were only available to the researcher and the researcher's doctoral committee. To protect participants' rights, I secured all paper-based recorded or digital research data from the study to remain in a locked cabinet in my home for 5 years and then the data will be destroyed.

Data Collection Instruments

The data collection steps in the study adhered to the IRB's guideline of scrupulously safeguarding participant confidentiality and data. Gill, Stewart, Treasure

and Chadwick (2008) contended qualitative research includes a variety of data collection methods including (a) observations; (b) visual or textual analysis of videos, books, or company archival documents; and (c) group or individual interviews. If the selected company was reluctant to release archival company documents, I planned to use the company's website, annual financial statements or any public source of information to obtain approximate archival information. Interviews involve exploring the views, beliefs, and motivations of participants, while focus groups involve using group dynamics to engender qualitative data (Gill et al., 2008).

The most prevalent data collection methods used in qualitative research are interviews and focus groups. Hesse-Biber and Leavy (2010) claimed that qualitative research typically entails three types of interview designs: (a) semistructured, (b) structured, and (c) low-structured or unstructured. Gill et al. (2008) noted that structured interviews are questionnaires administered verbally in which the interviewer asks predetermined questions, with little provision for follow-up questions. Conversely, there is little or no organization in the implementation of unstructured interviews. Such interviews may start with the following question: "Can you tell me about your experience with . . . ?" Unstructured interviews also lack predetermined interview questions, provide little guidance, and are usually time-consuming. A semistructured interview is a compilation of several key questions that define exploratory areas while allowing interviewers to dig deeply in pursuing a response (May, 1991). DiCicco-Bloom and Crabtree (2006) noted that in-depth semistructured interviews are the most widely

used interview format for qualitative research and allow interviewers to delve deeply into social and personal matters.

To collect data for this study, I used semistructured interviews with open-ended questions, accompanied by a script of prewritten questions aligned to the central research question, to keep the focus of the interview on the topic, while allowing latitude with the answers (see Appendix C). The open-ended questions in these interviews allowed participants the latitude to give as much or as little information they believed necessary (Walden, 2013). My script of prewritten questions for the interview went beyond just a list of interview questions but included prompts and overall guidance for conducting the interview. Jacob and Furgerson (2012) claimed that an interview protocol goes beyond interview questions. The protocol may also include a script of what an interviewer will say before the interview, and what the interviewer will say at the conclusion of the interview. The interview protocol included a set of questions and a procedure for directing the interview process (see Appendix D).

I conducted a semistructured face-to-face interview in a locked conference room at the firm's location after obtaining permission to perform the research. To enhance reliability and validity of the qualitative study, I implemented a data saturation strategy of continuously conducting interviews until there was no new information added to the codebook. To ensure sampling adequacy, I conducted member checking follow-up interviews to obtain in-depth information.

To enhance the reliability and validity of the process of collecting data for the study, I conducted member checking during and after the interviews by restating or

summarizing information from participants in writing and then shared the interpretations with the participants to affirm accuracy and completeness (Fusch & Ness, 2015). Harper and Cole (2012) noted that when conducting an interview in qualitative research, member checking is an important quality control process because study participants have the opportunity to review their statements for accuracy. In the member checking process, a researcher attempts to improve the credibility, accuracy, and validity of data collected during an interview. The benefit of member checking is that it gives a researcher the opportunity to verify the accuracy and completeness of the information summarized by the researcher, thereby augmenting the validity of the study (Cohen & Crabtree, 2008).

Another method for improving the rigors and validity of interview-based qualitative research is interview transcript review, which I did not use in the study. In interview transcript review, interviewees receive the interview transcript of their interviews to verify accuracy and provide clarifications (Hagens, Dobrow, & Chafe, 2009). I did not use the transcript review method in this study because in a case study with small census samples, member checking is very effective in generating in-depth data and facilitating reaching data saturation (Jonsen & Jehn, 2009).

Data Collection Technique

Opdenakker (2006) noted that the face-to-face interview was the dominant technique used in qualitative research between 1980 and 2000; from 2000 until 2016, telephone interviews were more prevalent, although they were in competition with computer-mediated communication such as e-mail and chat boxes. Face-to-face interview technique used in this study to collect data on the participants' experiences on strategies

they use to minimize product defects in outsourced products. I used a semistructured interview design coupled with probing follow-up questions to provide robust data necessary for qualitative research analysis and additional insights. Turner (2010) noted that the preparatory stage of interviewing includes various ingredients, including establishing rapport, choosing a least distracting setting for the interview, explaining the purpose of the interview, presenting confidentiality terms to participants, explaining the interview format, clarifying the duration of the interview, and providing interviewer contact information. Researchers should ask if a participant has any questions before an interview begins, and use other forms of data collection instruments to obtain a robust assortment of information for analysis.

The systematic data collection process for this study entailed participants receiving an invitation to participate in the study (see Appendix A). Participants signed consent forms to take part in the face-to-face interviews which lasted for 60 minutes. I scheduled an appropriate time and place for the face-to-face interview with participants at the facility of the selected company. The interview protocol involved informing each participant about the purpose of the research and the potential risks and benefits of participating. A script of prewritten questions accompanied the semistructured interview design with open-ended questions to keep the focus of the interview on the topic. I used a tape recorder during the interviews and reminded participants to turn off cell phones during the interview.

Appendix C includes sample interview questions designed to elicit views and opinions from participants. I reiterated the assurance of confidentiality of the research to

keep participants at ease and to ensure their willingness to share their experience on strategies for minimizing product defects in outsourced products in their company. Subsequent steps entailed synchronizing the recorded data with the observational notes and used a transcriptionist to replace the sparse observational interview notes with a full verbatim transcript (Tessier, 2012).

Removal of filler words enhances readability (Davidson, 2009). In an attempt to augment readability of the data from the interview, a first-pass edit removes filler or repeated words such as "you know," "umm," "ahh," and other redundant phrases. Subsequent steps smoothed out punctuation errors, syntax, grammar, and wordiness (Morris, 2014). I entered the data in QSR NVivo 11 for analysis after each participant confirmed the first pass of the transcription and gave participants additional time to ask any pertinent questions about the study.

Yin (2011) noted the need to check the structure of the instrument. As a substitute for a pilot study, the iterative process check includes interviews of three eligible participants to assess the interview process and make any necessary adjustments. In qualitative research, separate qualitative approaches are unnecessary because the interviewer can listen to the transcript of the first three interviews to improve the subsequent questions or protocol (Holloway, 2008). A pilot study is unnecessary when using validated questions (Ferreira & Otley, 2009). To enhance the accuracy, reliability, and validity of a recorded interview, Harper and Cole (2012) explained that member checking should include a quality control process. I conducted member checking for the study by restating or summarizing information from participants in writing during and

after the interview and then shared my summarized information and the interview transcripts with the participants to gauge completeness and accuracy. Using member checking in interviews in a case study with small census samples could generate in-depth data and lead to reaching data saturation faster (Jonsen & Jehn, 2009).

An advantage of the face-to-face interview technique is the opportunity to include social cues (Opdenakker, 2006). Such social cues include voice, body language, and intonation of the interviewee, which can provide the interviewer with information to complement the verbal answers to questions posed. The value of social cues depends on the type of information sought from the interviewee (Emans, 2004). For example, if the interviewer wants to know the interviewee's attitude toward a labor union, then social cues are important.

Wengraf (2001) discovered no significant time delay between questions and answers in the face-to-face interview because the interviewer and the interviewee can react directly to each other's statements. The advantage of this synchronous communication is better spontaneity without extended reflection. Wengraf noted that because of the synchronous character of a face-to-face interview, the interviewer must concentrate more on the questions asked and the answers provided, which is a situation termed *double attention*. Double attention means listening to the interviewees' responses and at the same time ensuring the interviewer gets responses with depth and detail within the allotted fixed time for the interview.

Bryman (2014) claimed that tape recording a face-to-face interview has the advantage of a more accurate interview report than writing notes. Conversely, taking

notes during the interview is important, even if the researcher is recording the interview, to ensure complete answering of all questions, or if the tape recorder malfunctions, and to simultaneously help with the protocol. Another disadvantage of tape recording the interview is the time required to transcribe the recording.

Data Organization Techniques

In the data organization phase, researchers start with a voluminous collection of qualitative data to achieve a clear, understandable, insightful, and trustworthy analysis (Gibbs, 2007). The objective of the data organization is to implement strategies to manage, retrieve, sort, catalog or label, and comprehensively keep track of the research data while simultaneously giving meaning to the analyzed information obtained from the research. Despite the sorting, indexing, retrieving, and collecting of research data generated in a research, the collected data must create good supporting evidence (Johnson, Dunlap, & Benoit, 2010). To make the data helpful requires good organization and a structured data approach. Qualitative data analysis involves both data handling and data interpretation. Data analysis begins with the orderly collection of data, then reducing the data into summaries, before finally finishing with interpretive analysis and conclusion (Flick, 2007).

Yin (2011) claimed that a hallmark of case study research is using multiple data sources such as documentation, archival records, interviews, and recordings to enhance data credibility. Baxter and Jack (2008) noted the need to converge and integrate the data from multiple sources to facilitate a holistic understanding of the phenomenon explored. I used data organization and storage mechanisms comprised of (a) a folder containing a

raw data file of each participant on a password-protected computer, and (b) two labeled manila folders kept in a secure location. I tagged all the research data collected from participants, including notes, using a code beginning with Participant1 that replaces participants' names and departments and stores the data in a data folder for interviews. A computerized database is often necessary to organize and manage the voluminous amount of data (Wickham & Woods, 2005). The QSR NVivo 11 software-supported files remained in a separate folder in the data folder for interviews. I maintained a separate list matching the participants' identifier, such as Participant 1, Participant 2, and so forth.

I automatically backed up and saved to a private secure cloud drop box any updates made to the folders or files on the password-protected computer. I placed all printed materials and papers into two separate, sealed, and labeled manila envelopes and housed them in a secure location. The first manila folder contained hard copies of interview transcripts, consent documentation, and handwritten notes. The second manila envelope contained shared company documents or related observational notes. The information and data from the study will remain in a locked container for 5 years from the time Walden University administrators approved the study and then I will destroy them. The password-protected file folders will reside on a personal computer for 5 years.

Data Analysis

The data analysis in this qualitative single-case study consists of using multiple sources of data. I used the methodological triangulation method because it entails using more than one technique. The techniques include interviews, documents, and observations, to collect data and check the consistency of the findings from the data

collected. Onwuegbuzie and Corrigan (2013) noted that data analysis entails a systematic review of data components to arrange, interpret, and discover underlying meanings. Wilson (2014) claimed that triangulation is the use of multiple methods, data, or investigators in the study of a phenomenon, and not an end in itself but rather a vehicle for conducting a study. The primary source of data in this study is the research data obtained from using semistructured interviews and open-ended questions (see Appendix C). The secondary source of data was coded information from field notes and a review of company records. Yin (2014) noted that case study is an ideal methodology when there is a need for holistic, in-depth investigation and that the major strength of case studies is the prospect of bringing out details from the viewpoints of participants using multiple sources of data.

Tellis (1997) described the case study as a triangulated research strategy. Stake (1995) described triangulation as protocols used to ensure accuracy and an ethical need to validate processes. Denzin (2011) noted that there are four types of triangulation: (a) data source triangulation, when researchers look for data consistency in different contexts; (b) theory triangulation, when researchers with varying viewpoints examine the same results; (c) methodological triangulation, when researchers use more than one kind of method to examine a phenomenon; and (d) investigator triangulation, when several researchers scrutinize the same phenomenon. Tellis indicated that a frequent criticism of case study research is that the results are not widely applicable in real life.

The first phase of the data analysis is to transcribe the answers from participants and carefully read and reread the transcript as a whole and line-by-line. The second phase

is uploading the transcribed document file into QSR NVivo 10 content analysis and software for analysis. Edward-Jones (2014) described the QSR NVivo 10 software as a versatile tool adaptable to a user's specific needs. James (2012) noted that content analysis software was good for indexing, coding, and storing qualitative data. QSR NVivo 11 helped in determining themes and patterns from the interviews. Kaefer, Roper, and Sinha (2015) claimed that QSR NVivo 10 facilitates analytical flexibility and can enhance the transparency and trustworthiness of the qualitative research process. I used the themes generated from the software to align with the conceptual framework for understanding strategies used by the leaders in the selected organization to minimize product defects in outsourced products.

The second phase of the data analysis process entailed a review of company records, procedures, and policies to ascertain if emerging data aligned with strategies to mitigate product defects and serve as a method of triangulation (Shoup, 2015). The third phase of the data analysis matched the observational records with the codes from the interview for alignment (Klonek, Quera, & Kauffeld, 2015). Matching patterns boost the trustworthiness and rigor of qualitative research (Trochim, 2000).

Reliability and Validity

In ensuring that a qualitative research is free of bias, reliability and validity are the two concepts often employed to identify and measure the bias (Bernard, 2013). Ritchie, Lewis, Nicholls, and Ormston (2013) noted that in the broadest conception, reliability means sustainable, and validity means well grounded; the two concepts help to define the strength of the data. The need for reliability and validity are of particular

concern in a qualitative study regarding using the soundness of the evidence from a particular study as a criterion to transfer the findings to another context (Ritchie et al., 2013). Morse, Barrett, Mayan, Olson, and Spiers (2008) asserted that validity and reliability augment the ability of a reader to corroborate the dependability, trustworthiness, and accuracy of research conclusions.

Reliability

Reliability refers to consistency in assessments. Validity, credibility, and reliability of qualitative research ensure that the participants believe the result and that other researchers can dependably repeat the study (Lapan, Quartaroli, & Riemer, 2011). The responses from the interviews and observed behaviors during the interview form a chain of evidence (Lapan et al., 2011). Yin (2014) noted that in a case study, the chain of evidence strengthens the reliability. In this study, the chain of evidence included the multiple sources of data (interviews, observation notes, company records) linked together to form this chain. Gibbert and Ruigrok (2010) noted that reliability might increase when the coded and transcribed field notes are consistent with the coded interview responses.

To verify the reliability of data, I conducted rigorous member checking to ascertain whether the participants understood the questions asked and that the responses given by the participants reflected their thoughts. Through member checking, the participants indicated their understanding of the question and confirmed the reflection of their thoughts in the responses. Member checking enhances reliability (Lietz & Zayas, 2010). Data demonstrate reliability when respondents answer similarly to questions (Gibbert & Ruigrok, 2010).

QSR NVivo 11 ensured coding consistency and data analysis, as well as to ensure external and internal dependability. Onwuegbuzie and Corrigan (2013) recommended using QSR NVivo 10 for vigorous content analysis in qualitative research. A researcher reaches the data saturation point after determining that no new coding, no new information, no new themes, or no more data are necessary (Fusch & Ness, 2015). Corbin and Strauss (2015) contended the data saturation point occurs when there are no new insights, no new themes, no new issues regarding the category of data, and a point to end the research. In summary, I embedded dependability thresholds in the study.

Validity

The perception of validity is the accuracy of an assessment. Bernard (2013) noted that validity is one of the ultimate goals of research, reflected in trustworthy, accurate, data collection instruments and findings. Bernard also recommended validating collection instruments through questions that elicit participants' accurate recall of lived experience. Participants validate a research study when they perceive the result as credible, findings align with the conceptual framework, and the data are transferable (Yilmaz, 2013). The quality of the data collection instrument is fundamental in ensuring research validity. The study supported data validity by using both the interview guide (see Appendix E) and the research protocol checklist (see Appendix D). Lincoln and Guba (1985) recommended four effective criteria for judging the soundness of qualitative research: credibility, transferability, dependability, and confirmability. I enhanced validity in this research by returning to the participants who generated the data for member checking to ensure the participants recognized my interpretations as accurate representations of their

experiences. I coded the interview effectively for analysis and used a peer-debriefing approach to ensure a truthful analysis of data.

