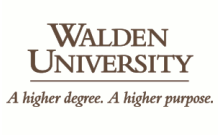

2020

Strategies to Manage Quality in Outsourced Manufacturing Processes

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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2020

Abstract

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Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

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Abstract

Offshore outsourcing operations that involve high risks of noncompliance with quality specifications have been studied among scholars. Researchers have demonstrated that organizations pursue offshore outsourcing to reduce costs and to remain competitive; however, noncompliance with quality specifications increases product costs. Grounded in the total quality management model, the purpose of this qualitative multiple case study was to explore business managers' strategies used to ensure compliance with quality standards when outsourcing manufacturing processes internationally. The participants consisted of 3 managers of companies in Riverside County, California, who successfully outsourced offshore manufacturing operations. Data were collected through face-to-face interviews and validated with organizational documents. Thematic data analysis was conducted through coding and identification of the main themes. Three themes emerged: criticality of the quality management system, compliance with product quality standards, and standardization of manufacturing processes. Recommendations for managers include implementing strategies to ensure that foreign suppliers have an effective quality system to manage product quality. The implications for positive social change include the potential to produce higher quality products with fewer recalls for the protection of the safety and health of consumers and maintaining or increasing the revenue of the businesses to influence the stability and growth of employment.

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Dedication

I dedicate this study first, to God, because I could never thank Him enough for my blessings. I dedicate this study to my husband, Fernando, and my sons, Luca, Ethan, and Nathan. You have given me the strength and motivation to endure this journey and made me a better professional and human the moment you arrived in my life. Thank you for all the sacrifices you made, your patience, for those hours, and the moments I missed that allowed me to complete this journey. I love you more than to infinity; you are my inspiration and my reason for every goal I choose to pursue. You take my breath away and fill my heart with unimaginable joy and happiness.

I also dedicate this study to my parents, Jose and Claudia. Thank you for having faith in me, for not allowing me to give up, loving me unconditionally, and teaching me to be resilient. You are absolutely the best parents and the best example I could have ever had. To my siblings (Adriana, Katia, and Tonito), nephews, and nieces, for being supportive, patient, understanding, and making me smile when I needed it the most. I love you. Mom, Kayla, and Katia thank you for being there for my boys when I could not. Words cannot explain the peace that knowing you were there gave me during some difficult times. I will be forever grateful.

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Section 1: Foundation of the Study

Organizations need to remain competitive and keep low costs (Chebolu-Subramanian & Gaukler, 2015). Competition has continued to increase considerably throughout the years, and manufacturing companies in foreign countries represent high-potential suppliers for companies in the United States that want to outsource manufacturing. Thus, low costs have become a primary driver for managers to pursue outsourcing manufacturing operations (Pearce, 2014). Despite the financial benefits of outsourcing, there are issues with poor product quality and operational challenges in the supply chain (Pournader, Kach, Fahimnia, & Sarkis, 2019). Managers have to develop risk management strategies for quality assurance so that outsourcing does not become detrimental to their company (Huang, Tu, Chao, & Jin, 2019). Managers have to implement quality management strategies to ensure that the outsourcing of manufacturing achieves economic benefits.

Background of the Problem

China, India, Mexico, and other lower-cost manufacturing nations are attractive countries to move operations from the United States due to lower manufacturing costs (Pearce, 2014). In the United States, 49% of companies that outsourced internationally indicated that cost reduction was the primary reason (Pearce, 2014). The pressure of competing to win product lines has led companies to outsource raw materials or manufactured goods and to relocate production to countries with less expensive labor (Chebolu-Subramanian & Gaukler, 2015). The changes that affected the manufacturing sector and its workforce are the consequences of the evolution of technologies, foreign

competition, and the offshoring of production jobs by the manufacturers in the United States (Dey, Houseman, & Polivka, 2012). From 2000 to 2010, the number of workers employed by manufacturing companies in the United States decreased by approximately 6 million (Dey et al., 2012). Managers choose to partially or totally move their operations to countries like India, Mexico, and China, among others, to reduce their costs.

Labor and materials are less expensive in some foreign countries than in the United States. However, outsourcing brings a different set of problems. International outsourcing involves risks associated with quality (Chebolu-Subramanian & Gaukler, 2015). Due to the distance, maintaining quality controls, and the systems required to ensure that suppliers meet standards can be challenging. Thus, most of the time, lower cost is associated with lower quality. Lower quality is a cost risk that organizations have to face when outsourcing manufactured goods.

Problem Statement

The U.S. organizational leaders who outsource manufacturing processes to countries with less expensive labor put their products at risk of quality noncompliance (Chebolu-Subramanian & Gaukler, 2015). In 2014, 44% of quality and safety recalls in the United States consisted of products imported from China (United States Consumer Product Safety Commission, 2015). The general business problem was that outsourcing results in lower quality and unanticipated expenses. The specific business problem was that some business managers lack effective strategies to ensure compliance with quality standards when outsourcing manufacturing processes internationally.

Purpose Statement

The purpose of this qualitative, multiple case study was to explore the strategies that business managers use to ensure compliance with quality standards when internationally outsourcing manufacturing processes. The population was business managers of three companies in Riverside County, California, who have successfully used strategies to ensure compliance with quality standards in outsourcing manufacturing processes internationally. The results of this study may assist managers of companies that outsource processes to learn effective outsourcing strategies to ensure compliance with quality standards while decreasing rejections and costs. The results are expected to contribute to social change by providing managers strategies to comply with standards for higher quality products and fewer recalls on society. The results from this study may also contribute to social change by continuing granting employment to the communities in Riverside County. The results of this study may contribute to social change by fostering sustainable development in the Riverside County communities and allowing managers to maintain businesses in the area and enhance the quality of life by promoting development, stability in jobs, and educational opportunities. Increasing jobs may mean increasing public tax money to build parks, schools, and instituting after school programs.

Nature of the Study

Research can use quantitative, or mixed, or qualitative methods. This research involved exploring a phenomenon to determine functional quality strategies for internationally outsourced products.

A quantitative methodology involves testing hypotheses to explain a phenomenon (Yin, 2018). The quantitative methodology was not appropriate for this study because I did not develop hypotheses for testing the relationships or differences among variables. Mixed method studies integrate qualitative and quantitative methods and findings in the research process (Östlund, Kidd, Wengström, & Rowa-Dewar, 2011). Since I did not use a quantitative method, mixed methods were not applicable to this research. A qualitative research methodology provides depth by acquiring insights from the participants' answers to interview questions and from other types of data (Venkatesh, Brown, & Bala, 2013). A qualitative method was the appropriate research methodology for this study because I explored the phenomenon of quality management in international outsourcing. A qualitative method was also the most appropriate selection for collecting descriptive data to explore a subject's thoughts on a specific topic and help answer the research question of this study.

Yin (2018) noted that researchers prefer a case study design when the research question answers *how*, *why*, or *what*, and the researcher has little or no control over the event. A case study design was suitable for this research because I focused on a phenomenon and learned about what strategies are useful to control the quality of the outsourced manufacturing process. The main research question for this study was what strategies managers use to ensure quality compliance, and I had no control over the participants' experiences.

Other qualitative research designs, phenomenology and ethnography, were not suitable for this study. With a phenomenological approach, the researcher focuses on a

single event but merges the experiences of several participants associated with that specific phenomenon or event (Yin, 2018). A phenomenological research design was not appropriate because the study's objective was not to understand the managers' experiences associated with a unique event. Ethnography entails the understanding of a cultural group and interpretation of social context (Howard & Williams, 2016). An ethnography design was not appropriate for this study because the interactions and cultural analysis of the participants did not contribute to answering the research question. Thus, a qualitative case study approach was appropriate for conducting my research based on the data I needed to collect to answer the research question.

Research Question

What are the strategies that managers use to ensure quality compliance in internationally outsourced manufacturing processes?

Interview Questions

The primary issue in the interviews was the strategies that managers use to control quality when internationally outsourcing manufacturing processes.

1. What strategies have you used and which work best to ensure compliance with quality standards when managing the outsourcing of manufacturing processes internationally?
2. What are the main challenges you have encountered to implement quality standards compliance when internationally outsourcing manufacturing processes?

3. How did you address the key challenges that you encountered to ensure compliance with quality standards when outsourcing manufacturing processes internationally?
4. What differences did you find in your organization's results through the implementation of different strategies to ensure compliance with quality standards when internationally outsourcing manufacturing processes?
5. Is there anything else you would like to share about the strategies managers use to ensure compliance with quality standards when outsourcing manufacturing processes internationally?

Conceptual Framework

The conceptual framework used in this study was the total quality management (TQM) framework. TQM framework is a management philosophy in which results are measured and monitored to achieve continuous improvement in all functions of an organization (Rehder & Ralston, 1984). It is based on the critical points developed by Deming (1981) to achieve higher quality and productivity.

Deming (1975, 1981, 1985) defined the fundamental principles of TQM and continuous improvement concepts in the 1970s and 1980s. Deming (1975) addressed the need for manufacturers to meet specifications and avoid inspection, rework, and product replacement costs. According to Deming (1975, 1981), the involvement of managers is essential for the TQM model to proceed. Later, Crosby (1984) highlighted the effect that management's commitment has in the quality process. Juran (1993) also noted that management performs the most critical role of implementing strategic quality

management in an organization by leading the change and standardization of processes for quality improvement to reduce the cost of poor quality.

Deming (1985) concluded that managers need to develop a philosophy oriented toward quality and overcoming manufacturing obstacles. From the beginning of the 1980s, TQM brought managers performance and profitability benefits (Samson & Terziovski, 1999). Applied to this study, the quality management strategies that managers use to ensure standard compliance in internationally outsourced manufacturing processes and have a foundation in TQM tenets are the focus of the research.

Operational Definitions

The following terms, which are used throughout this research, are defined for clarity and to prevent misinterpretation.

International or foreign outsourcing: Process that takes place when external suppliers located abroad become the source of some value chain activities or processes for organizations (Chadee & Raman, 2009).

Offshoring: Action of transferring business processes that represent added value to a foreign country (Ye, Zhu, & Mukhopadhyay, 2014).

Outsourcing: Action of contracting out with a business process with a foreign or domestic third-party (Cusumano, Kahl, & Suarez, 2015).

Quality: Degree to which a set of inherent characteristics fulfills requirements. The standard defines requirements as need or expectation (International Organization for Standardization, 2015).

Quality management (QM): Continuous improvement of processes, products, people, and operations to achieve targets, measurements, and specifications defined to comply with superior value (Goetsch & Davis, 2014).

Supply chain (SC): All the activities and processes involved to obtain a finished product from raw material to delivery and distribution (Ülgen & Forslund, 2015).

Supply chain management (SCM): Basu and Wright (2010) defined SCM as the planning for sourcing, manufacturing, and delivering products or services that meet the customers' needs and expectation. SCM includes all the processes to convert into products and services the raw material and information.

Total quality management (TQM): Management and holistic approach focused on continuous improvement and complying of quality standards to achieve performance results (Powell, 1995).

Value chain: The value chain involves interrelated activities or processes that add value to the competitive strategy of the organization (Soosay, Fearne, & Dent, 2012).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions represent unverified facts considered to be truthful (Leedy & Ormrod, 2013). Yin (2018) noted that qualitative studies entail some assumptions of the researchers. In this research study, my first assumption was that a qualitative case study is appropriate to identify the strategies that managers use to ensure quality compliance. A second assumption was that at least three suitable participants would be available to voluntarily participate in interviews and provide true, sincere, and veridic responses.

Another assumption was about the type of interview selected: semistructured. A semistructured interview is an effective style of gaining in-depth knowledge and understanding of the participants' experiences (Leavy, 2014). Thus, an assumption included that a semistructured interview was the best approach to conduct the interview.

Limitations

This qualitative research study exhibited some limitations. A limitation of the study represents characteristics of the design and methodology that have an impact on the researcher's interpretations of results and findings (Wiersma & Jurs, 2008). In this study, I explored the strategies that managers use to manage quality compliance in outsourced manufacturing processes. Through this study, I limited the participants to managers who work in companies that have outsourced processes to other countries. However, a limitation was that the participants had experience of outsourcing specifically to China, Thailand, and Mexico. This limitation resulted in information focused on experiences solely based on outsourcing to these countries.

Delimitations

The delimitations of a study are restrictions in scope (Leedy & Ormrod, 2013). I delimited the study (a) to foreign and not domestic outsourcing, and thus restricted the population of managers; (b) to managers with at least seven years of experience. The third delimitation of this study was the geographical area. The participants in the interviews for this case study worked for companies located in the County of Riverside in California. Managers of companies from other areas did not participate in this research,

excluding other managers from the state who also outsource or have outsourced manufacturing to foreign countries.

Significance of the Study

Contribution to Business Practice

This study may be of value to business practice because it identifies strategies that organization managers can use to successfully outsource manufacturing processes to foreign countries that comply with quality standards in order to remain competitive and increase profitability. Products that do not meet quality specifications can generate measurable costs to organizations (Abdul-Kadera, Ganjavib, & Solaimanc, 2010). Examples of these costs include those associated with returns, rework, and repeated inspections (Pearce, 2014). Outsourcing effectively may also have a direct effect on cost savings as a benefit for organizations in California. However, managers must be able to maintain the quality of standards in products from the providers of outsourced products and services (Steven, 2015). Quality compliance is vital for organizational leaders to ensure the effectiveness of outsourced manufacturing processes (Herzallah, Gutiérrez-Gutiérrez, & Munoz, 2014). Thus, through enhanced outsourcing strategies to ensure compliance with quality standards, managers may achieve an adequate balance between outsourced and domestic operations.

The potential beneficiaries include managers and professionals who have roles related to decision-making about compliance with quality standards of internationally outsourced manufacturing. This study may help managers to identify potential strategies to manage internationally outsourcing manufacturing to ensure compliance with quality

standards. The findings of this study may be of value to help managers in increasing the profitability and revenues of the businesses.

Implications for Social Change

The results from this study may contribute to positive social change by giving managers strategies that can help them comply with standards for higher quality products and fewer recalls that impact society. The results of this study may also contribute to positive social change: the achievement of financial, family, educational, and social goals may lead to individual happiness and betterment in communities. For human beings, happiness relates to cumulative life satisfaction across several factors of their lives (Moynihan, DeLeire, & Enami, 2015). Ensuring the continuity of businesses in the United States sustains jobs in the community and fosters sustainable development (Perry & Rowe, 2015). Business development generates economic and employment benefits to towns and regions (Perry & Rowe, 2015). If the recommended strategies are implemented, families in Riverside County would benefit from having businesses generate more income. The growth and stability of businesses would increase and sustain employment and thus enable individuals to realize their goals, for example, owning a home and other assets, pursuing higher education, developing financial security, and achieving overall life satisfaction.

A Review of the Professional and Academic Literature

The purpose of this qualitative case study was to explore the strategies managers of organizations that outsource manufacturing processes use to ensure compliance with quality standards. I explored the benefits and risks associated with outsourcing to gain a

deeper understanding of the challenges that managers encounter when trying to deliver quality products based on outsourced manufacturing processes. The results of the study may help managers of companies that outsource understand the strategies that are required for effective outsourcing by complying with safety and quality specifications and decreasing recalls and rejects. According to Handley and Gray (2013), through effective outsourcing, companies may continue to manufacture multiple products at lower costs to remain competitive.

The literature review for this study includes scholarly books, peer-reviewed articles, and other scholarly works that focus on the study's constructs of quality management, outsourcing, or both. I used the following databases: (a) Business Source Complete, (b) Emerald Management Journals, (c) SAGE Premier, (d) Science Direct, (e) EBSCOhost, (f) ProQuest, and (g) Taylor & Francis Group Online. I used the following keywords: *outsourcing, total quality management, foreign outsourcing, quality management in outsourcing, quality recalls, quality in outsourcing, strategies for outsourcing,* and *quality management strategies*. The review includes 110 references of which 90% were peer-reviewed; the remaining 10% are books, non-peer-reviewed articles, and doctoral dissertations. This literature review has 54% of articles that are 5 years old from the estimated completion of this study. The journal articles and books included in this literature review section have relevance in addressing the central research question of the study: What are the strategies that managers use to ensure quality standards compliance in internationally outsourced manufacturing processes?

There are three primary sections in the literature review. In the first section, I focus on the quality management conceptual framework of this study, including the antecedents of contemporary quality control and management. In the second section, I provide the results of my exploration of the topics of outsourcing, history, and background in manufacturing outsourcing processes, previous studies regarding this subject, and reasons why managers choose to outsource. Additionally, in the second section, first, I present the benefits and risks associated with outsourcing and then second strategies for effective outsourcing. I also include in the second section, an exploration of the relationship between quality management and outsourcing. In the third section of the literature review, I provide an examination of the literature available concerning the relationship between outsourcing and quality management, including the integration of these subjects.

Total Quality Management

Many managers experience performance and profitability improvement within their organizations as a benefit of TQM (Samson & Terziovski, 1999). A TQM framework represents the strategies and tools necessary for an organization to attain quality, efficiency, and effectiveness in performing needed processes (Wiśniewska & Szczepańska, 2014). The primary principles of quality management and control include total process control, compliance, and project-by-project improvement (Ebrahimpour, 1985). TQM constitutes multiple elements combined that managers can use to achieve a framework in which they can work to achieve continuous improvement.

Researchers have concluded that the TQM approach influences the achievement of continuous improvement and organizational success (Asad Mir & Pinnington, 2014). Leaders in organizations have applied TQM concepts as a foundation to improve the performance of their companies (Handley & Gray, 2015). TQM is a core foundation for managers to improve organizational performance and select critical success factors (Dabestani, Taghavi, & Saljoughian, 2014). Therefore, TQM is vital for successful and efficient processes, including outsourcing and quality management, as parts of the supply chain of an organization.

Antecedents to TQM. TQM is an incorporation of a group of multiple approaches and antecedents. TQM is the integration of a management philosophy and practices focused on continuous improvement and complying with requirements to achieve increased performance results through consistent measurement of results and productive relationships with vendors (Powell, 1995). Thus, managers interrelate TQM with internal and external processes with quality improvement.

The quality management philosophy originated in 1949 when a group from the Union of Japanese Scientists and Engineers established a committee of scholars, engineers, and officials in the Japanese government (Powell, 1995). The members of the committee dedicated their work to the improvement of productivity in Japan to enhance the quality of their production (Powell, 1995). The committee chose one man, Deming, to facilitate changes to their production style. The members brought success to Japan's manufacturing and a significant improvement in the quality management of Japan's production.

Deming's TQM theory. Deming was one of the most influential individuals in the quality revolution (Samson & Terziovski, 1999). After his work in facilitating changes in Japan, managers of organizations in the United States used Deming (1981)'s work as the precursor of quality management. Deming (1981) set the foundation for quality management by presenting 14 critical points necessary to achieve higher quality and productivity management performance. Deming (1975) addressed the requirements for manufacturers to meet specifications to avoid the costs of inspection, rework, and product replacement. Deming (1982) concluded that managers needed to develop a new philosophy based on 14 management points that addressed quality and obstacles in manufacturing. Deming's 14 management points are as follow:

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.
2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.
3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.
4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.