Dependability

Dependability is synonymous with reliability in quantitative research and refers to data stability (Houghton, Casey, Shaw, & Murphy, 2013). Gibbert and Ruigrok (2010) noted that dependability is the degree to which a third party may audit and explain the research approach. Thomas and Magilvy (2011) added that an audit trail might include (a) discussing the purpose of the study, (b) describing the why and how of participant selection for the research, (c) discussing the data collection method, and (d) describing the interpretation and presentation of the data. For this study, I reviewed with the gatekeeper of the company the research study design and the design's implementation. The review process with the gatekeeper also entailed describing the purpose of the study; discussing criteria for selecting participants. To increase the dependability of the study, I conducted member checking, also known as informant feedback, by returning to the participants from whom I collected data with my interpretations of the interviews. The objective of returning to the participants was to ensure the participants recognized my interpretations as accurate representations of their experiences.

Creditability

Creditability is a proxy for internal or external validity, confirmability and dependability are proxies for reliability and objectivity, and transferability is a proxy for external validity (Lincoln & Guba, 1985). Creditability is similar to internal validity in quantitative research and refers to the responsibility of a researcher to represent the

multiple realities revealed by the informant as adequately as possible (Thomas & Magilvy, 2011). Levin (1994) defined research creditability as the *potential impact* of the research, which is not sufficient to evaluate the enduring value of a study. Levin claimed that the credibility of a research is based on the strength of the methodology (Levin, 1994). To ensure creditability, I reviewed the participants' transcripts from the data generated from the interviews to look for similarities across and within participants. A credible qualitative study includes an accurate interpretation or description of human experience that other people who also share the experience would recognize immediately (Krefting, 1991).

Examples of strategies I used to establish creditability included member checking and data interpretation to identify and document recurrent themes and patterns. In this regard, I spent sufficient time with the interviewees, including return visits, to verify reappearing patterns in the data generated from the interviews. Creditability requires spending extended time with informants to enable the identification and verification of current patterns (Lincoln & Guba, 1985). Another strategy I used to ensure credibility for the study was methodological triangulation. Methodological triangulation entails using more than one technique, such as interviews, documents, and observations, to collect data and determine the consistency of the findings from the data collected. Stake (1995) described triangulation as protocols used to ensure accuracy and ethical need to validate processes.

Transferability

Transferability refers to the extent to which the results of a qualitative research are transferable to other contexts or locations (Yilmaz, 2013). A detailed description of the assumptions and research context enhances transferability (Polit & Beck, 2010). Trustworthy research is transferable. I leave the transferability prospects of the study findings to future researchers who may decide the transferability. Part of the research requirement is that findings are transferable. Lincoln and Guba (1985) asserted that trustworthiness translates to having confidence in a qualitative study and that triangulation enhances qualitative trustworthiness.

Confirmability

Shenton (2004) contended that to achieve confirmability, researchers should demonstrate that their findings emerge from the data and not from the predisposition of the researcher. Shenton further implored methods teachers to ensure students undertaking a qualitative inquiry follow a model that ensures trustworthiness. Patton (2009a) described the concept of confirmability as the qualitative researcher's focus on objectivity and ensuring that the derived findings are the informant's ideas and not the researcher's. The role of triangulation in confirmability is to mitigate the effect of investigator bias (Patton, 2009a). A crucial criterion for confirmability is the ability of the researcher to admit personal predispositions (Huberman & Miles, 2002). In this regard, researchers should include beliefs underpinning the decisions made and the methods embraced, as well as the rationale for favoring an approach.

Data saturation. Corbin and Strauss (2015) identified data saturation as a point where there is no new insight, no new coding, and no issues regarding the categories of themes. I enhanced the reliability and validity of the data collected for the study by conducting member checks after the interviews. Member checking, also known as informant feedback, entails summarizing information from participants and then sharing the information with the participants to affirm completeness and accuracy (Fusch & Ness, 2015). I continued member checking with the participants until there was no new information. Guest, Bunce, and Johnson (2006) claimed that member checking follow-up interviews might lead to saturation by obtaining in-depth information and deducing robust academic objectivity. Guest et al. asserted that member checking entails a review and interpretation of the interviewing transcripts, providing the printed synthesis to the participants, asking the participants if there is additional information they would like to provide, and continuing the member checking until there is no new information.

Cohen and Crabtree (2008) noted that a major advantage of member checking is that member checking provides researchers with the opportunity to verify a study's completeness and thereby strengthens validity. In this case study of an OEM firm whose leaders have had successful experience in minimizing product defects in offshore-manufactured products, a large sample size was not necessary. Agyepong and Adjei (2008) asserted that sample size is smaller in case studies, and the authors chose only two participants for their case study documenting their experiences with national health insurance in Ghana. Morse (2015) added that the smarter and more cognitively astute a researcher is, the smaller the sample size needed. Suri (2011) indicated that the likelihood

of reaching data saturation is higher if the data collection is purposeful and the research question is precise.

Transition and Summary

In Section 2, I restated the purpose statement for the qualitative single case research study, which is to explore strategies used by business leaders of an OEM in the United States to minimize the defects in offshore-outsourced products. Section 2 also included the role and responsibility of the researcher, the rationale for the choice of the qualitative single case study design, the definition of sampling methods, and a discussion on data reliability and validity. The quality indicators of data analysis include validation of data collection instruments and data organization techniques, as well as protocols demonstrating the construction of a valid study. Section 3 includes the findings and the conclusion of the study, with implications for social change and recommendations for further studies.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative single case study was to explore the manufacturing strategies used by business leaders of an OEM in the United States to minimize defects in offshore-outsourced products. To better understand the successful manufacturing strategies used by business leaders of my target company. I posed the following research question: What manufacturing strategies do leaders of an OEM use to minimize the defects in offshore-outsourced products? Discussion of my findings commences with an extensive review of other peer-reviewed studies which was the foundation of my conceptual framework.

According to Moe et al. (2014) in agency theory company leaders shift production and sourcing of materials from their local suppliers to low-cost countries primarily to take advantage of inexpensive labor and materials. The first unexpected finding from my interviews with the two expert participants contradicted the assertion in agency theory that lower cost is the primary reason why companies source offshore. The two experts revealed that they were equally concerned with the quality of the offshore manufactured products they purchased. A second interesting finding which contradicted key assumptions in agency theory was that the two participants viewed the offshore parts they purchased to be equal in quality to locally produced parts and even sometimes better. The counter suggestion in agency theory was that offshore outsourcing created a process riddled with complications and difficulties, thereby predisposing offshore produced products to defects and recalls (Steven, 2015; Steven & Britto, 2016; Tingting & Ritta,

2016). A third contradictory finding from my interviews also challenged agency theory. Eisenhardt (1989) noted that in agency theory, there is sometimes misalignment of interest in the principal-agent relationship that can result in conflicts of interest, mistrust, and power struggles between the principal and the agent. Contrary to this assertion in agency theory that contracting parties distrust each other, I discovered through overview of key findings in this study that the participants had high levels of trust and confidence in their suppliers.

Presentation of the Findings

The overarching research question for this case study was the following: What manufacturing strategies do leaders of an OEM use to minimize defects in offshore-outsourced products? To answer this question, I validated the data I collected through cross corroboration using multiple sources. Cope (2013) recommended the use of multiple sources to enhance a study's credibility. Data and corroboration were (a) in-depth interviews with follow-up memberchecking with two engineering experts at the OEM; (b) analyses of company documents (specifically, trend analysis of the company's quality monitoring processes), as well as scorecard information from external sources on the company's quality performances indices; and (c) reviews of my observational field notes. Data analysis resulted in four categorical themes, which exemplified how the selected OEM had successfully minimized defects in offshore-outsourced products.

These emergent themes provided me with a structure for focusing on the strategies used by OEM to successfully minimize defects in offshore-outsourced products. The themes included (a) factors the OEM considered in selecting offshore

suppliers, (b) strategies for minimizing defects in offshore-outsourced parts, (c) validation of the effectiveness of strategies used for minimizing defects, and (d) trust and working partnerships with offshore suppliers. Together, the themes delineated actionable steps that other offshore outsourcing businesses might take in order to make supplier selection decisions and mitigate offshore-manufactured defects.

Theme 1. Factors Considered in Selecting Offshore Suppliers

The first theme that emerged was factors in selecting offshore-outsourced suppliers. Theme 1 included three subthemes: (a) cost and quality of sourced products, (b) supplier track record and competence, and (c) supply chain synergy. Some of my data findings for Theme 1 aligned with tenets of TCT, which was one of the two theories in the conceptual framework. However, other findings which I categorized as a subtheme of Theme 1, cost and quality of sourced products, differed from notable agency theory assumptions, as well as the assertions of other peer reviewed studies.

Cost and quality of sourced products. The information about cost and quality of outsourced products that emerged from my interview data also deviated from assumptions in agency theory, and from extended knowledge in the discipline. Foss and Stea (2014) challenged certain assumptions in agency theory by asserting that while agency theory has helped in conceptualizing and framing key problems in the designing and managing of reward systems, the theory provided a lopsided account of the principal's ability to read the agent's mind. Perrow (1986) argued that agency theory addressed no clear problems and called the theory excessively narrow. In support of agency theory, Steven et al. (2014) asserted that agency theorists view outsourcing as a

strategic move by a principal to assign responsibility to another firm in an attempt to lower cost. Globalization sometimes promotes inconsistency in quality control and standards, resulting in quality defects and failures (Steven et al., 2014).

In concurring with the tenets agency theory, other researchers (Forman, Thelen, & Shapiro, 2015; Martínez-Noya & García-Canal, 2014; Moe et al., 2014) have noted how company leaders have shifted production and sourcing of materials from local suppliers to low-cost countries primarily to reduce cost. Tate, Ellram, Schoenherr, and Peterson (2014) and Lyles and Park (2013) added that for decades, developed nations with mature business markets and consumers offshored their production processes to developing countries to capitalize on lower costs for raw materials and labor. Ancarani, Di Mauro, Fatocchi, Orzes, and Santor (2015) conducted a wide-ranging literature review regarding the key drivers for manufacturing relocation decisions and found out the opportunity for cost reduction was the number one driver. Moe et al. (2014) noted that management's desire to reduce development costs was a prime motivator for offshoring. Table 2 shows the frequency of references made to these coconcurring codes in Theme 1.

Table 2

References Related to Theme 1 (Factors Considered in Selecting Offshore Suppliers)

Selection factor considered	Percentage of mention in Theme 1 and subthemes
Cost and quality of sourced products	100%
Supplier track record and competence	90%
Supply change synergy	95%

Surprisingly, in analyzing the data I collected from interviewing the two engineering experts regarding the factors they considered in selecting a supplier, I discovered that the experts interviewed were not focused exclusively on cost advantage alone as the primary reason for offshore outsourcing. The two experts were equally concerned with the quality of the product purchased as well as other important pertinent factors. Participant 1 noted, "I believe quality is the most important criteria, especially within our company. The value of a car's brand is highly dependent on its quality. We reinforce the value of our brand by repeatedly meeting customer's expectations with quality products." Participant 1 paused and then added, "Well, cost and quality are both important, and when I say cost, I mean total delivery cost, meaning piece price plus logistics, and shipments to our facility." Participant 2 commented, "Usually the supplier with the better quality has the better price and vice versa. Better quality translates to less waste and warranty cost, which leads to lower cost. Poor quality is a financial burden." Participant 1 looked seriously at me, paused and then added, "I try to stress to everyone

that cost and quality are not competitors; they are cousins. They … move together, run neck-in-neck. Here, we address quality as a company-wide issue and strive to provide top-level quality to our customers." This finding contradicted other previously discussed peer-reviewed studies from the literature review and the conceptual framework's agency theory which asserted that company leaders shifted production and sourcing of materials to low-cost countries primarily to reduce cost.

Other peer-reviewed research concurred with the research finding. In this regard, Musaeus (2014) administered a survey instrument to 15 subject matter experts in small and medium-sized enterprises in North America. The result displayed the quality of deliverables as the top-ranked factor (out of 26 factors) instead of the price, which was ranked third. Manning, Massini, and Lewin (2008) and Kinkel (2012) argued that cost reduction was no longer the only strategic driver regarding offshore decisions. Other important drivers include speed to market, shortage of workforce in technological development, proximity to strategic markets, and the need for new services.

Pournader, Kach, Fahimnia, and Sarkis (2016) and Khan, Niazi, and Ahmad (2011) added that cost-savings alone are not the primary driving factor in selecting a supplier and that the supplier should address other important factors such as product quality and competence. Caniato, Ronchi, Luzzini, and Brivio (2014) noted that clarifying and defining all costs (not just advertised unit cost) were critical to identifying the actual cost. Visani, Barbieri, Marta, Di Lascio, Raffoni, and Vigo (2015) suggested the use of total delivery cost approach in weighing a sourcing proposition, by considering all activities across the supply chain, thereby enabling better information for supplier

selection and negotiations instead of focusing on the unit cost. Nita (2014) posited that assessing and monitoring the comprehensive costs incurred throughout the supply chain were critical to meeting increased global competition.

Participant 1 noted, "Obviously, cost is a big driver, and people want the same product or a better product for less. The supplier with the better price also has better quality and vice-versa, because they have less waste, less recall, and warranty costs." Participant 2 concurred with Participant 1, adding that "quality and cost are some of the main drivers in our supplier selection factors." Participant 1 continued, "I stress to my staff to focus on the total delivery cost, not just the unit cost cited by a supplier, while we want the best quality, which does not mean the best quality at any price." Participant 1 believed that there should be a healthy tension between cost and quality. Peer-reviewed studies from the literature concurred with Participant 1's assertion regarding examining the totality of costs and other relevant factors as opposed to just the stated lower market price.

Alaghehband et al. (2011) asserted that decision leaders realize too late in the offshore outsourcing process that they failed to estimate the actual total cost of the product correctly, and they overlooked substantial hidden costs in the initial cost estimations. Hidden costs could negatively affect the firm's performance and affect product quality (Larsen et al., 2013; Seppala, Kylaheiko, & Jantunen, 2014). Larsen et al. (2013) noted that in offshore outsourcing, hidden cost could be unsuspected costs affiliated with product defects, supplier monitoring, and training, as well as other administrative and technical services to support the global offshoring initiatives and

domestic operations. The finding extended knowledge in the discipline on effective business practice.

Another subtheme that emerged from the interview regarding quality contradicted the consensus of other peer-reviewed literature and an assumption in agency theory. The assumption was that offshore outsourcing practice has a greater impact on quality recalls than domestic outsourcing (Gray, Skowronski, Esenduran, & Johnny Rungtusanatham, 2013). For example, consistent with the agency theory perspective, Subramanian et al. (2015) argued that OEMs engaged in global sourcing, face supply chain complexities which may negatively affect the quality and performance of the products. Additionally, these offshore outsourcing initiatives create a process riddled with difficulties, including underestimations of potential product defect challenges and hidden costs (Steven, 2015; Steven & Britto, 2016; Tingting & Ritta, 2016). Uluskan, Joines, and Godfrey (2016) asserted in their survey study conclusion that international suppliers perform worse for all quality issues in comparison to domestic suppliers. Per Steven (2015), the suggestion in agency theory is that cultural and physical distances exist among trading countries and that the distance problem may stifle the flow of information, thereby exacerbating quality problems in offshore outsourcing initiatives.

The data that emerged from the interview contradicted both the assertions in agency theory and the historical body of knowledge. For example, Participant 1 stated emphatically, “We have suppliers overseas whose quality is much better than the ones made here locally in America. The offshore suppliers understand that any small glitch or poor quality will translate to them losing the contract.” Participant 2 added, “A good

supplier can perform and produce quality products no matter where they are in the world. We are a global company, and we view all suppliers, locally or globally, through the same quality lens; we don't differentiate." In a follow-up question, Participant 1 volunteered, "We purchase based on the track record of a supplier. We focus on the supplier; we don't care whether it is local, offshore, near shore, etc. It's who you source with that affects the quality, not where you source from." Regarding my question about how good the quality of parts that the OEM staff purchases from offshoring is, Participant 1 responded, "We are very satisfied with the quality of our offshore outsourced products vis a vis local productions." The consensus of the two experts is that geography is not a factor when it comes to quality.