5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.
6. Institute training on the job.
7. Institute leadership... The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.
8. Drive out fear, so that everyone may work effectively for the company ...
9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.
10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.
11. a. Eliminate work standards (quotas) on the factory floor. Substitute leadership.
    b. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.
12. a. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.

b. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management by objective.

13. Institute a vigorous program of education and self-improvement.

14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job. (Deming, 1982, p. 21-23)

Professionals began to accept the quality management philosophy as a concept in a few companies in the United States in the 1970s (Ebrahimpour, 1985). However, managers of American industries did not give Deming's quality management concept the attention and importance needed for the improvement of the overall American production (Powell, 1995). Quality management did not gain importance in the United States until the 1980s when the manufacturing quality of Japan was comparable and even exceeded the productivity of companies in the United States (Powell, 1995). The Japanese managers had implemented the quality management framework based upon the 14 points from Deming to raise the quality of products and processes in the 1980s and continued to develop quality systems beyond the 1980s (Ebrahimpour, 1985).

Crosby (1984) and Juran (1993) also contributed to the development and establishment of the concept of quality management in the United States (Martínez-Lorente, Dewhurst, & Dale, 1998) based upon the Deming management method (Anderson & Rungtusanatham, 1994). Later, other scholars contributed to the evolution of this theory of quality management and named the concept TQM. TQM is a

management philosophy that focuses on achieving continuous improvement in all functions of an organization (Kaynak, 2003). Managers have struggled to sustain quality standardization even after the implementation of quality management is complete and institutionalized (Lawler & Mohrman, 1987), thus needing quality management to be a continuous effort.

According to Ubay, Marimin, and Arkeman (2017), TQM implementation has the preparation, planning, and implementation stages. In the TQM concept, scholars integrate all areas and departments of an organization and involve the processes from the acquisition of resources to customer service after the sale (Herzallah et al., 2014). TQM is a resource for managers to address the challenges of quality issues within all the areas of the organizations and in an inter-organizational context (Handley & Gray, 2015). Managers have used the TQM concepts and techniques within their organizations to achieve customer satisfaction and apply the concepts in supply chain and manufacturing (Li & Jiang, 2017).

TQM in manufacturing. Manufacturing is a foundation for the economy in countries with four main revolutions (Bihi, Luwes, & Kusakana, 2018). The first manufacturing revolution took place with the mechanization in processes (Bihi et al., 2018). The second and third revolutions occurred with the emergence of electricity and nuclear energy, respectively (Bihi et al., 2018). The fourth manufacturing revolution has a foundation on automation and data exchange technologies (Bihi et al., 2018).

Quality has critical value in the manufacturing processes and the four manufacturing revolutions. Quality manufacturing needs are specific to each process and

company (Li & Jiang, 2017). Managers cannot necessarily apply a method that works in one process or organization to the same process in the same way in other companies or similar industries (Li & Jiang, 2017). This issue is partially due to the culture within the area where managers choose to implement TQM (Zhang, Linderman, & Schroeder, 2014). Regardless, quality is an intrinsic part of manufacturing.

Managers implement TQM in different processes and establish different objectives depending on the type of industry or area of the business requiring improvement (Bhuiyan & Baghel, 2005). According to Bihi et al. (2018), a quality management system (QMS) consists of a group of policies, processes, and procedures followed by an organization to continually improve capabilities and achieve performance goals. Managers can implement many systems and controls to achieve consistency in quality management (Bihi et al., 2018). Managers who implement flexible manufacturing systems (FMS) can influence a positive impact on the quality management practices in manufacturing firms (Youssef & Al-Ahmady, 2002). Therefore, TQM includes FMS, QMS, and statistical process control (SPC), a way of measuring the flow of processes.

In traditional quality management strategies and methods, managers rely on SPC and data collection (Li & Jiang, 2017). Through their study, Youssef and Al-Ahmady (2002) examined several quality management practices, tools, and techniques in manufacturing companies. Managers in manufacturing companies are also able to measure quality by measuring the standard of the production of goods (Ubay et al., 2017). Managers' level of involvement and awareness of TQM in manufacturing increased in the next few years after 2010 (Way, Aichouni, Badawi, & Boujelbene,

2016). This increase is a reference to the way managers apply quality management continues to evolve.

Iteng, Abdul Rahim, and Ahmad (2017) found that manufacturing businesses that implement lean production practices were likely to experience the enhancement in operational performance. This enhancement in operations can apply to multiple types of industries and locations. Zhang et al. (2014) highlighted that customizing quality management practices to adhere to each organization's industry and situation, can reduce the risks of failure and improve performance. Thus, manufacturing is not the only industry for total quality management implementation.

Managers' commitment to the TQM program is critical for success in the manufacturing industry manufacturing (Ubay et al., 2017). Managers must have a TQM philosophy for the effective implementation of a quality system (Way et al., 2016). Through a TQM philosophy, managers can facilitate a lasting change for the industries (Way et al., 2016).

Based on a study conducted in Dubai, Al-Dhaafri and Al-Swidi (2016) found that statistical results showed a significant and positive relationship between TQM and operational performance in organizations. In addition, Muruganantham, Vinodh, and Ramesh (2016) noted that managers used TQM to improve customer service in the automotive manufacturing industry. Ergo, the implementation of TQM in manufacturing has extensive applications in organizations.

Managers do not limit the benefits of TQM to operational aspects of the business. Sabella, Kashou, and Omran (2014) found that a strong correlation between the

impact of TQM in performance and the relationship with the people and process management. TQM is also critical for the industrial and service operations managers to enhance business performance and outrival the organizations' capabilities (Dabestani et al., 2014). Leaders in manufacturing companies can experience beneficial outcomes from TQM implementation in their processes.

The implementation of TQM can lead to positive results in continuous improvement in multiple manufacturing processes within the business structure (Kerfai, Bejar Ghadhab, & Malouche, 2016). TQM constitutes a critical part of strategies for overall continuous improvement (Lakhal, 2014). Managers of manufacturing companies enhanced the operational performance and effectiveness in production, quality, and delivery by implementing lean production and quality practices (Iteng et al., 2017). TQM must constitute a fundamental part of all operations within a company, and managers cannot isolate quality to a single area because each area has inputs and outputs from other areas (Zhang et al., 2014).

Managers incorporate the principles of TQM in production processes by adopting approaches and practices that have an application in manufacturing (Antony, Gijo, Kumar, & Ghadge, 2016). Researchers recognize that managers must also incorporate contingencies for the effectiveness of quality practices (Handley & Gray, 2015). Managers use TQM techniques and concepts in various processes and areas of their businesses to increase organizational performance through quality improvements in these same processes and areas.

Impact of TQM in organizational performance. Powell (1995) found a correlation existed between TQM and organizational performance. For many years, managers experienced performance and profitability improvements as a benefit of TQM (Samson & Terziovski, 1999). Managers took advantage of benefits concerning TQM through various approaches that included process control, lean manufacturing, and six sigma (Antony et al., 2016). Managers accomplished and improved performance in their companies when they used TQM through the application of these approaches (Adb-Elwahed & El-Baz, 2018; Antony et al., 2016). The implementation of different approaches derived from the TQM practices had a positive influence on various organizational areas.

Researchers concluded that the managers' application of a TQM approach influences the achievement of continuous improvement and organizational success (Asad Mir & Pinnington, 2014). Researchers found multiple examples of the correlation between these two factors throughout the 2000 and 2010 decades (Asad Mir & Pinnington, 2014). Cabral, Quelin, and Maia (2014) studied organizational drivers that led managers to interrupt outsourcing, reverse the outsourcing decision, and reincorporate the operations to previous providers and evaluated the impact of quality. Therefore, according to Lakhal (2014), managers must implement quality procedures with the TQM philosophy and method to improve organizational performance.

Managers have used TQM in global programs to implement quality systems to ensure continuous improvement of multiple processes (Barata & Cunha, 2015). Therefore, managers may incorporate TQM in their practices regardless of the location

for their operations. Quality management is a pivotal element for multinational companies to survive the competence and changes in the market (Jiménez-Jiménez, Martinez-Costa, Martínez-Lorente, & Rabeh, 2015). Using quality management practices, managers of businesses have achieved success in market competitiveness (Adb-Elwahed & El-Baz, 2018). TQM may be vital for successful processes, including in companies that have multiple locations and managers who turn to international outsourcing as part of the supply chain of their organizations (Antony et al., 2016).

Other Quality Management Theories

Crosby's theory. In addition to Deming, Crosby (1984) elaborated Deming's concept of the impact that management's commitment had on the quality process. Crosby developed a quality management maturity grid, which is a model that managers can use to establish a position towards quality management (Boti, Oltean, & Hadarean-Somlea, 2011). Crosby developed management tools that he noted as principles that managers must define, understand, and communicate to each employee to achieve successful quality management (Boti et al., 2011). Crosby reinforced Deming's philosophy that managers are the individuals who are mainly responsible for quality because the managers set the initiatives concerning quality management.

Crosby (1984) outlined four critical points as part of this quality theory. The first point was that quality is the adherence to requirements. The second and third points are that prevention is the best way to ensure quality and that zero defects should be the standard for quality (Crosby, 1984). Finally, as his fourth point, Crosby defined that the price of nonconformity is the base for quality measurements.

Juran's theory. Scholars have credited Juran with being the first to introduce the human element in quality due to Juran's ability to incorporate statistical methodologies (Bailey, 2007). Juran integrated the human element as a component from quality control through studying the impact of human error in process standardization (Bailey, 2007). Juran (1993) also noted that top management performed the most critical role in implementing strategic quality management in an organization. Juran developed a trilogy framework for quality involving quality planning, improvement, and control.

EFQM framework. The European Foundation for Quality Management (EFQM) model has its foundation on specific organizational factors for quality management (Trébucq & Magnaghi, 2017). The EFQM model is a guide for managers to lead their organizations towards TQM (Van Schoten, de Blok, Spreeuwenberg, Groenewegen, & Wagner, 2016). The EFQM model has nine criteria; five are organizational factors that involve leadership, strategy, people, partnerships and resources, process products, and services (Trébucq & Magnaghi, 2017). The other four factors are areas of results: people, customers, society, and business (Trébucq & Magnaghi, 2017).

Belvedere, Grando, and Legenvre (2016) found that the EFQM model is suitable to measure and manage organizational performance, including the measurement of quality. Results in previous studies show that applying the EFQM model to implement TQM can have a positive impact in healthcare quality performance (Van Schoten et al., 2016). A limitation of the EFQM Model is that the application of the criterion is extensive. However, managers implementing the model show a positive

impact on several performance areas, not only quality management (Van Schoten et al., 2016).

Outsourcing

In the 1980s, scholars referred to outsourcing as the expansion of manufacturing or purchasing outside the company (Bhagwati et al., 2004). The concept of outsourcing is a combination of two words. The first concept in outsourcing as a word is *outside,* and the second *resource* or *resources* combine to form the concept (Giertl, Potkany, & Gejdos, 2015). The concept of outsourcing was not new. Nevertheless, with globalization, managers continue to increase the use of outsourcing in operations to provide a competitive advantage to companies of different industries (Vaxevanou & Konstantopoulos, 2015). Thus, for managers, the extension of the outsourcing concept has changed through previous decades.

Outsourcing became a new sector of interest for international businesses (Bhagwati et al., 2004). Managers who use outsourcing show an increase in profits in industries and businesses that do not have skilled labor (Long & Tuuli, 2018). Managers from businesses in the United States use outsourcing as an essential strategy to remain competitive and improve the efficiency of operations and logistics management (Zhu, 2015). Managers incorporate the outsourcing of manufacturing processes as a strategy for efficiency and cost reduction in business operations (Ye et al., 2014). Hence, the high level of importance that managers attribute to outsourcing has kept increasing as the international outsourcing phenomenon has spread among businesses.

Offshore outsourcing refers to managers outsourcing to countries outside of their organization's location (Wibisono, Govindaraju, Irianto, & Sudirman, 2017). Managers who use offshore outsourcing transfer businesses' value-adding processes to a foreign country (Ye et al., 2014). International outsourcing occurs when managers source some of the value chain activities to external suppliers located abroad (Chadee & Raman, 2009). Countries like India have had significant growth due to the offshoring of manufacturing. As an example, India became the third country in the world in the consumption of polymers (Goel, Kandasamy, Manupati, & Kek, 2018).

Management outsources to offshore locations to reduce costs, seek growth opportunities, address competitive pressures, access human resources, and follow industry practices (Lewin & Peeters, 2006). Since the 1980s, managers started implementing outsourcing to focus on reducing costs and improving competitive advantage (Zhu, 2015). Managers decided to outsource part or all operations as a strategy to overcome performance weaknesses (Mokrini, Benabbou, & Berrado, 2016). The findings of previous case studies show that managers do not consider manufacturing outsourcing as a long-term business strategy (Hartman, Ogden, Wirthlin, & Hazen, 2017). Researchers found that decisions to outsource based exclusively on the costs and disregarding other areas of the business, usually do not result in the anticipated short-term savings (Hartman et al., 2017). The offshoring of manufacturing had a major increase for the United States, the United Kingdom, and Europe during the 1990s to mid-2000s with cost savings associated with labor from developing countries as the main driver (Tate & Bals, 2017).

During the 1980s, performance improvement also became a central goal for business process outsourcing (McIvor, 2016). In a study in 2014, 70% of managers indicated that cost reduction is the main driver for outsourcing internationally (Pearce, 2014). Managers turn to outsourcing to reduce the costs of manufacturing (Sahu, Nayak, & Sahu, 2014). Offshoring can take place due to the increased potential for productivity (Wright, 2014). Outsourcing can be a pivotal strategy in practice for some organizations' success in operations.

Before outsourcing, managers must have access to information about the operations of the potential manufacturer and evaluate in comparison to current and upcoming manufacturing relocation opportunities (Hartman et al., 2017). Managers focus on low cost, proximity for logistics, and development of competences as the three significant factors in defining the location for manufacturing (Stentoft, Mikkelsen, Jensen, & Rajkumar, 2018). Managers who choose to outsource have a primary goal to reduce costs and to transfer the cost reduction in better pricing.

The decision between contract manufacturing and in-house production is critical because managers must coordinate organizational resources and vendor relationships in a way that the production is effective based on an organization's activities (Doussard, Schrock, Wolf-Powers, Eisenburger, & Marotta, 2017). The development of competences, quality, and knowledge are key factors that managers consider in deciding whether to keep operations offshore or reshoring (Stentoft et al., 2018). The differences between in-house versus contract manufacturing are the changes in production costs,

minimum order runs, lead times, and product design (Doussard et al., 2017). Thus, the difference in the production approach is the organizational strategy.

As part of a decision factor for outsourcing, managers also need to weigh the benefits to the organization from the labor and competition standpoints. Wang, Wallace, Shen, and Choi (2015) noted that domestic suppliers usually have a higher cost compared to international suppliers. Through outsourcing, managers allow organizations to replace internal resources to remain competitive in different areas of business (Buss & Peukert, 2015). The advantages of outsourcing include the reduction of supply chain costs, provision of resources and skills, and a competitive advantage in the market (Mokrini et al., 2016). Arvanitis, Bolli, and Stucki (2017) compared the differences in international outsourcing and international insourcing and the impact on domestic production.

Researchers found that developed countries, such as Switzerland, have high labor costs, and outsourcing to foreign countries helps them to remain competitive (Arvanitis et al., 2017). Managers often face the challenge of managing the high costs of labor. Mostofi (2017) found that managers selected offshoring to reduce manufacturing costs.

Managers can overcome inefficient processes when they choose to move them to another country (Arvanitis et al., 2017). The decision on what operations to outsource and the extent of outsourcing is not a straightforward process and has multiple implicates and factors (Mokrini et al., 2016). Results show that a lower manufacturing cost is the primary driver that influences managers' decisions for outsourcing manufacturing to other sites (Mostofi, 2017). Managers can transfer the cuts in costs to invest back in the organization or present lower prices to the market. Regardless of how managers choose to

take advantage of the benefits of outsourcing, the main goal remains to gain a competitive advantage.

Impact of outsourcing in California. When managers recur to international outsourcing, there is an impact on domestic employment through a displacement effect (Wright, 2014). The United States' manufacturing industry had a loss of 5.9 million jobs from 1985 to 2014 (United States Bureau of Labor Statistics, 2019). When companies relocate manufacturing plants to low-cost countries, the cost savings apply mainly to labor (Leibl, Nischler, Morefield, & Pfeiffer, 2009). The cost of labor as wages has a direct impact on a large portion of the total cost for manufacturing.

Wages continued to increase in California in the 2010 decade and became a factor of the decision to outsource to other states or countries (Aghdaee & Call, 2017). The California government enacted laws to increase the minimum wage to $15 (Aghdaee & Call, 2017). In Los Angeles, in 2017, the City Council and Mayor approved a plan to increase the minimum wage to $15 per hour by the year 2020 (Aghdaee & Call, 2017). Researchers have conducted studies to understand the impact of wages increasing as many cities imposed an increase in minimum wages (Aghdaee & Call, 2017). Aghdaee and Call (2017) studied the impact of wages increase in Oakland, California, and found that between November 2014 and July 2015, when a higher minimum wage became effective in Oakland, 70% of the businesses increased prices and experienced increased payroll costs. The participants of 69% of the businesses of the study noted that the increase in prices was due to the increase in wages (Aghdaee & Call, 2017). Thus, labor is an influencing factor in higher costs for manufacturing businesses in California.

From 1990 through 2003, the state of California lost 400,000 jobs from the manufacturing area (Wassmer & Chalmers, 2008). Wassmer and Chalmers (2008) noted that the primary reason for the loss of manufacturing jobs in California stemmed from the high cost of doing business in California. The California Manufacturers and Technology Association (2008) report showed that California's business costs were 24.2% higher than the rest of the nation. These costs impacted the loss in manufacturing employment and the outsourcing of manufacturing outside California. In 2010, California experienced the lowest number of manufacturing employees from 1990 to 2019 (United States Bureau of Labor Statistics, 2019).

Even by 2018, California continued to struggle to bring more manufacturing business into the state. The California Manufacturers and Technology Association (2018) reported that the manufacturing growth in 2018 was only 5.6% compared to the 10.6% in the rest of the United States (United States Bureau of Labor Statistics, 2019). However, the number of employees in manufacturing in California has slowly but steadily increased, and there was an increase of 1.27 % in employees in the manufacturing sector in 2019 compared to 2018 (United States Bureau of Labor Statistics, 2019).

On the contrary to what managers experienced in the United States, other countries benefited from businesses in the United States outsourcing. In Mexico, primarily in Baja California, the manufacturing industry increased by more than 25% in the 10 years from 2006 to 2016 (Gomis & Carrillo, 2016). The industrial regions of other countries outside the United States, such as Latin America, Europe, and Asia, became critical in the integration of the global supply and value chains as outsourcing of

manufacturing increased (Gomis & Carrillo, 2016). Thus, job losses in the United States have benefited other countries.