Other peer-reviewed literature on offshoring concurred with the finding from the interview regarding the merits of offshoring. Offshore outsourcing creates competitive advantages and strategic benefits for an organization (Ikediashi, Ogunlana, & Graeme, 2013; Steven et al., 2014; West, Ford, & Ibrahim, 2015). An analysis by Mukhherjee et al. (2013) showed that firms that embark on offshore outsourcing create value by effectively managing their external and internal resources in concert with an ever-evolving global environment. Steven (2015) asserted that not only does offshoring lead to higher profits, but interestingly, mitigates the negative connection between recalls and profits. Mathrani and Mathrani (2016) asserted that offshore outsourcing had facilitated the exchange of services and knowledge between buyers and suppliers in the global economic markets. The finding added to the new body of literature that asserts that the

quality of deliverables from suppliers was the top-ranked factor for some OEM clients, instead of the stated market price, in sourcing decisions.

Supplier track record and competence. Consistent with the conceptual framework of agency theory**, s**upplier selection is one scenario in which agency theory becomes important to business (Steven et al., 2014). Issues relating to agency theory problems in business divided into moral hazards (Amdt, Lemmerer, Sihn, & Lanza, 2016; Whipple & Roh, 2010) and adverse selection (Prosman, Scholten, & Power, 2016). In the supplier selection process, moral hazard problems arise when it is costly or difficult to monitor a supplier, which poses an incentive for the supplier to provide lower quality products or cheat, to gain higher profits (Mishra, Heide, & Cort, 1998; Steven et al., 2014).

Building on the conceptual framework of agency theory regarding principal-agent trust issues, Steven and Britto (2016) asserted that contract manufacturing offshore or inshore without adequate monitoring might lead to lower quality performance and potential recalls. Per the assumption in agency theory, the adverse selection problem arises during the supplier selection process when the client company lacks full comprehensive knowledge about the capabilities of the supplier (Steven & Britto, 2016). The selection of a wrong supplier may lead to product defects, and product recalls (Steven et al., 2014). Consistent with agency theory, the data from the theme of the interview data indicated that the expert participants conducted extensive vetting of their suppliers, to minimize defects and avoid the problems cited in agency theory. Wetzstein, Hartman, Benton, and Hohenstein (2016) asserted that with the robust growth in

outsourcing, the selection of the right suppliers is of critical importance to a business's success.

Consistent with the agency theory and other existing literature on effective business practice, Participant 1 stated, "We use a tool called supplier scorecard to measure suppliers globally. The tool includes several measures, for instance, their PPM (performance problems per million), which is their recall service campaign, or how quickly they rectify any defect issue." If the supplier is new to the company, Participant 1 stated that they would send a supplier quality development team to the supplier to conduct an ASES (Alliance Supplier Evaluation System) audit. Per Participant 1, ASES is the OEM's quality system audit that analyzes the stability of a potential new supplier by examining several factors such as the human resources (HR) condition of the new supplier including employee turnover rate and employee pay levels compared to companies in the vicinity.

Human resource analysis ascertains the supplier's capability to attract and retain good employees. Per participant 2, all the suppliers grouped into specific panels based on their field incident performance. Field incidents include (a) history of supplier quality defects, (b) speed of responses to correcting incidents, (c) change management, and (d) disruption history to plant productivity. Steinle, Schiele, and Ernst (2014) asserted that in agency theory, the supplier selection considerations come under moral hazard regarding supplier behaviors about expectations. The principal-agent framework in agency theory deemed appropriate when a principal assigns a task to an agent (Handley & Gray, 2013). Verner, Brenton, Kitchenham, Turner, and Niazi (2014) posited that decision makers in

vendor services outsourcing should evaluate and award contracts based on an objective or quantifiable set of universally accepted criteria for that industry.

Another key factor the OEM staff looks for is the ability of a supplier to transfer knowledge. Per Participant 1, "The ability of a supplier to transfer their technical knowledge from the mother plant to a new plant or a plant overseas is the most critical thing." To ensure a thorough, comprehensive vetting of suppliers, the purchasing group and the supply quality team combine their different expertise in selecting suppliers. This cross-functional team creates a scorecard that ranks the suppliers into four different levels. Level 1 is the best rating, level 2 is also good, level 3 is caution, and level 4 is not to resource. The OEM staff also proactively use supplier risk assessment tools to gauge the potential product defect risks of suppliers and their ability to deliver in a timely way (Participant 1). The rigorous selection process for vendors by the OEM staff is consistent with the findings in other peer-reviewed studies. Kittilaksanawong (2015) asserted that the buyer must scrutinize a supplier's previous track record and integrity to avoid opportunistic behaviors by the seller.

Other researchers suggested that correct vendor selection reduces the risk of offshore outsourcing and failing business partnerships (Fan, Sun, & Cheng, 2016; Manning, Lewin, & Schuerch, 2011). Mukherjee and Mukherjee (2015) claimed that selection of offshore supplier decision has emerged as an analytical hierarchical process and an important aspect of strategic alliance formation. Skiffington, Akoorie, Sinha, and Jones (2013) contended that the decision-making process to offshore outsourcing supported by the transaction cost theory. Skiffington et al. posited that firms must be

prudent in their selection of offshore vendors to ensure that the savings derived from outsourcing are bigger than the transaction cost.

Supply chain synergy. Supply chain synergy was a common co-concurring code in Theme 1. The OEM administrators have over 15 car manufacturing subdivisions globally with which they share the same car parts, alliances, and identical production platforms (Participant 1). The interview research data revealed that the proximity of a supplier to the allied group was more important to the OEM administrators from synergy vantage point than a lower unit price. Participant 1claimed that the company administrators prefer that their major suppliers (the tier one suppliers) locate very close to their plants. Participant 2 noted, “We source where most of the synergies exist.”

Participant 1 noted that the goal is to have everything vertically integrated and close to the plant wherever feasible, to enhance synergy and cut down on transportation cost. Participant 2 added, “Diverse geographical location of suppliers can be a big pain, not because of the quality, but because of the difficulty I have in immediately getting into the details of the supply chain if there is a problem.” To support Participant 2’s assertion about the difficulty of monitoring dispersed lower level suppliers globally, participant 1 noted that beginning in 2014, 72% of the recall service campaign were with the lower tier two and tier three suppliers. These lower level suppliers are scattered throughout the globe, about 25% of them in Mexico, 25% in China, 15% in Japan, 10% in the United States, 5% in Korea, and 5% in Germany (Participant 1). Consequently, the OEM administrator’s drive to concentrate their big primary supplier's closer to their plants is consistent with agency theory and existing literature on effective business practice.

The OEM studied is a Japanese company with several divisions in the United States. Consequently, the management practices of the OEM staff regarding supplier relationships mirror the parent company's management philosophy of dealing with suppliers. Florida and Kenny (2016) asserted that while the U.S. manufacturing environment is individualistic, with an arm's length relationship between corporations and their suppliers, the Japanese model is group oriented, team-based work, and has a consensual relationship between labor and management, with long-term supplier relationships. This type of relationship between the Japanese transplant corporations and their suppliers promotes trust and synergy and reduces costs in the long run (Florida & Kenny, 2016). St. John et al. (2014) conducted a survey of 500 companies and found that a close working relationship between vendor and client characterized by effective communication and trust resulted in successful partnerships. Quinlan, Hampson, and Gregson (2013) claimed that training outsourcing vendors would mitigate product defects, minimize other risks, and improve the quality of service from the vendor. This finding was in line with extant literature on effective business practice.

Drawing on both the agency and transaction cost theories, Lanier, Wempe, and Zacharia (2010) asserted that firms with concentrated supply bases, compared to dispersed supplier bases, enjoy superior profit margins, reduced inventory costs, and a beneficial economy of scale. Per Steven (2014), the smaller supplier base approach is consistent with the premise in agency theory that a smaller supplier base may lead to fewer product defects and recalls. Mena, Humphries, and Choi (2013) noted that from the transaction cost theory approach, supply chain complexity from too many suppliers was

identified as a major driver, influencing supply chain coordination cost, defects, and negative impact on product manufacturing performance. Mykhaylenko, Motika, Waehrens, and Slepniov (2015) contended that a different level of synergy that may exist among offshoring strategic decisions is a reliable predictor of offshoring success.

Consistent with the interview finding reflected in Theme 2, Liu and Song (2014) asserted that organizations prefer that their outsourced service providers locate within the same industry cluster, to achieve better synergy and supply interconnected operand resources while enjoying industry cluster advantage. Kim and Henderson (2015) noted that concentrating a supplier base may reduce supply base complexities, reduce monitoring costs and generate unequivocal economic benefits in the middle of the triadic relationships. Fan et al. (2016) contended that in manufacturing, lean manufacturing is the goal; likewise in the supply chain, the reduction of the supplier base could reduce supply chain risks. The literature on supply chain complexity showed that concentrated supply base in comparison to dispersed supplier base, had superior financial performance, from scale economies and reduced inventory costs (Lanier, Wempe, & Zacharia, 2010; Steven et al., 2014).

Another interesting trend I discovered from the research findings was that some auto suppliers had moved parts of their operations overseas to build their plants closer to their OEM clients, instead of shipping the parts from their home countries. The OEM studied is a Japanese-owned auto manufacturer in the United States that adheres to the Japanese tradition of purchasing entire subsystems from a few select tier one suppliers, with a long-term semi-exclusive purchaser-supplier relationship. Per Beechler and Taylor

(2013) in the Japanese approach, suppliers are an integral part of the parts development process engineering with the buyer, and the suppliers assume significant responsibility; including relocating overseas to be close to the buyer to improve synergy and cut development costs. Per Participant 1, some suppliers, mostly from China and Japan, are building facilities in the United States and Mexico, or wherever their clients or markets exist. Participant 1 continued, "One of our major offshore suppliers from Japan just built two plants next door to our plant, I guess to reduce transportation and logistics cost, currency fluctuation, tariffs, and so forth."

The finding confirmed other peer reviewed studies on new effective business practice. For example, Rein (2012) asserted that wage and transportation costs are getting higher in China; in certain cases, wages have tripled compared with four years ago, and because of the one-child policy, fewer young people are available to replace the aging workforce. Consequently, some Chinese enterprises have moved to Asian countries like Vietnam for cheaper wages and in some cases, to the United States to be closer to their clients, avoid the tax burden/tariffs in China, and take advantage of other incentives in the United States, despite higher manufacturing costs (Rein, 2012). Hanemann and Gao (2016) noted that the United States received the largest booming Chinese investment in 2016 of $45.6 billion and cumulative Chinese direct investment in the United States since 2000 exceeded $100 billion.

Theme 2. Strategies for Minimizing Defects in Offshore Products

A second important concurrent theme that emerged from the data was the strategies for minimizing offshore-outsourced manufactured defects; see Table 3.

Table 3

References Related to Theme 2 (Strategies for Minimizing Defects)

Selection factor considered	Percentage of mention in Theme 1, and all themes
Supplier assessments	100%
Supplier parts assessments	90%
Periodic visits to suppliers	75%

This theme included three sub-themes: (a) supplier assessment, (b) supplier parts assessments, and (c) periodic visits to suppliers. The various strategies used by the OEM staff to manage supplier defects is consistent with the framework of agency theory. Zsidisin and Ellram (2003) asserted that purchasing organizations implement various management techniques to mitigate supplier defects and reduce the likelihood of detrimental events.

Supplier assessments. Consistent with agency theory and expanding on quality management (QM) literature, the OEM staff places heavy emphasis on supplier quality performance right from the beginning of the supplier selection phase, to reduce the challenge of quality ambiguity (Gray & Handley, 2015; Steinle et al., 2014). The strategies for minimizing defects adopted by the OEM staff were consistent with the agency theory framework. The quality defect minimization strategy begins in earnest when their design team goes in advance of the purchasing team into the supplier facility (Participant 1). The objective of the visit is to enhance design quality before production begins to improve the percentage of components without problems (Participant 2).

Enhancing the precision of parts components in the design diagram improves the quality of the components that go into eventual production. Interviewer 1 noted, "We present the specification of the part to the supplier. Our design team will look at the supplier design proposal and judge whether it meets our specs." The OEM staff then embarks on a supply quality assurance (SQA) protocol to maintain and improve the quality of components from the suppliers selected (Participant 1).

To ensure a consistent supply of high-quality parts, the OEM partners with only suppliers that have gone through their score card approval processes (Participant 2). Another OEM team, the supplier quality assurance (SQA) group, coordinates the needs of the design team with the needs of the production plants and the suppliers to enhance the quality of sourced parts and augment mutual understanding among the three parties (Participant 1). The OEM staff follows a set of global standards for the quality of its parts and components from its suppliers, which the suppliers must meet. A huge number of components, as many as ten thousand parts make a car, and approximately five thousand suppliers provide as many as 80% of those parts (Participant 2).

The OEM staff uses a design review (DR) method whereby the design team reviews the potential risk of each component and proactively comes up with a strategy to avert problems (Participant 1). Evans (2013) defined quality in a highly competitive market as exceeding customer expectations, and that customer-driven quality was critical to highly performing firms. The various strategic steps adopted by the OEM staff to mitigate product defects appeared consistent with the American National Standards Institute (ANSI) and the American Society for Quality (ASQ) using Evans' (2013)

definition. The product supplier mitigation strategy implemented by the OEM is identical to the one implemented by Honda of America. Per Henry, Fawcett, and Fawcett (2013), Honda of America focused on continuous process improvement of suppliers through evaluations of supplier quality, cost, delivery, and development speed, all of which dramatically reduced the probability of supplier defects and supply risk occurrence.

Supplier parts assessments. The OEM staff enforced the scorecard that ranked each supplier and selected the suppliers with the highest rankings to ensure delivery of quality parts. Selecting the higher-ranking suppliers mitigates the defect rates (Participant 2). This finding was consistent with existing literature on effective business practice. Noshad and Awasthi (2015) posited that manufacturing organizations should focus on the performances of their suppliers to meet the needs of their final customers, by mitigating defects. Palvia and Palvia (2016) posited that buyers should ensure that their vendors align their resources and processes to the client's needs to meet or exceed targeted quality standards. To further mitigate product defects, a group known as the Parts Quality Engineering Group ensures that parts delivered by suppliers to the plants meet the quality specifications by using the company's advanced parts quality procedure (Participant 1). In this advanced parts quality procedure, the staff checks for control plans, process flows, inspection reports, packaging of specification reports, and capabilities studies, and fundamentally qualify the part (Participant 1). In line with the OEM's extraordinary steps to minimize defects, Zu and Cui (2013) noted that a company's high-quality performance was not only dependent on the company's internal quality control but also subject to delivery of reliable parts and quality from the suppliers. The OEM organization has field

quality centers (FQCs) located in the United States and Europe, whose primary goal is to collect defective parts quickly from the market and work with the OEM's design and production staff in concert with the supplier representatives to probe the cause of any defect problems and come up with countermeasures.

Periodic visits to suppliers. Periodic visits by the principal to the agent are consistent with agency theory. Tying the interview findings to the conceptual framework, Eisenhardt's (1989) asserted that the assumption in agency theory addressed problems that arise when the principal has difficulty verifying what the agent (the supplier) is doing. Per Eisenhardt (1989), in agency theory, supplying and buying firms are usually two separate organizations that have some degree of cooperation, but may also have partial goal conflicts. Linking the interview finding to existing literature on effective business practice, Neuman, Alves, Walsh and Needy (2015) argued that the purchaser reduces the likelihood of supplier defects and risk occurrences and improved supplier performance by conducting periodic visits to the suppliers. Chen, Chen, and Liu (2013) contended that monitoring of offshore vendors could prevent the buyer from incurring unanticipated costs from offshore outsourcing. Bengtsson and Engstrom (2013) posited that results in behavioral economics suggested that increased level of monitoring of a vendor from the principal, as opposed to a trust based self-regulating approach, reduced expenditure claims by the vendor as well as reducing the number of product defects and financial irregularities.

Participant 1 stated, "We visit the plants of our tier one primary suppliers as needed. I want to see their shop floors, and the lights in the eyes of the people I am

working with." Participant 2 added, "Nothing helps transparency like the specter of a client walking through the front door of a seller. You can't help but be transparent if I can visit your plant at any time." Participant 2 also pointed out that the engineering staff simultaneously provides technical support to suppliers when the suppliers fall short of standards in their production or quality. Florida and Kenny (2016) noted that the close working relationships between Japanese manufacturers and their suppliers promote trust, proactively identify problem areas, and reduce cost and waste. St. John et al. (2014) noted that a close working relationship between client and vendor characterized by effective communication correlated to a successful partnership. This finding was consistent with the extant literature on efficient business practice.

This finding of "conditional" trust of suppliers by the OEM experts was surprising because the experts asserted earlier on in the interview that they trusted their suppliers and that their suppliers trusted them. According to Participant 1, intermittently the OEM relies on their counterparts or representatives in other parts of the world (Japan, Mexico, Thailand, China, Germany, and the UK) to conduct supplier plant visits on behalf of the OEM. If the supplier is in Europe, an affiliate from the UK will visit the supplier, and if in Asia, an affiliate from Japan may visit the supplier or often it may be a combined visit from the OEM staff and its counterpart. Participant 1 repeated that beginning in 2014, a "whopping" 72% of the recall service campaigns were with the lower tier two and tier three suppliers, scattered throughout the globe.

In linking the interview finding to existing literature on effective business practice, Hartmann and Moeller (2014) noted that recall campaign incidents in the lower

tier suppliers are responsible for the chain liability for nonadherence to sustainability standards and the suppliers need to be monitored to avoid negative branding. Wilhelm, Blome, Bhakoo, and Paulraj (2016) asserted that in a buyer's quest for a transparent supply chain, the company prefers to monitor all the upstream relationships independently. However, given the daunting complexity of attempting to monitor a globally dispersed supply base, it may be necessary for the buyer to use surrogates or tier one suppliers as monitoring agents to avoid devastating consequences (Wilhelm et al., 2016).

Theme 3. Methods for Gauging Effectiveness of Defect Minimization Strategies

Strategies for minimizing defects emerged from the interviews with subthemes comprising internal and external benchmarks. Linking the finding to existing literature, Bai and Sarkis (2014) claimed that by implementing effective quality management monitoring tools, companies could improve their performances, increase customer satisfaction, and expand market share. The finding was in line with existing literature on effective business management. Table 4 shows the frequency the two subthemes, internal and external benchmarks, were mentioned.

Table 4

References Related to Theme 3 (Methods for Gauging Effectiveness of Strategies)

Selection factor considered	Frequency of mention in theme 3
Internal Benchmarks	100%
External Benchmarks	100%

Internal benchmarks. The subtheme *internal benchmark* refers to quality tools used by the OEM staff gauge the effectiveness of the manufacturing strategies used to minimize defective sourced products. The three subcategories in the internal benchmarks that the OEM staff uses to monitor the effectiveness of the strategies for minimizing defects are (a) three months in service (3MIS) warranty or 3,700 miles of ownership of a newly purchased automobile and outside 3MIS car-dealership check-up, (b) 300 quality assessment test points on test vehicles before mass production, and (c) third party quality surveys and call center information (internal company documents from the study). The explanations of each of the three internal benchmark subcategories are further discussed.

The three months in service (3MIS) internal benchmark is the first and leading benchmark used by the OEM staff to gauge the effectiveness of defect mitigation strategies (Participant 1). For every 3,759 miles or 3 months of ownership, whichever comes first, the OEM's staff recommends that new vehicle buyers who want the ultimate preventative maintenance to bring their vehicles into the OEM's various dealerships for

maintenance-checkup (Participant 1). Using a model-specific check-list and maintenance guide, the technicians at the various dealerships conduct various mechanical and electrical checks of the vehicles to identify any problem areas or product defects. The performance of the vehicles during these tests, regarding defective parts identification, informs the OEM staff of the level of their success in mitigating defects. Outside 3MIS protocol entails one checkup at 7,500 miles to conduct additional maintenance follow up checks (Participant 1). The engineers compile all the data generated from the dealership visits for maintenance into trend analysis quantitative charts, comprised of information from the electronics, exhaust, heat exchange, interior and chassis and various other parts to identify comparative trends, product defects, and problem areas (internal company documents from the study).

The second internal benchmark protocol entails the OEM staff conducting over three hundred quality assessment test points on several test vehicles before mass production to assess any product defect issues. The third internal benchmark was comprised of the OEM using third-party surveys on product performance as well as compiled information from car owners that call the OEM call centers about vehicle issues and performance, to identify defect claims, within 3 and 12 months following sales of vehicles (internal company documents from the study).

External benchmark. The OEM staff uses third-party survey results in national markets to objectively gauge the performance and service experience of its vehicles (Participant 1). The OEM staff uses J. D. Power and Associates annual global marketing information services. J.D. Power and Associates conducts surveys on product quality,

customer satisfaction, and buyer behavior in various industries (Participant 1). The J.D. Power Initial Quality Study (IQS) sales satisfaction index examines the problems reported by millions of original vehicle owners in the first 90 days of ownership. Two major indices in the survey instruments are the sales satisfaction index and the consumer service index (Wardlaw, 2016). The sales satisfaction index (SSI) covers survey information from customer satisfaction with the selling dealer by examining four measures: service quality, service advisors, delivery timing, and sales staff. The customer service index (CSI) provides customer feedback on vehicle pick-up, service advisors, and service quality (*internal* document from the study).

The result of the external benchmark showed that in the fiscal year 2016, a midsized pickup vehicle of the OEM won the top-ranked model in initial quality in the J.D. Power and Associates 2016 quality survey (Wardlaw, 2016). In 2015, the pickup model for the OEM also maintained the top level for SSI in Japan, China, and Mexico and top level for CSI in Japan and Mexico. Per the 2016 Annual Report for the OEM, the return on equity (ROE) valuation, which measures how efficiently the company generates profit from the share equity invested by shareholders was 11%. The 11% ROE rate is consistent with the standard for the industry after adjusting for research and development (R&D) costs (Maverick, 2015).

Theme 4. Trust and Working Partnership

An unexpected theme that emerged from the interview was the assertion by the two experts that they have a high degree of trust in their suppliers. Participant 2 stated, “There is a tremendous amount of trust from us to our suppliers and vice-versa. They

trust that when we say we are going to build 200,000 vehicles a year using their parts that we will follow through." Participant 1 qualified the trust of suppliers by adding that a supplier's track record plays a role on the issue of trust. Participant 1 continued, "Nobody can promise you 100% quality all the time, but when a supplier has a good track record and history, they engender trust. They know that once you break the trust, we are going to scrutinize every step you take." A possible explanation for the self-assured trust the OEM staff has with their suppliers is related to the fact that the OEM is a Japanese division in the United States. Consequently, the OEM's management practices and worldview mirrors that of the parent company in Japan (Abo, 2015). Florida and Kenny (2016) asserted that while the U.S. manufacturing environment is individualistic, with an arm's length relationship between corporations and their suppliers, the Japanese model is group oriented, team-based work, with a consensual relationship between labor and management and long-term supplier relationships. The close working relationships and long-term contracts between Japanese companies and their suppliers promotes trust, promotes synergy, and reduces costs in the long run (Abo, 2015). A Japanese subsidiary firm located in a foreign land cannot be totally free from the dominant management style of its Japanese parent company (Abo, 2015). Participant 2 noted that their staff holds periodic quality conferences with suppliers around the world to provide two-way communication, elicit feedback, and build strong partnerships with suppliers.

The finding regarding a trusting relationship between principal and agent was consistent with existing literature on effective business practice. In this regard, Vahlne and Johnson (2013) argued that the performance of the offshore outsourcing arrangement

is highly dependent on the relationships between a firm and its offshoring partner. Lacity and Wilcox (2014) asserted that having both the leadership of the supplier and vendor working cooperatively is a key driver in the innovative process. Kim and Henderson (2015) noted that suppliers and purchasing firms could create larger profits by pooling resources and cooperating with each other than by operating alone. Wowak, Craighead, Ketchen, and Hult (2016) claimed that the notion that innovation must emerge from within a single firm is becoming obsolete because a growing number of firms obtain product ideas from working cooperatively with supply chain partners.

The finding from the interview contradicts the agency theory conceptual framework. As Eisenhardt (1989) noted in agency theory, there is a misalignment of interest in the principal-agent relationship resulting in conflicts of interest, mistrust, and power struggles between the principal and the agent**.** Chaudri and Seo (2012) posited that agency theory and transaction cost theory (TCT) incorporate an assumption that contracting parties are opportunistic and primarily interested in satisfying their personal profit goals, resulting in mistrust among contractors that may result in substandard products. The finding extended knowledge on effective business practice.

Application to Professional Practice

The study's findings contribute specific and actionable recommendations for manufacturing strategies U.S. business leaders engaged in offshore outsourcing may explore to minimize defects in offshore-outsourced products. This study contributes to applied business practice by adding three different, unanticipated insights into how the study's central conceptual framework of agency theory may not be a good fit for business

practices in a certain national context (Buchanan, Chai, & Deakin, 2014). Boyd (1994) argued that research demonstrated that agency theory assumptions which addressed the different interests between managers of firms and the owners only fit certain circumstances. Lane, Cannella, and Lubatkin (1998) contended that agency theory predictions are not supported in instances when managerial interests do not clearly conflict with stockholders.

Florida and Kenny (2016) and Kaplan (1997) posited that the differences between the ownership structures of relationship-oriented Japanese firms and market-based U.S firms might also limit the generalization of agency theory. For example, building on agency theory, Eisenhardt (1989) argued that in this theory, there is a misalignment of interest in the principal-agent relationship that results in conflicts of interest, mistrust, and power struggles between the principal and the agent**.** Chaudri and Seo (2012), other agency theory advocates, posited that agency theory and TCT incorporate an assumption that contracting parties are opportunistic and are primarily interested in satisfying their personal profit goals, resulting in mistrust among contractors that may result in substandard products.

The U.S. OEM studied in the United States is a subsidiary of a Japanese corporation, and the management practices of the OEM organization regarding supplier relationships mirror the parent company's management philosophy of dealing with suppliers. Abo (2015) asserted that while the U.S. manufacturing environment is individualistic, with an arm's length relationship between corporations and their suppliers, the Japanese model is group oriented, and team-based work, with consensual

relationship between labor and management and long-term supplier relationships. This type of relationship between the Japanese transplant corporations and their suppliers promotes trust and synergy and also reduces costs in the long run (Abo, 2015). The two experts interviewed for the study asserted affirmatively that they trust their suppliers, and that their suppliers trust them in return. They are very satisfied with the quality of the products generated by their suppliers. This finding contradicts a major assumption in agency theory that contracting parties are opportunistic and cannot be trusted. U.S. business leaders may explore the result of this research finding of promoting trusting and closer working relationships with offshore suppliers to improve business practices, mitigate product defects, and improve profit margins.

A second unpredicted finding from the study challenged certain contestable assumptions in agency theory regarding how the agency theory conceptual framework may not be a good fit in every context. The assertion in the extant peer-reviewed literature on agency theory was that company leaders shifted production and sourcing of materials from their local suppliers to low-cost countries primarily to capitalize on lower cost (Forman, Thelen, Shapiro, 2015; Martínez-Noya & García-Canal, 2014; Moe et al., 2014). The research data from the study contradicted the assertion in agency theory that cost was the most important factor in outsourcing decisions. The research data showed that product quality, and not product cost, was the most important factor that the OEM considered in making offshore sourcing decisions. The preference for product quality in offshore sourcing decisions by the OEM staff interviewed may be one of the contributing factors to the success of the OEM in minimizing defects in offshore-outsourced products.

The third unexpected finding from the study contradicted the assertions in agency theory that offshore outsourcing practice has a greater impact on quality recalls than domestic outsourcing (Gray, Skowronski, Esenduran, & Johnny Rungtusanatham, 2013; Steven et al., 2014). Contrary to the assertion in agency theory, Participant 2 noted, "A good supplier can perform and produce quality products no matter where they are in the world." This finding is relevant to improved business practice by providing additional insight into the strategies U.S. business leaders could use to minimize defects in offshore-outsourced products. U.S. business leaders may appreciate that the findings comprehensively summarized (a) effective factors to consider in selecting offshore suppliers, (b) strategies for minimizing defects in offshore-outsourced products, (c) methods for gauging the effectiveness of defect minimization strategies, and (d) trust and working relationships with suppliers. The findings may contribute to improved offshore outsourcing business practices by U.S. business leaders in their efforts to minimize defects in offshore-outsourced products.

Implications for Social Change

One of the primary goals of the study was to promote positive social change and behaviors in communities, individuals, organizations, and society regarding the real-world problem of product defects. Product defect issues have significant business, individual, institutional, and social implications. For example, in 2016, the U.S. National Highway Traffic Safety Administration staff imposed its largest penalty of $200 million against the business leaders of Takata (a Japanese company) for selling defective air bag inflators in the United States (National Highway Traffic Safety Administration, 2016).

Per the NHTSA report, for years Takata leaders built and sold defective products in the United States and refused to acknowledge the defect. They also failed to inform the National Highway Safety Administration, its customers, or the public about the defects. The defects resulted in 11 fatalities and over 100 injuries and a recall involving more than 23 million inflators, 19 million vehicles, and 12 different auto manufacturers (National Highway Traffic Safety Administration, 2016).

As underscored by the Takata case, Wowak and Boone (2015) noted that product defects could have significant catastrophic effects, with serious financial repercussions that pale in comparison to life-threatening risks. Another goal of the study was to accentuate the need for offshore manufacturers to comply with government regulations and report product defect issues while showing transparency and accountability for their products. The globalized supply networks have led to heightened awareness of product defects and various other risks. The implication for social change of the study is that society will experience reduced defect risks from outsourced products, which will decrease the number of catastrophic fatalities and financial repercussion on businesses and simultaneously improve consumer safety and trust.

Recommendations for Action

Most industries have seen an increase in globalization, including offshore outsourcing, which has sometimes promoted inconsistency in product quality standards, leading to quality problems and sometimes quality failures (Steven et al., 2014). Steven (2015) posited that this outsourcing initiative is creating a process riddled with widespread difficulties including reduced controls and vulnerability to disruptions,

breakdowns, political changes, and higher levels of product defect risks. The study findings highlighted the results derived from an in-depth exploration of the successful strategies an OEM implemented to mitigate the defects in offshore-manufactured products. The findings may contribute to improved offshore outsourcing business practices by U.S. business leaders in their efforts to minimize defects in offshore-outsourced products. I recommend four strategies that emerged from the study.

One recommendation is to carefully vet suppliers and ensure that cost-saving is not the primary factor in selecting a supplier and that consideration is given to other critical factors such as quality, competency, change management, and other universally accepted criteria for the industry. Clarify and define all costs associated with the product, scrutinize the supplier's performance track record, and meticulously scrutinize the contractual terms with suppliers. A second recommendation is to implement strategies for minimizing defects by focusing early on supplier quality performance scorecards. Use internal product quality experts to gauge the quality of imported products and adherence to engineering specifications. Conduct periodic visits to suppliers to validate adherence to the contracted manufacturing processes and inspect materials used to reduce the likelihood of supplier defects and risk occurrences. A third recommendation is to use internal and external quality management monitoring tools to gauge the effectiveness of the product defect minimization strategies. The final recommendation is to establish a trusting working relationship with the vetted suppliers to promote synergy and reduce cost in the long run.

By applying these recommended strategies, some OEM business leaders may benefit and learn how to implement successful manufacturing strategies to mitigate the defects in their offshore-manufactured products. I will disseminate the findings of this study to OEM business leaders through (a) business journals, (b) manufacturing trade journals, (c) OEM trade association conferences and (d) automobile manufacturer summits. Presentation of the findings to automobile manufacturers through *auto summits* and conferences, written materials, and training symposiums may help educate business leaders from the OEM industries.