Other outsourcing risks and challenges. Even though managers can materialize multiple benefits from outsourcing to international countries, outsourcing may also have negative impacts on business. Outsourcing involves multiple risks and benefits (Campbell, 1995). The most difficult challenge in outsourcing remains in risk mitigation (Cabral et al., 2014). International outsourcing has positive and negative impacts on the cost, quality, flexibility, and delivery areas of the organization (Yu & Lindsay, 2011). International outsourcing has a negative impact on the productivity and efficiencies of domestic production, while insourcing can have an impact on developing more capabilities to become stronger in the productivity of the business (Arvanitis et al., 2017). Thus, the impact of outsourcing may be detrimental in several areas of the companies.

With outsourcing to countries outside of the United States, high costs for training may rise (Leibl et al., 2009). The costs and failure of the outsourcing process have been critical factors for decision making to reverse outsourcing (Cabral et al., 2014). The failures in outsourcing can stem from issues related to assets, poor design, and lack of monitoring on the quality side (Cabral et al., 2014). In addition, quality standards in countries with low costs may be lower than in high-cost countries (Foerstl, Kirchoff, & Bals, 2016). Thus, managers recognize that there have been occasions in which offshoring did not have the benefits desired (Leibl et al., 2009). For example, managers from a German company, Katjes Fassin GmbH & Co (KG), wanted to insource their

candy production due to the inconsistency in costs and quality. However, their plant no longer had enough capacity and so they developed a partnership with a supplier in Germany (Bals et al., 2016). Training costs, quality issues, and problems at the time of startup can impact the savings projected for offshoring (Bals et al., 2016; Cabral et al., 2014).

Steven, Dong, and Corsi (2014) noted that managers identified a relationship among outsourcing, lower quality performance, and a higher number of recalls. Through these kinds of findings, together with other precedents of defects in products, researchers established concern with the quality of outsourced manufacturing processes. Researchers have turned more attention to understanding the impact on the quality of the outsourced manufactured products.

Many managers experience difficulties in managing a successful outsourcing operation with suppliers (Espino-Rodriguez & Ramirez-Fierro, 2018). If the outsourcing relationship is not successful, the decision to outsource can be detrimental to the business. Thus, critical factors such as quality management, logistics, financial analysis, and risk mitigation are necessary for success in outsourcing (Tamás, 2018).

The organization's capability in operations to meet expectations is a success factor for effective offshore outsourcing (Wibisono et al., 2017). Ineffective outsourcing has a negative impact on the operations and financials of the business (Tamás, 2018). Inappropriate outsourcing operations can impact the operational efficiency of any organization (Lok, Opoku, & Baldry, 2018). Outsourcing between companies must be a partnership to achieve common goals (Lee, 2001). Managers of companies should not

be limited to manage a formal contract. Managers must support a relationship between vendor and customer to achieve effective offshore outsourcing project management (Wibisono et al., 2017). According to Lok, Opoku, and Baldry (2018), managers must understand the impact that a decision to outsource can have in all the operations of a business.

Hartman, Ogden, Wirthlin, and Hazen (2017) conducted a case study of 12 large, mid-size, and small manufacturing companies to understand the critical information and factors to decide about reshoring. Hartman et al. performed the study with HAeroJet, American Axel Manufacturers, Cox Manufacturing, Deere & Company, E&R Industrial, Evenflo, M2 Global Technologies, PEPSICO, Pratt & Whitney, Sulzer Metco, The Triumph Group, and Westinghouse. The researchers found that when the company's managers and decision-makers were directly involved with the manufacturing and supply chain operations, the information was more accurate to decide whether to outsource an operation or not (Hartman et al., 2017). In many cases, the managers did not discover the complexity of factors and hidden costs to outsource involved until after they had made the decision to outsource and, in some cases, the outsourcing process had already started (Hartman et al., 2017). Outsourcing offshore in the manufacturing of clothing also presents a variety of sustainability issues and challenges (Ashby, 2016). Ashby (2016) developed a study in the United Kingdom clothing industry that outsourced manufacturing to foreign countries.

Managers need to consider engineering design and the complete manufacturing and supply chain processes and complexities associated before deciding if they should

pursue outsourcing (Hartman et al., 2017). Effective outsourcing correlates to the enhancement of cost reductions, quality, and improvement in competitive advantages (Campbell, 1995). Nevertheless, outsourcing involves some risks that include the lack of capability from suppliers to meet expectations and an organizations' loss of control over critical processes (Campbell, 1995).

Results of previous studies show that suppliers outside the United States have a worse quality performance in comparison to U.S. suppliers (Uluskan, Joines, & Godfrey, 2016). Hartman et al. (2017) recommend delaying any outsourcing decision and holding off until the information needed is available, and managers can evaluate having pertinent knowledge. Scholars have shifted considerable attention to the impact in quality when managers in U.S. organizations pursue outsourcing (Hartman et al., 2017; Uluskan et al., 2016).

Managers encounter the challenge of deciding if outsourcing is or is not a decision that will benefit their organizations due to the quality failures in outsourcing processes (Gorla & Somers, 2014). When managers decide to outsource, there is a direct negative effect on operation flexibility and the company's opportunities to access the knowledge and capabilities developed abroad (Arvanitis et al., 2017). Managers in organizations decide to outsource with the purpose of benefiting the business (Wibisono et al., 2017). The low cost of the manufacturing process is one of the main factors that managers consider for the location of the manufacturing company (Johansson & Olhager, 2018). However, according to Johansson and Olhager (2018), managers must consider

several factors like the market, culture, logistics, and risks in operations, in addition to cost to define the location domestically or offshore.

The process of executing outsourcing is a defining factor in the effectiveness of offshore outsourcing (Wibisono et al., 2017). Managers in organizations must choose approaches that allow effective control and management of operational performance (Yang, Zhao, Yeung, & Liu, 2016). Uluskan et al. (2016) highlighted that managers must align the levels of quality of international suppliers if the suppliers desire to maintain outsourcing processes to the level of quality required. Managers must approach and implement quality to obtain benefits from the outsourcing process rather than disadvantages (Yang et al., 2016).

TQM in outsourcing. Handley and Gray (2013) noted quality-related incidents, involving contract manufacturers, are increasingly recurrent. The conformity of the product that the supplier delivers is a crucial factor for the quality (Wibisono et al., 2017). Pearce (2014) found that problems with the quality of work in foreign countries represented a disadvantage for international outsourcing. In 2014, 44% of quality and safety recalls in the United States represented products imported from China (United States Consumer Product Safety Commission, 2015). Pournader et al. (2019) noted that managers need to evaluate outsourcing to ensure the quality within all the supply chain meets satisfactory levels. Quality control is critical in outsourcing to ensure the compliance of standards in the quality of products and services throughout the supply chain.

Leaders within domestic companies who decide to outsource manufacturing processes encounter a wide range of challenges in maintaining quality standards. Management concerns about problems with the quality of work in countries like China and India represent a disadvantage for companies to operate in the realm of outsourcing (Pearce, 2014). The success of implementing TQM in outsourcing depends on the integration and collaboration between the company and the manufacturer (Deng, Wu, & Liu, 2017). For outsourcing to be effective in countries like China, the Chinese manufacturers must raise the quality levels and focus on concepts of TQM in deployment (Deng et al., 2017). Maintaining the quality controls and the systems requires companies to ensure meeting standards has become a priority for managers.

Supply chain relationships between suppliers are critical to the economy of the organizations (Johnstone, Li, & Luo, 2014). In international outsourcing, the relationship between the domestic company and the foreign vendors is especially critical for companies. It is imperative that organizations learn the importance of an inspection for improvement of processes, maintaining quality, and reducing costs in any operation (Cleeren, 2015). External entities entail processes that are not within the control of the outsourcing companies but can impact the outsourcers' organizational performance (Pournader et al., 2019). Outsourcing always represents a risk for organizations because external entities have a relationship within the supply chain process when managers choose to outsource (Pearce, 2014). Thus, both parties must understand and align with the same quality standards.

International suppliers that implement quality management and productivity practices display a superior level of quality in their products (Uluskan et al., 2016). In the past, managers have decided to insource, which refers to reverse outsourcing, due to the resources required to maintain quality standards, auditing costs, instability of the labor force, and distance that have a negative impact on the operations (Bals et al., 2016). For example, managers at Margarete Steiff GmbH decided to nearshore-insource their toys' manufacturing from China to subsidiaries in Tunisia and Portugal instead of relocating to the home country, Germany, to address quality issues.

Leaders in organizations use TQM as a tool to execute quality improvements (Sahu et al., 2014). Managers can establish a solid, efficient foundation through TQM implementation with international suppliers (Sahu et al., 2014). Kaipia and Turkulainen (2017) found that managers in organizations require investing in resources to manage the outsourcing process once they decide to outsource to ensure compliance with quality standards of the products chosen to outsource.

If international vendors implement TQM successfully, managers at companies that outsource may achieve high quality and lower costs simultaneously (Uluskan et al., 2016). Sahu et al. (2014) noted that TQM and outsourcing are approaches and methods that complement each other to ensure the efficiency of manufacturers. Managers often neglect that outsourcing requires production capacity in-house to achieve adequate flexibility (Bovaird, 2015).