Recommendations for Further Research

The objective of this single qualitative case study was to explore the manufacturing strategies used by business leaders of an OEM to minimize defects in offshore-outsourced products. In conducting the research, I discovered that some of the findings deviated from agency theory, the conceptual framework for the study. Agency theory may not be a good fit for business practices globally, depending on the national context of the business practice (Buchanan et al., 2014). Florida and Kenny (2016) and Kaplan (1997) argued that the differences between the ownership structures of relationship-oriented firms like Japanese firms and market-driven U.S firms may limit the generalization of agency theory. The OEM studied in the United States is a division of a Japanese firm. The firm's relationships with its suppliers mirror the parent company's philosophy, which is a cooperating link of trust and productive long-term contractual partnerships. Building on agency theory, Eisenhardt (1989) argued that in agency theory, there is a misalignment of interest in the principal-agent relationship resulting in conflicts

of interest, mistrust, opportunism, and power struggles between the principal and the agent**.** Agency theory is a conflictual theory because it focuses on conflicting interests between two self-serving actors with ingrained tensions due to uncertainties (Bendor, Glazier, & Hammond, 2001). Future researchers may want to explore the use of an alternative theory such as stewardship theory. Stewardship theory is not conflictual, and individual goals do not motivate the interests of principals aligned with those of agents (Lee & O'Neill, 2003; Schilleman, 2013).

The use of agency theory as the central conceptual framework for the study is a *limitation*, due to the limited applicability of the theory to global business practice settings. The company selected for the study in the U.S. is a division of a Japanese company with which it shares identical management practices. The management practices of the company differ in some respects from U.S. business practices (Abo, 2015). The differences in management practices may limit the transferability of all the findings from the study to U.S. businesses. Conducting a quantitative research could examine and verify the factors identified in the qualitative research to establish the factors relevance or the existence of other factors that could result in mitigating defects in offshore manufacturing products.

Reflections

In reflecting on the experience within the DBA doctoral study process, during the interview, I observed the Participants without passing any judgments and asked probing follow-up questions in a friendly manner. The responses from the probing questions provided rich and robust insights into the successful manufacturing strategies used by the

OEM staff to mitigate defects in their offshore manufactured products. The participants showed a keen interest in participating in the study because offshore product defect challenges are a major vexing problem in the manufacturing industry, especially among OEM automobile manufacturers who suffer from product recalls. The participants were very interested in contributing to the ongoing discussion on best practices for mitigating product defects. Wowak and Boone (2015) contended that product defects have significant catastrophic effects, with serious financial consequences that pale in comparison to life-threatening risks. For example, the Takata airbag explosion in the United States resulted in 11 fatalities and over 100 injuries and a recall involving more than 23 million inflators (National Highway Traffic Safety Administration, 2016). Ashan and Gunawan (2014) contended that American and European manufacturers have nearly three times greater recall than those manufacturers in East Asia.

Before I conducted the study, my worldview about contractual transactions between business partners was consistent with the conceptual framework of agency theory, which asserted that there is a misalignment of interest in the principal-agent relationship that results in conflicts of interest, mistrust, opportunism, and power struggles among the business partners (Eisenhardt, 1989). From the study, I learned that contrary to the assertion in agency theory, business partners could indeed work very closely together and develop long-term trusting committed relationships with shared goals of defect reductions and increased profit margins. The performance and success of offshore outsourcing partnering arrangement are dependent on shared goals as well as the

quality of the relationships between the local firm and the offshore partner (Lacity & Wilcox, 2014; Palvia & Palvia, 2016; Vahlne & Johnson, 2013).

Conclusion

The purpose of the qualitative single case study was to explore the manufacturing strategies used by an OEM to minimize defects in offshore-outsourced products. While there are numerous factors why business administrators engage in offshore outsourcing, the consensus of peer-reviewed literature is that cost saving is usually at the top of the list. Offshore outsourcing also offers many opportunities to businesses, such as the capacity to concentrate on core competencies and the use of offshore vendors as competitive leverage. Despite the growth in offshore outsourcing, suppliers and buyers admitted concerns with quality defects issues and less than satisfactory results. The alarming product defects and quality related incidents in offshore outsourcing initiatives necessitate exploring manufacturing strategies to minimize the defects in offshore-outsourced products. The research findings revealed some unpredicted take-home messages that turned the applecart of agency theory and conventional extant literature assertions upside down. Take home messages include suggestions that business leaders place a stronger emphasis on product quality instead of lower product cost when sourcing, establish trusting working relationships with vetted suppliers and focus more on supplier product quality rather than the geographical location of suppliers. The study recommendations may contain teachable manufacturing strategies U.S. business leaders could use to minimize defects in offshore-outsourced products, and improve profits.

References

Abdullah, L. M., & Verner, J. M. (2012). Analysis and application of an outsourcing framework. *Journal of Systems and Software*, *85*, 1930-1952. doi:10.1015/j.jss.2012.02.040

Abo, T. (2015). Researching international transfer of the Japanese-style management and production systems: Hybrid factories in six countries. *Asian Business & Managemen*t, *14*, 5-35. doi:10.1057/abm.2014.13

Adams, B. S., Yan, D., & Thomas, C. (2014). Global sourcing and quality recall: An empirical study of outsourcing-supplier concentration-product recalls linkages. *Journal of Operations Management, 32*, 241-253. doi:10.1016/j.jom.2014.04.003

Agyepong, I. A., & Adjei, S. (2008). Public social policy development and implementation: A case study of the Ghana National Health Insurance Scheme. *Health and Policy Planning*, *23*, 150-160. doi:10.1093/heapol/czn002

Alaghehband, F. K., Rivard, S., Wu, S., & Goyette, S. (2011). An assessment of the use of transaction cost theory in information technology outsourcing. *Journal of Strategic Information Systems*, *20*(2), 125-138. doi:10.1016/j.jsis.2011.04.003

Amdt, T., Lemmerer, C., Sihn, W., & Lanza, G. (2016). Target system based design of quality control strategies in global production networks. *Procedia CIRP*, *50*, 336-341. Retrieved from http://dx.doi.org/10.1016/j.procir.2016.04.167

Ancarani, A., Di Mauro, C., Fratocchi, L., Orzes, G., & Sartor, M. (2015). Prior to reshoring: A duration analysis of foreign manufacturing ventures. *International Journal of Production Economics*, *169*, 141-155. Retrieved from http://dx.doi.org/10.1016/j.ijpe.2015.07.031

Anderson, E. (1988). Transaction costs as determinants of opportunism in integrated and independent sales forces. *Journal of Economic Behavior & Organization*, *9*, 247-264. doi:10.1016/0167-2681(88)90036-4

Ashan, K., Gunawan, I. (2014). Analysis of product recalls: Identification of recall initiators and causes of recall. *Operations and Supply Chain Management: An International Journal*, *7*, 97-106. Retrieved from http://journal.oscm-forum.org/

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *Qualitative Report*, *13*, 544-559. Retrieved from http://nsuworks .nova.edu/tqr/

Bai, C., & Sarkis, J. (2014). Determining and applying sustainable supplier key performance indicators. Supply Chain Management: *An International Journal*, *19*, 275-291. doi:10.1108/SCM-12-2013-0441

Bairi, J., Manohar, M. B., & Kundu, G. K. (2013). Knowledge acquisition by outsourced providers from aging workforce of oil and gas industry: A study. *VINE*, *43*, 39-56. doi:10.1108/03055721311302133

Beechler, S., & Taylor, S. (2013). Japanese multinationals: strategies and management in the global Kaisha. In N. Campbell & Burton, F (Eds.), *The transfer of human resource management systems overseas.* New York, NY: Taylor & Francis Group.

Bendor, J., Glazier, A., Hammond, T. (2001). Theories of delegation. *Annual Review of Political Science*, *4*, 235-269. doi:10.org/10.1146%2Fannurev.polisci. 4.1.235

Benito, G. R. G., Petersen, B., & Welch, L. S. (2009). Towards more realistic conceptualisations of foreign operation modes. *Journal of International Business Studies*, *40*, 1455-1470. doi:10.1057/jibs

Bengtsson, N., & Engstrom, P. (2014). Replacing trust with control: A field test of motivation crowd out theory. *The Economic Journal*, *124*, 833-858. doi:10.1111/ecoj.12049

Bernard, H. R. (2013). *Social research methods: Qualitative and quantitative approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Bhimani, A., & Wilcocks, L. (2014). Digitisation, "big data" and the transformation of accounting information. *Accounting and Business Research*, *44,* 469-490. doi:10.1080/00014788.2014.910051

Bloomberg, L. D., & Volpe, M. (2015). *Completing your qualitative dissertation: A roadmap from beginning to end.* Los Angeles, CA: Sage.

Borrego, M., Douglas, E. P., & Amelink, C. T. (2009). Quantitative, qualitative, and mixed research methods in engineering education. *Journal of Engineering Education*, *98*, 53-66. doi:10.1002/j.2168-9830.2009.tb01005.x

Bouchet, A., Troilo, M., & Spaniel, W. (2015). Internal sourcing, social responsibility, and human assets: A framework for labor procurement negotiations in baseball's talent supply chain. *Corporate governance*: *The International Journal of Business in Society*, *15*, 214-228. doi:10.1108/CG-09-2014-0108

Boyd, B. K. (1994). Board control and CEO compensation. *Strategic Management Journal*, *15*, 335-344. doi.10.1002/smmj.4250150502

Bryman, A. (2014). *Social research methods* (4th ed.). Oxford, UK: Oxford University Press.

Buckley, P. J., & Strange, R. (2015). The governance of the global factory: Location and control of world economic activity. *Academy of Management Perspectives*, *29*, 237-249. doi:10.5465/amp.2013.0113

Buchanan, J., Chai, D. D. H., & Deakin, D. (2014). Agency theory in practice. A qualitative study of hedge fund activism in Japan. *Corporate Governance: An International Review*, *22*, 296-311. doi:10.1111/corg.12047

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*. 81-105. PMID:13634291

Caniato, F., Ronchi, S., Luzzini, D., & Brivio, O. (2014). Total cost of ownership along the supply chain; A model applied to the tinting industry. *Production Planning & Control*, *26*, 1-11. doi:10.1080/09537287.2014.918285

Caruth, G. D. (2013). Demystifying mixed methods research design: A review of the literature. *Mevlana International Journal of Education (MJE)*, *3*, 112-122. doi:10.13054/mje.13.353.2

Chang, C-Y. (2013). Understanding the hold-up problem in the management of megaprojects: The case of the channel tunnel rail link project. *International Journal of Project Management*, *31*, 628-637. doi:10.1016/j.iproman.2012.012

Chan, Z. C., Fung, Y. L., & Chien, W. T. (2013) Bracketing in phenomenology: Only undertaken in the data collection and analysis process? The *Qualitative Report*, *18*, 30. Retrieved from http://nsuworks.nova.edu/tqr/

Chaudri, R., & Seo, H. (2012). An agency theory explanation of SEO underperformance: Evidence from dual-class firms. *Journal of International Financial Markets*, *Institutions and Money*, *22*, 575-588. doi:10.1016/j.intfin.2012.03.002

Chen, C. Y., Chen, P. C., & Lu, Y. E. (2013). The coordination processes and dynamics within the inter-organizational context of contract-based outsourcing engineering projects. *Journal of Engineering and Technology Management*, *30*, 113-135. doi:10.1016/j.jengtecman.2013.01.001

Clandinin, D. J., & Connelly, F. M. (2013). Narrative, experience and the study of curriculum. *Cambridge Journal of Education*, *20*, 241-253. doi:10.1080/0305764900200304

Coase, R. H. (1937). The nature of the firm. *Economia, 4*, 386-405. doi:10.1111/j.1468-0335.1937.tb00002

Cohen, D., & Crabtree, B. (2008). Evaluative criteria for qualitative research in health care: Controversies and recommendations. *Annals of Family Medicine*, *6*, 331-339. doi:10.1370/afm.818

Coleman, C. H., & Bouesseau, C. M. (2008). How do we know that research ethics committees are really working? *BMC Medical Ethics*, *9*, 6-11. doi:10.1186/1472-6939-9-6

Cope, D. G. (2013). Methods and meanings: Credibility and trustworthiness of qualitative research. *Oncology Nursing Forum*, *41*, 89-91, doi:10.1188/14.onf.89-91

Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.

Cordner, A., Ciplet, D., Brown, P., Morello-Frosch, R. (2012). Reflexive research ethics for environmental health and justice: Academics and movement-building. *Social Movement Studies*, *11*, 161-176. doi:10.1080/14742837.2012.664898

Crotty, M. (1998). *The foundations of social research: Meaning and perspectives in the research process*. Thousand Oaks, CA: Sage.

Crowe, S., Creswell, K., Robertson, A., Huby, G., Avery, A., & Sheika, A. (2011). The case study approach. *BMC Medical Research Methodology*, *11,* 100-110. doi:10.1186/1471-2288-11-100

Cuevas-Rodriguez, G., Gomez-Meija, L. R., & Wiseman, R. M. (2012). Has agency theory run its course?: Making the theory more flexible to inform the management of reward systems. *Corporate Governance: An International Review*, *20*, 526-546. doi:10.1111/corg.12004

Dachs, B., & Zanker, C. (2015). Backshoring of production activities in European manufacturing. Retrieved from http://www.isi.fraunhofer.de/isi-wassets/docs/i/en/publikationen/ems-bulletin-3_en3.pdf

Dahlgaard-Park, S. M. (2012). Core values: The entrance to human satisfaction and commitment. *Total Quality M & Business Excellence*, *23*, 125-140. doi:10.1080/14783363.2012.655067

Davidson, C. (2009). Transcription: Imperatives for qualitative research. *International Journal of Qualitative Methods*, *8*, 36-52. Retrieved from http://ejournals.library.ualberta.ca/index.php/ijqm/index

Denzin, N., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research*. Thousand Oaks, CA: Sage.

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education*, *40*, 314-321. doi:10.1111/j.1365-2929.2006.02418.x

Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO and shareholder returns. *Australian Journal of Management*, *16,* 49-65. doi:10.1177/031289629101600103

Drauz, R. (2014). Re-insourcing as a manufacturing-strategic option during a crisis-cases from the automobile industry. *Journal of Business Research*, *67*, 346-347. doi:10.1016/j.jbusres.2013.01.004

Edward-Jones, A. (2014). Qualitative data analysis with NVIVO. *Journal of Education for Teaching*, *40*, 193-195. doi:10.1080/02607476.2013.866724

Eide, E. R., & Showalter, M. H. (2013). Methods matter: Improving casual inference in educational and social science research: A review article. *Economics of Education Review*, *31*, 744-748. doi:10.1016/j.econedurev.2012.05.010

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management* Review, *14*, 57-74. doi:10.5465/AMR.1989.4279003

Ellram, L. M., Tate, W. L., & Petersen, K. J. (2013). Offshoring and reshoring: An update on the manufacturing location decision. *Journal of Supply Chain Managemen*t, *19*, 14-22. doi:10.1111/jscm.12019

Emans, B. (2004). *Interviewing: Theory, techniques and training*. New York, NY: Taylor & Francis Group.

European Commission. (2012). RAPEX-*Weekly notification reports.* Retrieved from http://ec.europa.eu/consumers/dyna/rapex/rapex_archives_en.cfm

Evans, J. R. (2013). *Quality & performance excellence* (7th ed.). Mason, OH: South-Western.

Fan, H., Sun, G. L. H. & Cheng, T. C. E. (2016). An information processing perspective on supply chain risk management: Antecedents, mechanism, and consequences. *International Journal of Production Economics*, *185*, 63-75. Retrieved from http://dx.doi.org/10.1016/j.ijpe.2016.11.015

Fayezi, S., O'Loughlin., & Zutshi, A. (2016). Understanding and development of supply chain agility and flexibility: A structured literature review. *International Journal of Management Reviews,* n/a-n/a. doi:10.1111/ijmr.12096

Ferreira, A., & Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research*, *20*, 263-282. doi:10.1016/j.mar.2009.07.003

Fine, C. (2013). Intelli-sourcing to replace offshoring as supply chain transparency increases. *Journal of Supply Chain Management*, *49*, 6-7. doi:10.1111/jscm.12018

Flick, U. (Ed). (2007). *Designing qualitative research*. Los Angeles, CA: Sage.

Florida, R., & Kenny, M. (2016). Social reconstruction of the world automobile industry: Competition, power, and industrial flexibility. In F. C. Deyo (Ed.). *Social reconstruction of the world of automobile*. New York, NY: St. Martin's Press.

Forman, A. M., Thelen, S., & Shapiro, T., (2015). Domestic versus offshore providers: The impact of cost, time, and quality sacrifices on consumer choice. *Journal of Service Management*, *26*, 608-624. doi:10.1108/JOSM-01-2015-0020

Foss, N., & Stea, D. (2014). Putting a realistic theory of mind into agency theory: Implications for reward design and management in principal-agent relations. *European Management Review*, *11*, 101-116. doi:10.1111emre.1206

Flynn, B. B., & Zhao, X. (2014). Section 1. In B. B. Flynn & X. Zhao (Eds.), *Global supply chain quality management* (pp. 3-37). Boca Raton, FL: CRC Press.

Fratocchi, L., Di Mauro, C., Barbieri, P., Nassimbeni, G., & Zanoni, A. (2014). When manufacturing moves back: Concepts and questions. *Journal of Purchasing and Supply Management*, *20,* 54-59. doi:10.1016/j.pursup.2014.01.004

Frels, R. K., & Onwuegbuzie, A. J. (2013). Administering quantitative instruments with qualitative interviews. A mixed research approach. *Journal of Counseling and Development*, *91,* 184-194. doi:1002/j.1556-6676.2013. 00085.x

Fusch, P., & Ness, L. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, *20*. Retrieved from http://tqr.nova.edu/

Gelfond, J. A., Heitman, E., Pollock, B. H., Klugman, C. M. (2011). Principles for the ethical analysis of clinical and transitional research. *HHS Public Access, 30*, 2785-2792. doi:10.1002/sim.4282

Gibbert, M., & Ruigrok, W. (2010). The "what" and "how" of case study rigor: Three strategies based on published research. *Organizational Research Methods*, *13*, 710-737. doi:10,1177/1094428109351319

Gibbs, G. R. (2007). *Analyzing qualitative data*. Thousand Oaks, CA: Sage.

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: Interviews and focus groups. *British Dental Journal*, *204*, 291-295. doi:10.1038/bdj.2008.192

Goodrich, K. M., Hrovat, A., & Luke, M. (2014). Professional identity, practice, and development of Kenya teacher-counsellors: An ethnography. *Journal of Counselor Leadership and Advocacy*, *1*, 44-66. doi:10.1080/2326716X.2014.886976

Gray, J. V., Handley, S, M. (2015). Managing contract manufacturer quality in the presence of performance ambiguity. *Journal of Operations Management*, *38*, 41-55. doi:10.1016/j.jom.2015.08.002

Gray, J. V., Roth, A. V., & Leiblein, M. J. (2011). Quality risk in offshore manufacturing: Evidence from the pharmaceutical industry. *Journal of Operations Management*, *29*, 737-752. doi:10.1016/j.jom.2011.06.004

Gray, J. V., Skowronski, K., Esenduran, G., Johnny Rungtusanatham, M. (2013). The reshoring phenomenon: What supply chain academics ought to know and should do. *Journal of Supply Chain Management*, *49*, 27-33. doi:10,1111/jscm.1202

Gunasekaran, A., Irani, Z., Choy, K., Filippi, L., & Papadopoulos, T. (2015). Performance measures and metrics in outsourcing decisions: A review for research and applications. *International Journal of Production Economics*, *161*, 153-166. doi:10.1016/jipe.2014.12.021

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with Data Saturation and validity. *Field Methods*, *18*, 59-92. doi:177/152822X05279903

Gylling, M., Heikklla, J., Jussila, K., & Saarinen, M. (2015). Making decisions on offshore outsourcing and backshoring: A case study in the bicycle industry. *International Journal of Production Economics*, *162*, 92-100. doi:10.1016/jipe.2015.01.006

Hagens, V., Dobrow, M., Chafe, R. (2009). Interviewee transcript review: Assessing the impact on qualitative research. *BMC Medical Research Methodologis*, *9*, 1. doi:10.1186/1471-2288-9-47

Hannafey, F. T., & Vitulano, L. T. (2013). Ethics & executive coaching: An agency theory approach. *Journal of Business Ethics*, *15*, 599-603. doi:10.1007/s 10551-012-1442-z

Handley, S. M., & Benton, W. C. (2013). The influence of task-and location-specific complexity on the control and coordination costs in global outsourcing relationships. *Journal of Operations Management*, *31*, 109-128. doi:10.1016/jom.2012.12.003

Handley, S. M., & Gray, J. V. (2013). Inter-organizational quality management: The use of contractual incentives and monitoring mechanisms with outsourced manufacturing. *Production and Operations Management*, *22*, 1540-1556. doi:10.1111/j1937-5956.2012.01351.x

Hanemann, T., & Gao, C. (2016, December 30). Record deal making in 2016 pushes cumulative Chinese FDI in the US above $100 billion. *Rhodium Group.* Retrieved from http://rhg.com/

Harper, M., & Cole, P. (2012). Member checking: Can benefit be gained similar to group therapy. *The Qualitative Report*, *17,* 510-517. Retrieved from http://nsuworks.nova.edu/tqr/

Hartmann, J., & Moeller, S. (2014). Chain liability in multitier supply chain? Responsibility attributions for unsustainable supplier behavior. *Journal of Operations Management*, *32*, 281-294. Retrieved from https://doi.org/10.1016/j.jom.2014.01.005

Henry Jin, Y., Fawcett, A. M., & Fawcett, S. E. (2013). Awareness is not enough: Commitment and performance implications of supply chain integration. *International Journal of Physical Distribution & Logistics Management*, *43*, 205-230. Retrieved from http://dx.doi.org/10.1108/IJPDLM-10-2011-0169

Hesse-Biber, S. N., & Leavy, P. (2010). *The practice of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Hirsch, P., Michaels, S., & Freidman, R. (1987*).* "Dirty hands" versus "clean models". *Theory and Society*, *16*, 317-336. Retrieved from http://www.jstor.org/stable/6577

Ho, W., Zheng, T., Yildiz, R., & Talluri, Y. (2015). Supply chain risk management: A literature review. *International Journal of Production Research*, *53,* 5031-5069. doi:10.1080/00207543.2015.1030467

Holland, J., Browman, G., McDonald, M., & Saginur, R. (2013). Protecting human research participants: Reading vs. understanding the consent form. *Journal of the National Cancer Institute*, *105*, 927-928. doi:10.1039/jnci/djt152

Holloway, I. (2008). *A-Z of qualitative research in nursing and health care* (2nd ed.). Oxford, UK: Wiley-Blackwell Science.

Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse Researcher*, *20*(4), 12-17. doi:10.778/nr2013.03.20.4.12.e326

Huberman, A. M., & Miles, M. B. (2002). *The Qualitative Researcher's Companion*. Thousand Oaks, CA: Sage.

Hyett, N., Kenny, A., & Dickson-Swift, V. (2014). Methodology or method? A critical review of qualitative case study reports. *International Journal of Qualitative Studies on Health and Well-being*, *9*. doi:10.3402/qhw.v9.23606

Ikediashi, D., Ogunlana, S., & Graeme, B. (2013). A conceptual model for analyzing the impact of outsourcing decision om FM service-level performance. *American Society of Civil Engineers*, *nd*, 10-11. doi:10.1061/9780784413135.121

Ippoliti, R. (2013). Economic efficiency of countries' clinical review processes and competitiveness on the market of human experimentation. *Value in Health*, *16*, 148-154. doi:10.1016/j.jval.2012.09.010

Jacob, S. A., & Furgerson, S. P. (2012). Writing interview protocols and conducting interviews: Tips for students new to the field of qualitative research. *The Qualitative Report*, *17*, 1-10. Retrieved from http://tqr.nova.edu/

Jain, A., & Thietart, R. (2013). Knowledge-based transactions and decision framing in information technology outsourcing. *Journal of Strategic Information Systems*, *22*, 315-327. doi:10.1016/j.jsis.2013.08.001

Jalali, S., & Wohlin, C. (2012). Global software engineering and agile practices: A systemic review. *Journal of Evolution and* Process, *24*, 643-659. doi:10.1002/snr.561

James, P. T. (2012). Clinical doctors as qualitative researchers: QDAS factors informing hospital research policy. *The Internal Journal of Medical Informatics*, *6*, 1-13. doi:10.5580/2b29

Jensen, M. C., & Meckling, W. H. (1979). Theory of the firm: Managerial behavior, agency cost, and ownership structure. *Economics Social Institutions*, *1*, 163-231. doi:10.1002/9780470752135.ch17

Johnson, B. D., Dunlap, E., & Benoit, E. (2010). Structured qualitative research: Organizing "mountains of words" for data analysis, both qualitative and quantitative. *Substance Use & Misuse*, *45*, 648-670. doi:10.1002/97804470752135.ch17

Jonsen, K., & Jehn, K. A. (2009). Using triangulation to validate themes in qualitative studies. *Qualitative Research in Organization and Management: An International Journal*, *42*, 123-150. doi:10.1108/17465640910978391

Kaefer, F., Roper, J., Sinha, P. (2015). A software-assisted qualitative content analysis of news articles: Example and reflections. *Forum: Qualitative Social Research*, *16* (2). Retrieved from http://www.qualitative-reserch.net/index.php/fqs/index

Kakabadse, N. K., Knight, R., & Kakabadse, A. (2013). *How to make boards work: An international overview.* New York, NY: Palgrave Macmillan.

Kaplan, S. N. (1997). Corporate governance and corporate performance; A comparison of Germany, Japan, and the US. *Journal of Applied Corporate Finance*, *9*, 86-93. doi:10.1111/j.1745-6622.1996.tb00586.x

Khan, A. W., & Khan, S. U. (2013). Critical success factors for offshore software outsourcing contract management from vendor's perspective: An exploratory study using a systematic literature review. *Institute of Engineering and Technology Software*, *7*, 327-338. doi:10.1049/iet-sen.2013.0013

Khan, S., & Lacity, M. (2012). Survey results: Are client organizations responding to anti-offshoring pressures? *Strategic Outsourcing: An International Journal*, *5*, 166-179. doi:10.1108/17538291211257600.

Khan, S., & Lacity, M. (2014). Organizational responsiveness to anti-offshoring institutional pressures. *The Journal of Strategic Information Systems*, *23*, 190-209. doi:10.1016/j.jsis.2014.05.001

Khan, S. U., Niazi, M., Ahmad, R. (2011). Factors influencing clients in the selection of offshore software outsourcing vendors: An exploratory study using a systematic literature review. *Journal of Systems and Software*, *84*, 686-699. Retrieved from http://dx.doi.org/10.1016/j.jss.2010.12.010

Kim, Y., & Henderson, D. (2015). Financial benefits and risks of dependency in triadic supply chain relationships. *Journal of Operations Management*, *36*, 115-129. Retrieved from http://dx.doi.org/10.1016/j.jom.2015.04.001

Kinkel, S. (2012). Trends in production relocation and backshoring activities: Changing patterns in the course of the global economic crisis. *International Journal of Operations & Production Management*, *32*, 696-720. doi:10.1108/01443571211230934

Kinkel, S. (2014). Future and impact of backshoring: Some conclusions from 15 years of research on German practices. *Journal of Purchasing and Supply Management*, *20*, 63-65. doi:10.1016/jpursup.2014.01.005

Kinkel, S., & Zanker, C. (2013). New pattern of German production relocation and back shoring activities after the global economic crisis. *ResearchGate*, conference paper presented at the EUROMA (European Operations Management Association, Dublin, Ireland). Retrieved from http://.researchgate.net/publication/268075205

Kittilaksanawong, W. (2015). Value creation and appropriation in buyer-supplier relationships: Governance, competition and cultures. In B. Chistiansen (Ed.), *Handbook of research on global supply chain management.* Hershey, PA: IGI Global.

Klonek, F. E., Quera, V., & Kauffeld, S. (2015). Coding interactions in motivational interviewing with computer-software: What are the advantages for process researchers? *Computers in Human Behavior*, *44*, 284-292. doi:10.1016/j.chb.2014.10.034

Koch, L. C., Niesz, T., & McCarthy, H. (2014). Understanding and reporting qualitative research: An analytical review and recommendations for submitting authors. *Rehabilitation Counseling Bulletin*, *57*, 131-143. doi:10.1177/0034355213502549

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy*, *45*, 214-222. doi:10.5014/ajot.45.3.214

Lacerda, A. P., Xambre, A. R., & Alvelos, H. M. (2015). Applying value stream mapping to eliminate waste: A case study of an original equipment manufacturer for the automotive industry. *International Journal of Production Research*, *4*, 271-274. doi:10.1080/00207543.2015.1055349

Lacity, M., & Wilcocks, L. (2014). Business process outsourcing and dynamic innovation. *Strategic Outsourcing*: *An International Journal*, *7*, 66-92. doi:10.1108/SO-11-2013-0023

Lapan, D. S., Quartaroli, T. M., & Riemer, J. F. (2011). *Qualitative research: An introduction to methods and designs.* San Francisco, CA: John Wiley & Sons

Lane, P. J., Cannella, A. A., Lubatkin, M. H. (1998). Agency problems antecedents to unrelated mergers and diversification. *Strategy Management*, *19*, 555-578. Retrieved from https://doi.org/10.1002/(sci)1097-0266(199806) 19:6<555::aid-smj955>3.3.co;2-p

Lanier, D., Wempe, W.F., & Zacharia, Z. G. (2010). Concentrated supply chain membership and financial performance: Chain-and-firm-level perspectives. *Journal of Operations Management*, *28*, 1-6. Retrieved from http://dx.doi.org/10.1016/j.jom.2009.06.002

Larsen, M. M., Manning, S., & Pedersen, T. (2013). Uncovering the hidden cost of offshoring: The interplay of complex, organizational design, and experience. *Strategic Management Journal*, *34,* 533-552. doi:10.1002/smj.2023

Lauckner, H., Paterson, M., & Krupa, T. (2012). Using constructivist case study methodology to understand community development process: Proposed methodological questions to guide the research process. *The Qualitative Report*, *17,* 1-22. Retrieved from http://nsuworks.nova.edu/tqr/

Laws, K., & McLeod, R. (2004). Case study and grounded theory: Sharing some alternative qualitative research methodologies with systems professionals. In M. Kennedy, G. Winch, R. Langer, J. Rowe, & J. Yanni (Eds.), *Proceedings of the 22nd international conference of the systems* (vol. 78; pp. 1-25). Albany, NY: Systems Dynamics Society.

LeCompte, M. D., Preissle, J., & Tesch, R. (1993). *Ethnography and qualitative design in educational research*. San Diego, CA: Academic Press.

Lee, H. (2013). Joint global expansion strategies between supply chain participants and logistics service providers. *International Journal of Advanced Logistics*, *2*, 55-68. doi:10.1080/2287108X.2013.11006087

Lee, P. M., & O'Neill, H. M. (2003). Ownership structure and R&D investments of US and Japanese Firms: Agency and Stewardship perspectives. *Academy of Management Journal, 46*, 212-225. doi:10.2307/30040615

Leedy, P. D., & Ormrod, J. E. (2016). *Practical research: Planning and design.* Upper Saddle River, NJ: Pearson Education.