Effective outsourcing requires collaborative skills from all parties and departments (Bovaird, 2015). The strategies that managers select to address the

negative impact that outsourcing can have in their company are critical to ensure performance (Yu & Lindsay, 2011). From 2010 to 2016, labor costs and quality issues in foreign manufacturing markets increased, which has led many managers to reconsider the opportunities and evaluate to relocate manufacturing within the United States and insourcing (Foerstl et al., 2016; Hartman et al., 2017). Therefore, ensuring the control of the processes to comply with standards continues to be critical for managers.

Backshoring, reshoring, nearshoring, and insourcing. Backshoring or reshoring refers to the domestic relocation of manufacturing activities back from foreign countries (Dachs, Kinkel, Jäger, & Palčič, 2019). Reshoring or backshoring involves the partial or full relocation of manufacturing and other business activities to the same country of the company's headquarters (Bals et al., 2016; Dachs et al., 2019). Nearshoring involves moving the manufacturing and other business processes from a foreign country to a location closer to the company's country, but not the same country (Bals et al., 2016). Insourcing is the reincorporation of an outsourced activity to the company (Bals et al., 2016; Cabral et al., 2014).

Academics have conducted more research on backshoring and the relationship with offshoring in the recent decade (Stentoft et al., 2018). Ancarani, Di Mauro, Fratocchi, Orzes, and Sartor (2015) studied the length of operations of offshore manufacturing of the United States and European companies before reshoring. Ancarani et al. (2015) studied data for 249 companies that relocated to the home country after offshoring, and they found that several factors, like the industry, home country, foreign country, and size can have an in impact on the duration of offshoring. Ancarani et al.

(2015) found that the electronics and automotive industries had a higher risk for shorter offshoring, and the decrease in cost differentials was a critical factor for managers to decide to backshore operations.

Researchers have argued that a key factor for reshoring stemmed from the avoidance of hidden costs and risks when offshoring (Gray, Skowronski, Esenduran, & Rungtusanatham, 2013). By 2013, the potential of reshoring represents close to 3 million jobs in the United States for manufactured products based on the location of the consumers' demand (Gray et al., 2013). Reshoring continued to grow in developed countries due to the increased costs, supply management problems, and sustainability issues of outsourcing (Ashby, 2016). Sustainability and social implications are also influencing the decisions and strategies for reshoring manufacturing (Ashby, 2016). Stentoft et al. (2018) conducted a study of Swedish companies and analyzed data from 133 offshoring and 99 backshoring projects to understand the main drivers for offshoring and backshoring. The main drivers for backshoring were hidden costs, quality issues, and lack of capabilities from the supplier (Stentoft et al., 2018).

Foerstl et al. (2016) researched the drivers for reshoring and insourcing and the link with outcomes. The increase in wages, where the initial estimates versus real costs and the possibility to reshore continued to place at risk the offshoring projects in many industries (Long & Tuuli, 2018). Managers from ET Water System, a company located in California, decided to reshore and have a manufacturing partner in San Jose, California, instead of offshoring due to quality concerns associated with offshoring (Long & Tuuli, 2018). A significant risk for offshoring manufacturing takes place due to the vulnerability

of intellectual properties and underinvestment in the foreign country (Long & Tuuli, 2018). The outsourcing and offshoring of manufacturing equipment remain one of the highest investments from the capital side (Albertoni, Elia, Massini, & Piscitello, 2017). Underinvestment can trigger additional costs that can impact the project significantly (Long & Tuuli, 2018).

Researchers developed a framework to explain the reasoning behind insourcing and reshoring in companies to understand the external and organizational challenges involved with reshoring and insourcing decision making (Foerstl et al., 2016). Quality issues for small companies and technology-based industries also influenced the managers' decisions to backshore and terminate offshoring operations. Ancarani et al. (2015) found that reshoring probabilities are higher for European companies with offshoring manufacturing to Asian countries.

Albertoni et al. (2017) studied reshoring initiatives to understand if the reasons for reshoring originated from failures in the original outsourcing strategies or the shift of benefits based on organizational performance. The change in technologies and evolution of the companies' knowledge influence the phenomenon of relocation in reshoring and insourcing. Developed countries, like Germany, established initiatives of investment to bring back manufacturing activities to the home countries (Albertoni et al., 2017). The objectives that motivate a company to outsource and offshore, together with the reaction to issues in the process, are vital elements that define the success of the manufacturing processes (Albertoni et al., 2017). The main driver to reshore and insource is the failure in financial and operational performance after the outsourcing takes place (Albertoni et

al., 2017). Thus, managers must have a clear understanding of potential challenges when outsourcing to foreign countries.

The quality issues have been determining factors for managers choosing to reshore and maintain the operations offshores for shorter periods than planned (Ancarini et al., 2015). Lack of flexibility and low quality of the products manufactured abroad are the most frequent drivers for backshoring (Dachs et al., 2019). Quality is a predominant factor in moving production back after offshoring to Asia (Dachs et al., 2019). Managers usually make the decision to outsource offshore manufacturing based on cost advantages (Johansson & Olhager, 2018). However, the development of competences and quality are critical factors to backshore in high-industrialized countries like Sweden (Johansson & Olhager, 2018). In 2012, General Electric started a plan to reshore manufacturing of their production and noted about 14% of their competitors planned to reshore (Gray et al., 2013). From 2012 to 2018 reshoring activities in the United States became more frequent and created a potential for jobs within the country (Dachs et al., 2019).

From 1996 to 2016, foreign outsourcing raised based on low-cost opportunities without a comprehensive analysis of the hidden costs and risks (Tate & Bals, 2017). Albertoni et al. (2017) concluded that managers must be more cautious about offshoring and outsourcing manufacturing due to wage increases in foreign countries, inflation in economies, and quality and operational challenges. In 2017, managers and scholars began questioning the decisions to outsource based on the automation development and increase of labor in other countries (Tate & Bals, 2017).

Tate and Bals (2017) created terminology and a concept for *rightshoring*, to refer to the analysis to illustrate the best decision concerning outsourcing, insourcing, offshoring, and reshoring. Rightshoring involves many elements of operations, including geographical, practical implications, quality background, and cost elements (Tate & Bals, 2017). Managers must integrate the financial, quantitative, and qualitative factors to define the rightshoring strategy for their companies (Presley, Meade, & Sarkis, 2016). However, the integration of these factors and variables is a difficult task. Thus, managers are giving more focus on several elements before making decisions concerning outsourcing offshore.

Relationship between Outsourcing and TQM

The risks of recalls continued to grow in supply chains that outsource manufacturing (Olson & Wu, 2011). Multiple factors contributed to non-compliance with the quality of products produced in foreign countries (Anwar, 2014). Nevertheless, quality is essential for business sustainability. Quality assurance is a cornerstone for all types of industries (Aung & Chang, 2014). Recalls and rejects result in detrimental costs for organizations. The companies that implement quality strategies improve quality management and performance (Valmohammadi & Roshanzamir, 2015). Therefore, quality management is necessary to achieve the enhancement of business performance.

Extensive literature is available about the risks associated with outsourcing. Outsourcing management involves three key factors: cost, quality, and time (Zhu, 2015). The numbers of managers who continue to outsource operations keep rising (Espino-Rodriguez & Ramirez-Fierro, 2018). Researchers have developed multiple steps and

frameworks to make outsourcing decisions (Bals et al., 2016; Handley & Gray, 2013; McIvor, 2016). Bals, Kirchoff, and Foerstl (2016) developed a conceptual decision-making framework for reshoring and insourcing. Thus, managers' need for studies that analyze the outsourcing relationships among or between companies continues to rise to understand the benefit of the operation (Espino-Rodriguez & Ramirez-Fierro, 2018).

Kaipia and Turkulainen (2017) studied the relationship between the establishment of priorities of cost and quality in outsourcing before and in the early stages of production. However, researchers defined strategies to address quality in a contingency plan, not a proactive measure. Therefore, researchers need to perform more studies to address the potential quality risks proactively in outsourcing.

The authors of most of the literature associated with outsourcing focused on the drive to reduce costs or the efficiency of quality management, not a merge between both (Zhu, 2015). For example, Lau and Zhang (2006) performed a study to explore the critical factors that motivate organizations in China to outsource but did not address at all the risks involving quality in their research. Youssef and Al-Ahmady (2002) filled a gap in the literature by studying the FMS and quality management practices together. However, no other practitioners or researchers have incorporated and explored the interrelation of both. Other researchers have limited their studies involving multiple countries to quality management and did not explore further. Rungtusanathama, Forza, Koka, Salvador, and Nie (2005) performed a study to understand the applicability of TQM in several countries but did not address the outsourcing processes.

Adb-Elwahed and El-Baz (2018) conducted a study to monitor the impact of quality strategies in the integration of management systems through managers using TQM tools for measurement. Adb-Elwahed and El-Baz found that managers must implement QM practices as part of the organizational strategy and engage quality as part of the values in order to achieve successful results. Adb-Elwahed and El-Baz addressed the manufacturing side for management systems in quality but did not explore in depth the outsourcing element.

Other researchers placed focus on the study of the relationship between vendors as a quality management strategy. Handley and Gray (2015) found that in the contract manufacturing relationships, managers can use performance programs to ensure quality performance with conformance. Nevertheless, the researchers performed a generic study concerning contract manufacturing and did not focus the study on exploring outsourcing to foreign countries.

Jaklič, Ćirjaković, and Chidlow (2012) studied the effects of international sourcing on manufacturing versus service firms through analyzing financial data. Sharma, Lindsay, and Everton (2015) explored how small firms managed institutional differences to enhance their international outsourcing success but did not explore the quality element deeply. Zhu (2015) researched the impact of multiple factors, including quality. However, researchers from these previous studies focused on general outsourcing, not outsourcing to foreign countries.