Li, E., & Martin, J. S. (2016). Capital formation and financial intimidation: The role of entrepreneur reputation formation. *Journal of Corporate Finance.* doi:10.1016/j.jorpfin.2016.04.002

Liu, L., & Song, H. (2014). Service outsourcing and procurement in service supply chain: Perspective of service buyers. *WHICEB 2014Proceedings, Paper 9*. Retrieved from http://aisel.aisnet.org/whiceb2014

Levin, J, R. (1994). Crafting educational intervention research that's both credible and creditable. *Educational Psychology Review*, *6*, 231-243. doi:10.1007/BF02213185

Lietz, C. A., & Zayas, L. E. (2010). Evaluating qualitative research for social work practitioners. *Advances in Social Work*, *11,* 188-202. Retrieved from http://journals.iupui.edu/index.php/advancesinsocialwork

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry.* Newbury Park, CA: Sage.

Lyles, M. A., & Park, S. H. (2013). The life cycle of internalization. *Business Horizon*, *56*, 405-410. doi:10.1016/j.bushor.2013.04.005

Lyons, D. H., Bike, D. H., Ojeda, L., Johnson, A., Rosales, R., & Flores, L. Y. (2013). Qualitative research as social justice practice with culturally diverse population. *Journal for Social Action in Counseling and Psychology*, *5,* 10-25. Retrieved from http://www.researchgate.net/publication/262676566

MacGillivray, B. H. (2014). Heuristics structure and pervade formal risk assessment. *Risk Analysis, 34*, 771-787. doi:10.1111/risa.12136

Madupalli, R., Pannirselvam, G., & Williams, C. (2014). Quality of business-to-business relationships: Impact of customer-supplier differences. *Academy of Marketing Studies, 18*, 149-167. Retrieved from http://www.alliedacademies.org/academy-of-marketing-studies-journal/

Manning, S., Lewing, A. Y., & Schuerch, M. (2011). The stability of offshore outsourcing relationships. *Management International Review*, *51*, 381-406. doi:10.1007/s11575-011-0081-4

Manning, S., Massini, S. & Lewin, A. Y. (2008). A dynamic perspective on next generation offshoring: The global sourcing of science and engineering talent. *Academy of Management Perspectives*, *22*, 35-44. doi:10.5465/AMP.2008.34587994

Mardis, A. M., Hoffman, E. S., & Rich, P. J. (2014). Trends and issues in qualitative research methods. *Handbook of Research on Educational Communications and Technology*, *2014*, 173-193. doi:10.1007/978-1-4614-3185-5_15

Marshall, C., & Rossman, G, B. (2014) *Design qualitative research*. Thousand Oaks, CA: Sage.

Martin, C., Carlos, M., Omera, K., & Oznur, Y. (2011). Approaches to managing global sourcing risk. *Supply Chain Management: An International Journal*, *16,* 67-81. doi:10.1108/135598541111115338

Martinez-Nova, A., & Garcia-Canal, E. (2014). International evidence on R&D services outsourcing practices by technological firms. *The Multinational Business Review*, *22*, 372-393. doi:10.1108/MBR-08-2014-0042

Mason, M. (2010). Sample size and saturation in Ph.D. studies using qualitative interviews. *Forum: Qualitative Sozialforschung/Forum: Qualitative Social Research*, *11*(3), 8. Retrieved from http://www.qualitative-research.net/index.php/fqs/index

Mathrani, A., & Marthrani, S. (2016). Regional governance in outsourcing partnerships. *Competitive Review*, *26*, 435-452. doi:10.1108/cr-03-2015-0017

Matthew, B., Huberman, M. A., Saldana, J. (2013*). Qualitative data analysis: A methods sourcebook.* Los Angeles, CA: Sage.

May, K. M. (1991). Interview techniques in qualitative research: Concerns and challenges. In J. M. Morse (Ed.), *Qualitative nursing research* (pp. 187-201). Newbury Park, CA: Sage.

Marucheck, A., Greis, N., Mena, C., & Cai, L. (2011). Product safety and security in the global supply chain: Issues, challenges, and research opportunities. *Journal of Operations Management*, *29,* 707-720. doi:10.1016/j.jom.2011.06.007

Maverick, J. B. (2015, July 8). What average return equity company automotive sector. Retrieved from http://www. Investopedia.com/ask/answers/070815/what-average-return-equity-company-automotive-sector.asp

Mboga, J. (2014). *Exploring outsourced vendor operating effectiveness and its effect on clients' objectives*. (Doctoral dissertation). Available from ProQuest Dissertations & Thesis Full-Text database. (UMI 3605925)

Mclvor, R. (2013). Understanding the manufacturing location decision: The case for the transaction cost and capability perspectives. *The Journal of Supply Chain Management*, *49*, 23-26. doi:1111/jscm.12010

Mena, C., Humphries, A., & Choi, T. Y. (2013). Toward a theory of multi-tier supply chain management. *Journal of Supply Chain Management*, *49*, 58-77. doi:10.1111/jscm.1203

Merkert, R., & Hensher, D. (2013). Regulation, trust and contractual incentives around transport contracts: Is there anything bus operators can learn from public air service contracts? *Research in Transportation Economics*, *39*, 67-68. doi:10.1016/j.retrec.2012.05.025

Merriam, S. B. (2013). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Mishra, D. P., Heide, J. B., & Cort, S, G. (1998). Citing information asymmetry and levels of agency relationships. *Journal of Marketing Research*, *35*, 277-295. doi:10.2307/3152028

Mishra, S. C., & Zachary, R. K. (2013). The nature of the firm, the growth and resource-based theories of the firm, and the emergent theory of the entrepreneur: A dedication to Nobel Laureate Ronald Coase. *Entrepreneurship Research Journal*, *3*, 433-436. doi:10.1515/erj-2013-0067

Mitchell, M. L., & Jolley, J. M. (2013). *Research design explained* (8th ed.). Boston, MA: Wadsworth.

Mitnick, B. M. (2015). Agency Theory. *Wiley Encyclopedia of Management*, *2*, 1-6. doi:10.1002/0781118785317.weom020097

Moe, N. B., Smite, D., Hanssen, G. K., & Barney, H. (2014). From offshore outsourcing to insourcing and partnerships: Four failed outsourcing attempts. *Empirical Software Engineering*: *An International Journal*, *19*, 1225-1258. doi:10.1007/s10664-013-9272-x

Morris, G. J. (2014). *The positive deviance phenomenon of leading successful strategic change* (Doctoral dissertation). Available from ProQuest Dissertations & Thesis Full-Text database. (UMI No. 3623421)

Morse, J., Barrett, M., Mayna, M., Olson, K., & Spiers, J. (2008). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, *2,* 13-22. doi:10.1177/160940690200100202

Morse, J. (2015). Analytical strategies and sample size. *Qualitative Health Research*, *25*, 1317-1318. doi:10.1177/1049732315602867

Moustakas, C. (1994). *Phenomenology research method*. Thousand Oaks, CA: Sage.

Mukherjee, D., Gaur, A., & Datta, A. (2013). Creating value through offshore outsourcing: An integrative framework. *Journal of International Management*, *19*, 377-389. doi:10.1016/jintman.2013.03.015

Mukherjee, S., & Mukherjee, K. (2015). Selection decisions of offshore ITO service providers for strategic alliances-an AHP-based approach. *International Journal of Business Information Systems*, *20*, 238-269. doi:10.1504/JBIS.2015.071541

Musaeus, S. (2014*). Prioritizing offshore vendor selection criteria for the North American geospatial industry* (Order No. 3666704). Available from Dissertations & Theses @ Walden university. (1640916950).

Mykhaylenko, A., Motika, A., Waehrens, B. V., & Slepniov, D. (2015). Accessing offshoring advantages: What and how to offshore. *Strategic outsourcing*: *An International Journal*, *18*, 262-283. doi:10.1108/SO-07-2015-0017

National Highway Traffic Safety Administration. (2016). U.S. Department of transportation expands and accelerates Takata air bag inflator recall to protect American drivers and passengers. Retrieved from http://www.nhtsa.gov/About+NHTSA/Press+Releases/nhtsa-expands-accelerates-takata-inflator-recall-05042016

Neuman, Y., Alves, T. D. C., Walsh, K. D., & Needy, K. L. (2015). Qualitative analysis of supplier quality surveillance practices in EPC Projects. *Journal of Construction Engineering and Management*, *141*, 04015039. doi:10.1061/(asce)co.1943-7862.0001023

Ni, J. Z., Flynn, B., & Jacobs, F. R. (2014). Impact of product recall announcements on retailers' financial value. *International Journal of Production Economics*, *153*, 309-322. doi:10.1016/j.ijpe.2014.03.014

Niazi, M., Ikram, N., Bano, M., Imtiaz, S., & Khan, S. U. (2013). Establishing trust in offshore software outsourcing relationships: An exploratory study using a systematic literature review. *Institute of Engineering and Technology ET Software*, *7,* 283-293. doi:10.1049/iet-sen.2012.0136

Niranja, T. T., & Rao, S. S. (2011). A toolkit for balanced outsourcing. *Industrial Management, 53,* 19-24. Retrieved from https://www.iienet2.org/details.aspx?id=652

Nishimura, A., Carey, J., Erwin, P. J., Tilburt, J. C., Murad, M. J., & McCormic, J. B. (2013). Improving understanding in the research informed consent process: A system review of 54 interventions tested in randomized control trials. *BMC Medical Ethics*, *14 (1)*, 28. doi:10.1186/1472-6939-14-28

Nita, B. (2014). Integrated cost management in supply chain. *Performance Measurement and Management*, *345*, 74-84. doi:10.15611/pn.2014.345.07

Noshad, K., & Awasthi, A. (2015). Supplier quality development: A review of literature and industrial practices. *International Journal of Production research*, *53*, 466-487. Retrieved from http://dx.doi.org/10.1080/00207543.2014.95467

Obloj, T., & Zemsky, P. (2014). Value creation and value capture under moral hazard: Exploring the micro-foundation of buyer-supplier relationships. *Strategic Management Journal*, *36*, 1146-1163. doi:10.1002/smj.2271

Onwuegbuzie, A. J., & Corrigan, J. A. (2014). Improving the quality of mixed research reports in the field of human resource development and beyond: A call for rigor as an ethical practice. *Human Resource Development Quarterly*, *25*, 273-299. doi:10.1002/hrdq.21197

Opdenakker, R. (2006). Advantages and disadvantages of four interview techniques in qualitative research. *Forum: Qualitative Social Research, 7*. Retrieved from http://www.qualitative- research.net/index.php/fqs/index

Oshri, I., Kotlarsky, J., & Willcocks, L. P. (2015). *The handbook of global outsourcing*. New York, NY: Palgrave Macmillan.

Ouabouch, L., & Amri, M. (2013). Analysis supply chain risk factors: A probability-impact matrix applied to pharmaceutical industry. *Journal of Logistics Management*, *2*, 35-40. doi:10.5923/j.logistics.20130202.01

Oviatt, B. M. (1988). Agency and transaction cost perspectives on the manager-shareholder relationship: Incentives for congruent interests. *Academy of Management Review*, *13,* 214-225. Retrieved from http://jstor.org/stable/258573

Palvia, P., & Palvia, S. C. J. (2016). Global sourcing of services: Strategies, issues and challenges. In S. Palvia & P. Palvia (Eds.) *Global Sourcing of services: Strategic Issues* (pp. 175). Hanover, MA: Publishers Inc.

Patil, S., & Wongsurawat, W. (2015). Information technology (IT) outsourcing by business process outsourcing/information technology enabled services (BPO/ITES) firms in India: A strategic gamble. *Journal of Enterprise Information Management*, *28*, 60-70. doi:10.1108/JEIM-09-2013-0068

Patton, M. Q. (2009a). *Qualitative research and evaluation methods* (2nd ed.). Thousand Oaks, CA: Sage.

Patton, M. Q. (2015b). *Qualitative research and evaluation methods*: *Integrating theory and practice* (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.

Perrow, C. (1986). Economic theories of organization. *Theory and Society*, *15*, 11-45. doi:10.1007/bf00156926

Pinnegar, S., Daynes, & J. G. (2007). Locating narrative inquiry historically: Thematics in the turn to narrative. In D. J. Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology* (pp. 3-75). Thousand Oaks, CA: Sage.

Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: *Myths and Strategies, 47,* 1451-1458. doi:10.1016/j.ijnurstu.2010.06.004

Pournader, M., Kach, A., Fahimnia, B., & Sarkis, J. (2016). Outsourcing performance quality assessment using data envelopment analytics. *International Journal of Product Economics*. doi:10.1016/j.ijpe.2016.07.004

Prosman, E. J., Scholten, K., & Power, D. (2016). Dealing with defaulting suppliers using behavioral based governance methods: An agency theory perspective. *Supply Chain Management*, *21*, 499-511. doi:10.1108/scm-08-2015-0299

Prunovic, Z., Christoffersen, M., & Mefford, R. N. (2012) Deployment of vendor capabilities and competences throughout the outsourcing process. *International Journal of Operations & Production Managemen*t, *32*, 351-374. doi:10.1108/01443571211212619

Quinlan, M., Hampson, I., & Gregson, S. (2013). Outsourcing and offshoring aircraft maintenance in the US: Implications for safety. *Safety Science*, *57*, 283-292. doi:10.5703/1288284314659

Rahman, S., Khan, M. A., Alam, M., Mustami, N., & Chang, C. W. (2014). A comparative study of knowledge sharing pattern among the undergraduate and postgraduate students of private universities in Bangladesh. *Library Review*, *63*, 653-669. doi:10.1108/1r-12-2013-0157

Rein, S. (2012). *The end of cheap China: Economic and cultural trends that will disrupt the world*. San Francisco, CA: John Wiley & Sons, Inc.

Rennie, D. L. (2012). Qualitative research as methodical hermeneutics. *Psychological Methods*, *17*, 385-398. doi:10.1037/a0029250

Reiter, S., Stewart, G., & Bruce, C. (2011). A strategy for delayed research method selection: Deciding between grounded theory and phenomenology. *Electrical Journal of Business Research Methods*, *9*, 35-46. Retrieved from http://www.ejbrm.com

Richey, R., & Klein, J. D. (2014). *Design and development research*: *Methods, strategies, and issues*. New York, NY: Taylor & Francis Group.

Ritchie, J., Lewis, J., Nicholls, M., & Ormston, R. (2013). *A guide for social science students and researchers*. Thousand Oaks, CA: Sage.

Roh, J. A., Whipple, J. M., & Boyer, K. K. (2013). The effects of single rater bias in multi-stake holder research: A methodological evaluation of buyer-supplier relationship. *Production and Operations Management*, *22*, 711-725. doi:10.1111/j.1937-59562012.01371x

Sandelowski, M. (2007). Sample size in qualitative research. *Research in Nursing & Health, 18,* 179-183. doi:10.1002/nur.4770180211

Sargeant, J. (2012). Qualitative research part II: Participants, analysis, and quality assurance. *Journal of Graduate Medical Education*, *4*, 1-3. doi:10.4300/JGME-D-11-00307.1

Schillemans, T. (2013). Moving beyond the class of interest: On stewardship theory relationships between central government departments and public agencies. *Public Management Review*, *15*, 541-562. doi:10.1080/14719037.2012.691008

Schwartz, C. (2014). Toward an understanding of the nature and conceptualization of outsourcing success. *Information & Management*, *51*, 152-164. doi:10.1016/jm.2013.11.005

Selby, J. V., & Krumholz. H. M. (2013). Ethical Oversite: Serving the best interests of patients. *The Hastings Center Report*, *43*, 34-36. doi:10.1002/hast.138

Seppala, J., Kylaheiko, K., & Jantunen, A. (2014). Revealing hidden motives behind outsourcing decision: A case study relating to public information technology services. *INDERSCIENCE*, *7*, 520. doi:10.1504/IJPM.2014.064617

Sharma, S. K., & Vasant, B. S. (2015). Developing a framework for analyzing global supply chain security. *Journal of Supply Chain Management*, *12*, 7-34. Retrieved from https: www.ebscohost.com/academic/business-source-complete

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22,* 63-75. Retrieved from http://content.iospress.com/

Shoup, V. S. (2015*). One hospital's satisfaction plans in response in response to a changing healthcare environment (*Doctoral dissertation). Available from Dissertations & Theses @ Walden University. (Order No. 3685479)

Sikes, P., & Piper, H. (2010). Ethical research, academic freedom and the role of ethics committees and review procedures in educational research. *International Journal of Research & Method in Education*, *33*, 205-213. doi:10.1080/1743727X

Simões, S. A., de Souza, J. W., Contador, J. C., & Ferreira, A. A. (2012). IT outsourcing: Methodology for supplier selection criteria for competitive advantage. *Journal of Information Systems and Technology Management*, *9*, 123-146. Retrieved from http://www.jistem.fea.usp

Simon, M. K. (2011). *Dissertation and scholarly research: A practical guide to start and complete your dissertation, thesis, or formal research project* (3rd ed.). Charleston, SC: Dissertation Success.

Skiffington, H., Akoorie, M. E., Sinha, P., Jones, G. (2013). Production outsourcing offshore in the New Zealand printing, publishing and packaging industries. *Strategic Outsourcing: An International Journal*, *6*, 116-137. doi:10.1108/SO-01-2013-0001

Sodhi, M. S., & Tang, C. S. (2014). Guiding the next generation of doctoral students in operations management. *International Journal of Production Economic*s, *150*, 28-36. doi:10.1016/j.ijpe.2013.11.016

Sodhi, M. S., & Tang, C. S. (2016). Supply chain opportunities at the bottom of the pyramid. *Springer Link*, *43*, 125-134. doi:10.1007/s40622-015-0117-x

St. John, J., Guynes, C. S., & Vedder, R. (2014). The client-vendor offshore relationship: Success factors. *Journal Information Systems Management*, *3*, 120-125. doi:10.1080/10580530.2014.890429

St. John, J., Vedder, R., & Guynes, C. S. (2013). Relationship changes in IT offshoring. *International Journal of Management & Information Systems*, *17*, 131. doi:10.19030/ijmis.v17i3.7862

Stahl, B. C. (2013). Responsible research and innovation: The role of privacy in an emerging framework. *Science and Public Policy*, *40*, 708-716. doi:10.1093/scipol/sct057

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

Stark, M. D., Garza, Y., Bruhn, R., & Ane, P. (2015). Student perceptions of sandtray in solution-focused supervision. *Journal of Creativity in Mental Health*, *10,* 2-17. doi:10.1080/15401383.2014.917063

Steinle, C., Schiele, H., & Ernst, T. (2014). Information asymmetries as antecedents of opportunism in buyer-supplier relationships: Testing principal-agent theory. *Journal of Business-to-Business Marketing*, *21*, 123-140. Retrieved from http://dx.doi.org/10.1080/1051712X. 2014.903457

Steven, A. B. (2015). Supply chain structure, product recalls, and firm performance: Empirically investigating recall drivers and recall financial relationships. *Decision Sciences*, *46*, 477-483. doi:10.1111/deci.12135

Steven, A. B., & Britto, R, A. (2016). Emerging market presence, inventory, and product recall linkages. *Journal of Operations Management*, *46*, 55-68. doi:10.1016/j.jom.2016.07.003

Steven, A. B., Dong, Y., & Corsi, T. (2014). Global sourcing and quality recalls: An empirical study of outsourcing-supplier concentration-product recalls linkages. *Journal of Operations Management*, *32,* 241-253. doi:10 .1016/j.jom.2014.04.003

Subramanian, N., Rahman, S., & Abdulrahman, M. D. (2015). Sourcing complexity in the Chinese manufacturing sector: An assessment of intangible factors and contractual relationship strategies. *International Journal of Production Economics*, *166*, 269-284. doi:10.1016/j.ijpe.2015.03.012

Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal*, *11,* 63-75. doi:10.3316/QRJ1102063

Tan, K. H., Tse, Y. K., & Chen, J. (2014). Chapter 4. In B. B. Flynn & X. Zhao (Eds.). *Global supply chain quality management* (pp. 48-57). Boca Raton, FL: CRC Press.

Tate, W. L., Ellram, L. M., Schoenherr, T., & Petersen, K. J. (2014). Global competitive condition driving the manufacturing location decision. *Business Horizon*, *57*, 381-390. Retrieved from: http://dx.doi.org/10.1016/j.bushor.2013.12.01

Tellis, W. M. (1997). Application of a case study methodology. *The Qualitative Report*, 3, 1-19. Retrieved from http://nsuworks.nova.edu/tqr/vol3/iss3/1

Tessier, S. (2012). From the field notes, to transcripts, to tape recordings: Evolution or combination? *International Journal of Qualitative Methods*, *11,* 446-460. Retrieved from http://www.iiqm.ualberta.ca/en/InternationalJournalofQualitati.aspx

Thomas, B. A. (2013). Strategies for sustaining the edge in offshore outsourcing of services: The case of India. *The Journal of Business & Industrial Marketing*, *28*, 475-486. doi:10.1108/JBIM-04-2013-0103

Thomas, M. R. (2003). *Blending qualitative & quantitative research methods in theses and dissertations.* Thousand Oaks, CA: Sage Publications, Inc.

Thomas, E., & Magilvy, J. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing*, *16*, 151-155. doi:10.1111/j.1744-6155.2011.00283.x

Tingting, L., & Ritta, H. (2016). Governance structure in IT outsourcing: A network perspective. *Strategic Outsourcing*: *An International Journal*, *9*, 38-59. doi:10.1108/SO-03-2015-0011

Torto, R. T. (2011). Effects of inter-personal relationship on code choice in communication: A case of the University Community of Cape Coast, Ghana. *Language in India, 11*, 59-72. Retrieved from http://www.languageindia.com

Tramm, R., Daws, K., & Schadewaldt, V. (2013). Clinical trial recruitment: A complex intervention? *Journal of Clinical Nursing*, *22*, 2436-2443. doi:10.1111/jocn.12145

Trochim, W. (2000). *The research methods knowledge base* (2nd ed.). Cincinnati, OH: Atomic Dog.

Turner, D. W. (2010). Qualitative interview design: A practical guide for novice investigators. *The Qualitative Report*, 15, 754-760. Retrieved from http://nsuworks.nova.edu/tqr/

Uluskan, M., Joines, J. A., & Godfrey, A. B. (2016). Comprehensive insight into supplier quality and the impact of suppliers on outsourcing decisions. *Supply Chain Management: An International Journal*, *2*, 92-102. Retrieved from http://dx.doi.org/10.1108/SCM-04-2915-0140

U. S. Consumer Product Safety Commission. (2014). Port surveillance news: More than 4.8M units of violative imported products kept at bay during Fiscal Year 2013. Retrieved from http://www.cpsc.gov/en/newsroom/news-release/2014/more-than-12.5m-units-of

Vahlne, J. E., & Johanson, J. (2013). The Uppsala model on evolution of the multinational business enterprise-from internalization to coordination of networks. *International Marketing Review*, *30*, 189-210. doi:10.1108/02651331311321963

Verner, J. M., Bereton, O. P., Kitchenham, B. A., Turner, M., & Niazi, M. (2014). Risk and risk mitigation in global software development: A tertiary study. *Information and Software Technology*, *56*, 54-78. Retrieved from http://dx.doi.org/org/10.1016/j.infsof.2013.06.005

Visani, F., Barbieri, P., Marta, F., Di Lascio, L., Raffoni, A., & Vigo, D. (2015). Supplier's total cost of ownership evaluation. A data envelopment analysis approach. *Omega*, *61*, 141-154. doi:10.1016/j.omega.2015.08.001

Walden, L. (2013). *Why some teachers stay in spite of the problems inherent in high-risk high schools* (Doctoral dissertation). Retrieved from Academia EDU. (4510021)

Wardlaw, C. (2016, June 22). Top ranked cars, trucks, and suvs in the J.D. Power 2016 U.S. initial quality study. *J.D. Power & Associates*. Retrieved from http://www.jdpoer.com/ratings-and -awards

Welch, M. (2014). Exploring the impact of communication technologies on business air travel. *Journal of Organizational Culture, Communication and Conflict*, *18,* 187-213. Retrieved from http://www.alliedacademies.org/journal-of-organizational-culture-communications-and-conflict/

Wengraf, T. (2001). *Qualitative research interviewing*. London, UK: Sage Publications, Inc.

West, D., Ford, J., & Ibrahim, E. (2015). *Strategic marketing: Creating competitive advantage*. New York, NY: Oxford University Press.

Wetzstein, A., Hartman, E., Benton Jr, W. C., & Hohenstein, N. O. (2016). A systematic assessment of supplier literature: State-of-the-art and future scope. *International Journal of Production Economics*, *182*, 304-323. Retrieved from http://dx.doi.org/10.1016/j.ijpe.2016.06.022

Wilhelm, M. M., Blome, C., Bhakoo, V., & Paulraj, A. (2016). Sustainability in multi-tier supply chains; Understanding the double agency role of the first-tier supplier. *Journal of Operations Management*, *41*, 42-60. Retrieved from https://doi.org/10.1016/j.jom.2015.11.001

Whipple, J. M., & Roh, J. (2010). Agency theory and quality fade in buyer-supplier relationships. *The International Journal of Logistics Management*, *21*, 338-352. doi:10.1108/09574091011089781

Wickham, M., & Woods, M. (2005). Reflecting on the strategic use of CAQDAS to manage and report on the qualitative research process. *The Qualitative Report*, *10*, 687-702. Retrieved from http://nsuworks.nova.edu/tqr/

Wiengarten, F., Humphreys, P., Gimenez, C., & Mclvor, R. (2015). Risk management practices, and the success of supply chain integration. *International Journal of Production Economics*, *171,* 361-270. doi:10.106/j.ijpe.2015.03.020

Williamson, O. E. (1975). *Markets and hierarchies*. New York, NY: Macmillan.

Wilson, V. (2014). Research methods: Triangulation. *Evidenced Based Library and Information Practice*, *9*, 74-75. Retrieved from https://doi.orgh/10.18438%2Fb8ww3x

Wowak, K. D., & Boone, C. A. (2015). So many recalls, So little research: A review of the literature and roadmap for future research. *Journal of Supply Chain*, *51*, 54-72. doi:10.1111/jscm.12079

Wowack, K. D., Craighead, C. W., Ketchen, D. J., & Hult, G. T. M. (2016). Toward a "theoretical toolbox" for the supplier-enabled fuzzy front end of the new product development process. *Journal of Supply Chain Management*, *52*, *66-81*. doi:10.1111/jscm.1208

Yang, B., Zhang, Y., & Liu, M. (2013). Cultural intelligence and relationship quality on offshore IS outsourcing success: From the vendor's perspective. *Journal of Convergence Information Technology*, *8,* 721-731. doi:10.4156/jcit.vol8.issued4.83

Yang, Q., Zhao, X., Yeung, H. J., Liu, Y. (2016). Improving logistics outsourcing performance through transaction and relational mechanisms under transaction uncertainties. *International Journal of Production Economics*, *175*, 12-23. doi:10.1016/j.ijpe.2016.01.022

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions. *European Journal of Education, Research, Development and Policy, 48*, 311-325. doi:10.1111/ejed.12014

Yin, R. K. (2011*). Qualitative research from start to finish*. New York, NY: The Guilford Press.

Yin, R. K. (2014*). Case study research: Design and methods*. Thousand Oaks, CA: Sage.

Young, I., Gropp, K., Pintar, K., Waddell, L., Marshall, B., & Thomas, K. (2014). Experiences and attitudes towards evidence-informed policy-making among research and policy stakeholders in the Canadian agri-food public health sector. *Zoonoses and Public Health*, *61*, 581-589. doi:10.1111/zph.12108

Yuksel, P., & Yildirim, S. (2015). Theoretical frameworks, methods, and procedures for conducting phenomenological studies in educational settings. *Turkish Online Journal of Qualitative Inquiry*, *6*(1), 1-20. Retrieved from http://www.tojqi.net/

Zhao, X., Li, Y., & Flynn, B. (2013). The financial impact of product recall announcements in China. *International Journal of Production*, *142*, 115-123. doi:10.1016/j.jipe.2012.10.018

Zsidisin, G. A., & Ellram, L. M. (2003). An agency theory investigation of supply risk management. *Journal of Supply Chain* Management, *39*, 15-27. doi:10.1111/j.1745-493X.2003.tb00156.x

Zu, X., & Kaynak, H. (2013). An agency theory perspective on supply chain quality management. *International Journal of Operations & Production Management*, *32*, 423-446. doi:10.1108/01443571211223086

Zu, X., & Cui, Y. (2013). An empirical model of supplier relation and management for better quality. *International Journal of Applied Management Science*, *5*, 217-233. doi:10.1504/IJAMS.2013.055424

Appendix A: Invitation to Participate in Study

Dear Business Leader,

I am a doctoral candidate in the Doctor of Business Administration program studying manufacturing strategies used by business leaders in mitigating the defects in offshore manufactured products. My research indicates that your company will be a good candidate for my study. I would like to have a short chat with you to discuss how this could be a win-win for both of us.

My objective is to conduct a study at your company on the strategies your managers use to mitigate the quality defects in offshore manufactured products. My case study approach will include conducting some fieldwork, including recorded interviews of managers and looking at applicable company written quality control documents.

I have studied the literature for the past 3 years on strategies for mitigating the defects in offshore manufactured products. Upon my study's completion, I will share a summary of my study results and suggestions with you and your managers, which may provide additional strategies to complement your ongoing strategies. This will be free consulting services, analysis, and suggestions on your company's outsourcing practices.

I will use pseudonyms in my study and any publication to protect the identity of the company and employees and to promote confidentiality.

Thank you for your consideration.

Sincerely,

More Layen

Appendix B: Interview Protocol and Questions

1. What are your decision criteria for outsourcing a product offshore?
2. How do your decision criteria for outsourcing a product affect the quality of the product?
3. How does the strategy for reducing cost influence your ability to minimize defects in your outsourced products?
4. What are your primary challenges in working with offshore vendors to minimize product defects?
5. What strategies are you using to address product defect challenges of offshore providers?
6. What mechanism do you use to analyze the ability of various offshore providers to meet your product specifications?
7. What benchmarks do you use to gauge your effectiveness in minimizing product defects?

Appendix C: Research Protocol Checklist

Pseudonym of Participants:	**Code for Participants:**
Date of Interview:	**Interview Duration:**

Participant meets eligibility criteria: No ☐ Yes ☐

Consent form completed: No ☐ Yes ☐

Permission to record and transcribe interview received: No ☐ Yes ☐

Check recordings on: Yes ☐

Backup Yes ☐

Open with review of research questions:	Purpose	Yes ☐
	Risks	Yes ☐
	Benefits	Yes ☐
	Participant confidentiality	Yes ☐
	Right to withdraw	Yes ☐

Close with details of and estimates for interview:	Review of draft transcript	Yes ☐
	Member checking	Yes ☐
	Participant confidentiality	Yes ☐
	Data storage for 5 years	Yes ☐

Participant support and participation thank-you:
Yes ☐

Post Interview Items:

Confirm post-interview observational journaling completed:
Yes ☐

Transcribe interview:
Yes ☐

Member checking: Yes ☐

Code the responses: Yes ☐

Appendix D: Interview Guide

Purposive Sampling					
I	**Demographic Information Section:**				
	1	Participant's name:	**2**	Participant's pseudonym:	
	3	Interview date:	**4**	Start time:	End time:
	5	Sex of participant:	M ☐ F ☐		
	6	Participant's role:	**7**	Participant's company:	
	8	Time with current organization:		Years:	
II	**Participant Eligibility Criteria Established:**				Yes ☐
What role do you play in your organization?					
III	**Interview Questions Section:**				
	1	What are your decision criteria for outsourcing a product offshore?			
	2	How do your decision criteria to outsource a product affect the quality of the product?			
	3	How does the strategy to reduce cost influence your ability to minimize defects in your outsourced products?			
	4	What are your primary challenges working with offshore providers to minimize product defects?			
	5	What strategies are you using to address product defect challenges of offshore providers?			
	6	What mechanism do you use to analyze the ability of various offshore providers to meet your product specifications?			
	7	What benchmarks do you use to gauge effectiveness in minimizing product defects?			