Many studies focused on quality management are available. Giri, Roy, and Maiti (2017) analyzed pricing, differentiation, and the quality management strategies of the

manufacturers in centralized and decentralized systems. The researchers studied the manufacturers' quality management strategies but focused on the impact on brand differentiation (Giri, Roy, & Maiti, 2017). Ubay, Marimin, and Arkeman (2017) conducted a research to study the determining factors and strategies for TQM implementation together with the impact of ISO (*International Organization for Standardization*) quality operating procedures in executing TQM in manufacturing companies. The authors mentioned above contributed to the academic literature by exploring the impact of TQM from an organizational perspective in manufacturing companies and business to business relationships, but further opportunities of analysis of the impact of quality in outsourcing remain.

Li and Jiang (2017) studied knowledge-based innovative methods (KIMs) as strategies to manage quality in outsourcing. KIMs are methods in which managers use knowledge, innovative thinking, and technologies as alternatives to strategies to control quality in multiple processes in manufacturing (Li & Jiang, 2017). Li and Jiang noted that managers must study the supply chain and understand the procedures to have a successful implementation of KIMs when outsourcing manufacturing processes. However, the researchers did explore additional strategies to control quality besides the application of KIMs.

Impact of TQM on reshoring. Another large portion of literature covers outsourcing versus insourcing and offshoring and reshoring. Mokrini et al. (2016) created a decision aid approach for strategic insourcing and outsourcing as a guide for decision-makers' factors. Mokrini et al. found that to apply an effective and appropriate decision-

making process on outsourcing; managers need to apply specific organizational factors and details. Thus, not all the frameworks in decision making processes to outsource are effective or will work for all companies.

In their study, Presley et al. (2016) developed a methodology to incorporate cost and multiple attributes to develop factors that managers need to consider in the outsourcing versus insourcing and offshoring versus reshoring decisions. An illustration of the methodology and the feedback from supply chain professionals were part of the validation for the approach developed companies (Presley et al., 2016). The number of companies reshoring manufacturing from 2012 to 2018 continued to increase based on many reasons and factors (Tate & Bals, 2017). The strategic sourcing evaluation methodology constitutes quantitative and qualitative factors that aid in the analysis and evaluation in the decision process to reshore a company's operation (Presley et al., 2016). Presley et al. (2016) found that the results of the model indicate that there is a significant variance in the simplicity and complexity that managers will take into consideration and can result in different decisions depending on each organization.

There is a need for further research to explore models and decision support systems that can incorporate forecasting, estimation, and combine the diverse factors to enhance outsourcing and offshoring versus insourcing and reshoring decision making (Presley et al., 2016). Managers do not have models available to decide and evaluate reshoring. A gap in the literature exists within the incorporation of quality and other factors to understand the impact of outsourcing and insourcing.

Limited literature is available in which the researchers specifically studied the impact of quality in manufacturing when outsourcing. Yu and Lindsay (2011) studied the impact of international outsourcing on production strategies and performance of apparel manufacturing companies. The most significant contribution from researchers was to show how managers address the impact of international outsourcing on four areas that included cost, quality, flexibility, and delivery (Yu & Lindsay, 2011). However, Yu and Lindsay limited their study to companies in New Zealand. Thus, their study lacked generalizability.

After continuous research in the literature available, I found that authors of literature focused only on specific aspects of outsourcing or quality. Limited research is available regarding the relationship between international outsourcing and firm performance (Sharma et al., 2015). A gap in literature research exists concerning the study of the impact that international outsourcing has on large multinational companies (Yu & Lindsay, 2011). Researchers must extend studies to focus on forward and reverse processes in the supply chain and the risk management of uncertainty from both the demand and supply sides in contracts where the price is dependent on quality standards (Ye, Ma, & Dai, 2016). There is also a gap that researchers in studies in which researchers analyze the success in outsourcing from a quality standpoint (Espino-Rodriguez & Ramirez-Fierro, 2018). However, as outsourcing has continued to rise, so does the need for having more literature that managers can review to make decisions prior to outsourcing.

In prior literature, researchers focused on the buyer's effectiveness to address quality issues from the sources instead of collaboration between the buyer and contract manufacturer (Lee, Rhee, & Cheng, 2013). Espino-Rodriguez and Ramirez-Fierro (2018) noted that it is necessary to study the outsourcing relationship as a partnership between the companies rather than from a supplier-buyer perspective. Gray, Skowronski, Esenduran, and Rungtusanatham (2013) noted that in-depth case studies are necessary to explore the context and drivers for offshore outsourcing and reshoring decisions because broad data is required to perform a comprehensive analysis on this subject. Thus, not enough literature is available where researchers address specific strategies to control quality in outsourcing processes internationally while taking into consideration the cost reduction element and a partnership between the companies.

In this study, I explored the strategies that managers implement to ensure quality in outsourced processes. It is critical that managers, who choose to outsource manufacturing internationally, consider the impact on their quality and other business priorities (Yu & Lindsay, 2011). In this review, I explored the key components of TQM and outsourcing. I also explored in depth, the history, evolution, and importance of TQM in quality management. I investigated the positive and negative impact of outsourcing in quality management and the financials of business. I investigated the aspects involving the effectiveness of outsourcing manufacturing processes but also incorporated the quality management piece. I researched further the strategies focused on managing quality to ensure effective outsourcing in foreign countries.

Summary and Transition

In Section 1 of this study, I outlined the foundation of this research study. I presented the business problem associated with high risks of noncompliance with quality specifications when outsourcing manufacturing. The purpose of this qualitative, multiple case study was to explore the strategies that business managers use to ensure compliance with quality standards when internationally outsourcing manufacturing. I also presented TQM as the conceptual framework for this research and the academic literature review. I also introduced the nature of the study, and the main research question: What are the strategies that managers use to ensure quality compliance in internationally outsourced manufacturing processes? I presented the significance of the study to explore the contribution to practice and implications for change that I can influence through this study. I listed the interview questions and the limitations, assumptions, and delimitations of the study.

In Section 2, I outline the steps to conduct the research and describe the research method and design, my role as a researcher. I provide insight into the role of participants, and the type and process sampling. I also identify the data collection, organization, and analysis techniques as well as the ethical standards that I followed to conduct this study. In Section 3, I present the findings of this study, the applications for practice, and the implications for social change. I also list recommendations for actions and further research.

Section 2: The Project

Section 2 contains an outline of the specifics of the project. In this section, I present the purpose statement of this research and my role as a researcher. I define the criteria for the participants for this study and provide the details for selecting a qualitative multiple case design. I specify the population and the steps I took to conduct convenience and purposeful sampling. I note the foundation for ensuring the conduct of ethical research and provide the justification for undertaking a semistructured interview as the data collection instrument, together with member checking. I outline the data analysis and organization techniques and the steps I followed to ensure the reliability and validity of the findings.

Purpose Statement

The purpose of this qualitative, multiple case study was to explore the strategies that business managers use to ensure compliance with quality standards when internationally outsourcing manufacturing processes. The population was business managers of three companies in Riverside County, California, who have successfully used strategies to ensure compliance with quality standards in outsourcing manufacturing processes internationally. The results of this study may assist managers of companies that outsource processes to learn effective outsourcing strategies to ensure compliance with quality standards while decreasing rejections and costs. The results are expected to contribute to social change by providing managers strategies to comply with standards for higher quality products and fewer recalls on society. The results from this study may also contribute to social change by continuing granting employment to the communities in

Riverside County. The results of this study may contribute to social change by fostering sustainable development in the Riverside County communities and allowing managers to maintain businesses in the area and enhance the quality of life by promoting development, stability in jobs, and educational opportunities. Increasing jobs may mean increasing public tax money to build parks, schools, and instituting after school programs.

Role of the Researcher

The researcher performs a critical role in a qualitative study because the researcher becomes the primary collector of data. I was the main instrument for data collection. Tsvetkov (2014) stated that information is significant in research because it helps improvement and future development. In qualitative studies, the role of the researcher involves methodological strategies to ensure the trustworthiness of the results (Smith & Noble, 2014). Researchers can use multiple and mixed methods in search of divergent views and perspectives of the same case study (Chang, 2006). As a researcher, I used research processes to ensure I obtained the information required to complete the exploration and to answer the research question.

During a case study, the researcher collects the data and cannot separate him or herself from the research (Tonon, 2015). The qualitative researcher has personal involvement in every step of the research process (Tonon, 2015). Therefore, it is essential to address the personal lens of the researcher that is the own perspective of the researcher (Denzin, 2009).

The researcher must ensure that the interpretation of the findings and results represent the participants' perspectives (Holloway, Brown, & Shipway, 2010). According to Smith and Noble (2014), the role of the researcher includes accounting and acknowledging for personal sampling biases and ensuring sufficient depth and relevance of the data collection and analysis. A researcher will interpret the data more accurately if he or she can recognize the impact of personal views of the world and understand and assimilate the presence of personal lens (Fusch & Ness, 2015). I have a background in working in manufacturing and leading outsourcing projects for manufacturing processes. Thus, to mitigate biases and personal lens, I used a triangulation method and reflexibility strategies while identifying the impact of my own experience with quality compliance of outsourced manufacturing processes on potential biases and personal lens.

Triangulation is a technique to reduce bias and validate the data through the use of different sources that can include interviews and participant observations, among others (Denzin, 2012; Thomas & Magilvy, 2011). I used interviews and the review of companies' standard operating procedures as two different sources of data. Reflexivity is a strategy for quality control in qualitative research in which the researcher applies the understanding of how the personal characteristics and experiences can impact the data collection (Berger, 2015). Through reflexivity strategies, I overcame and mitigated biases and personal views when I moved from an outsider position to an insider in the course of the study and interviewing process, which I used to collect data.

The role of the researcher also involves complying with ethical standards during the research. The Belmont Report contains a summary of the ethical principles and

guidelines that the researcher must follow to solve the ethical problems involved in research with human subjects (Grady & Fauci, 2016). I conducted the interviews to ensure minimal risk for participants as defined by Walden University's Institutional Review Board (IRB) based on ethical standards in research. I also followed an interview protocol (see Appendix A) for a semistructured interview. The in-depth interviews for this qualitative research had a semistructured format to allow the respondents to feel comfortable and participate in a conversation. A qualitative semistructured interview guide and protocol contributes to the objectivity and trustworthiness of findings in a case study (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). During the interview, I gathered relevant and useful data that provided information about the outsourcing process and strategies to control quality that applied to my research while ensuring compliance with ethical standards and meeting the IRB requirements.

Participants

The criteria for eligibility for the participants of this study consisted of business managers who have successfully used strategies to ensure compliance with quality standards in internationally outsourcing manufacturing processes. To conduct effective research, participants must know the topics concerning the purpose of the study (McCusker & Gunaydin, 2015; Percy, Kostere, & Kostere, 2015; Robinson, 2014). Therefore, the background of the potential participants was a crucial element when recruiting for the interviews.

The participants did not have any personal or business relationship with me to limit bias. Before contacting the potential participants, I obtained IRB approval from

Walden University's IRB. The approval number for this study was 12-05-19-0580097. I gathered data of the businesses registered within the county from Riverside County websites and filtered manufacturing businesses that conduct importing operations. The strategies for gaining access to the participants included recruitment via email to the managers holding a position in the supply chain, materials, or quality department in a manufacturing business that outsourced internationally. I obtained the email information by contacting in person or via phone the receptionists or the phone directory of the businesses. The recruitment email included an invitation letter (Appendix B) to participate in the study explaining the purpose of the study, what the study entailed, and inviting them to participate in a voluntary interview. If the manager (potential candidate) wished to participate in the study, I asked him or her to reply with contact information. Then, I reached out via phone and provided more details.

During the phone call, I inquired about the background of the participant. The potential participants demonstrated success in managing the quality of outsourcing operations by showing the operations remained cost-effective, sustainable, and the products met quality standards with zero recalls. If the potential participant met the criteria, I went through the informed consent information and explained him or her could sign the informed consent when we met together. We scheduled a face-to-face interview at a time, date, and location that was convenient for the participant. Before the interviews began, the participants signed a consent form in which I gave the information regarding the purpose of the study, that their participation was voluntary, and that they could withdraw at any time during the process. I also ensured the participants understood that

the information was confidential and that I would not disclose their names in the study report. After a participant signed the consent form, the interview began.

Research Method and Design

Research Method

A qualitative research method extrapolates a theory from others' perspectives (Field, 2017). In this study, I obtained more information about the problem that managers experienced or continue to experience when outsourcing manufacturing processes to other countries. Researchers can achieve depth in a study and acquire insights from narratives through qualitative research and data collection approaches (Venkatesh et al., 2013). Through a qualitative research method, I was able to study the subject deeply under research and found information that led to the answers of the questions defined at the beginning of the research.

In existing research related to this subject, academics find both qualitative and quantitative research. A qualitative study is more suitable for studies in which the researcher aims to answer what and why questions (Christ, 2013; Corner, 2002; Venkatesh et al., 2013). According to Yin (2018), qualitative research explores an in-depth phenomenon. Qualitative research is adequate to study and analyze everything in a situation through the investigation of multiple individuals associated with the same case under study (Cronin, 2014). Through the use of a qualitative study as a research method, the investigator can objectively find the means to successfully describe and understand a phenomenon (Berger, 2015; Cronin, 2014; Elo et al., 2014). Therefore, the selection of a qualitative research method was appropriate to obtain in-depth information to explore the

phenomenon and the strategies that managers use to ensure quality standards compliance in internationally outsourced manufacturing processes to address the problem of this research.

The quantitative method involves testing hypotheses to explain a phenomenon (Yin, 2018). Thus, a quantitative methodology was not suitable for this research because a quantitative method entails testing to achieve the goal of the research (Cronin, 2014). Corner (2002) noted that quantitative research requires the use of empirical studies of multiple design elements. Quantitative research involves quantifying the data of a phenomenon (Elo et al., 2014). To conduct quantitative research, I would need access to statistical organizational data, which represents a limitation for the study. A quantitative approach was not appropriate because this research involved exploring a phenomenon to find information, not testing hypotheses (Corner, 2002; Cronin, 2014; Östlund et al., 2011). Mixed studies include a combination of qualitative and quantitative methods (Östlund et al., 2011). Thus, neither mixed nor quantitative methodologies were applicable for this study due to the limitations of the quantitative methodology to achieve my purpose.

Research Design

The selection of the design for research depends on the central objective of conducting the study (Christ, 2013). The investigator uses the research questions as a foundation to define the most suitable design for the study (Elo et al., 2014). The designs for qualitative research are phenomenology, ethnography, narrative research, and case studies. A phenomenological study describes the meaning of a concept or phenomenon

based on individual lived experiences (Yin, 2018). A challenge for a phenomenological study includes that this method requires a broader understanding of philosophical assumptions and the intervention of a large number of participants. Therefore, a phenomenological design was not appropriate for the study because I would need access to a large number of participants, which was not necessary to achieve the purpose of the study. An ethnographical research design entails the development of a theory from the examination of the participants (Venkatesh et al., 2013). The researcher needs to understand anthropological and cultural social concepts. The ethnography method is extensive for data collection and requires prolonged time on the field; thus, this approach limits the audience and has a high level of complexity (Venkatesh et al., 2013). Therefore, an ethnographical method was not suitable because the application for this study was limited for business practice instead of the cultural aspects of a business.

A case study approach starts with the identification of a particular case and has the objective of in-depth understanding of a problem or issue (Soosay et al., 2012). A case study represents an empirical inquiry that investigates a phenomenon (Yin, 2018). The justification for using a case study design is that this design consists of contextually rich data use to study a phenomenon in a real-life context and provide an in-depth understanding (Yin, 2018). In a case study, the researcher focuses on specific situations by describing the single or multiple cases and investigating the individuals, groups, or phenomenon (Cronin, 2014; Elo et al., 2014; Soosay et al., 2012). A multiple case study approach with an in-depth interview methodology was appropriate for my research because I focused on a particular phenomenon to research the strategies that managers

use effectively to control the quality of the outsourcing process in more than one organization. I achieved this objective through a multiple case study.

A case study research is a systematic investigation of analysis to obtain in-depth data (Berger, 2015; Cronin, 2014; Elo et al., 2014). According to Cronin (2014), a case study is useful to inquire into the complete description of an event or phenomenon. Case study methods have a preference when the research questions plan to answer what or why, and the investigator has little to no control over the real-life events (Berger, 2015; Cronin, 2014; Yin, 2018). I performed a study of real-life events in which I had no control. Therefore, a case study was the appropriate choice for this study.

Population and Sampling

The population for this qualitative research was a group of managers that work in departments related to the outsourcing process of companies located within the county of Riverside in Southern California in the United States. The population was managers who work in organizations in which managers are responsible for outsourcing manufacturing operations to Mexico, China, or India. Based on the criteria for eligibility to fulfill the purpose of the study, the participants had to have experience in successful outsourcing manufacturing operations to foreign countries. The participants also had to work or have worked in a manufacturing company within Riverside County in California and experience in the supply chain, quality, materials, or production departments.

In this study, I selected a purposeful and convenience sampling strategy and selected three participants. I gathered data of the businesses registered within the county from Riverside County websites. The strategy for sampling selection is a critical step in

qualitative research (Robinson, 2014). I used a purposive and convenience sampling techniques to select the participants.

The purposive or purposeful sampling technique involves the researcher choosing participants due to the qualities or experience that the participants possess (Cleary, Horsfall, & Hayter, 2014; Etikan, Musa, & Alkassim, 2016; Gentles, Charles, Ploeg, & McKibbon, 2015). Convenience sampling is a type of nonprobability sampling where the researcher selects the participants from a target population based on members that meet specific practical criteria, like accessibility, proximity, availability, or the willingness to participate (Brewis, 2014; Etikan, Musa, & Alkassim, 2016; Morse, 2015).

To conduct effective research, participants must know the topics concerning the purpose of the study (McCusker & Gunaydin, 2015; Percy et al., 2015; Robinson, 2014). I focused on selecting participants who met the experience requirements from a purposeful sampling but also met the convenience sampling criteria. In order to fulfill the purpose of the study, I needed to ensure the participants had the experience required. However, I also needed to have access to, proximity to, and willingness of participants to conduct the interviews. I selected participants who are managers in businesses located within Riverside County in California based on convenience sampling. Thus, a combination of both sampling methods was the most appropriate sampling strategy to conduct this research.

I reached data saturation by ensuring I had enough information to meet the purpose of the study and answered the research question. According to Fusch and Ness (2015), the researcher accomplishes data saturation when there is enough information to

replicate the study, no additional or new information arises, and therefore, no further coding is needed. In a qualitative study, the researcher reaches a saturation point when there is enough data available to answer the research questions (Bowen, 2008). In qualitative research studies, the investigator can select the sample size for accessibility to information (Morse, Lowery, & Steury, 2014). I selected three participants who met the requirements and could contribute throughout the interview process to answer the research question completely. A small sample size can be adequate to focus on each experience during the interview process in research with time constraints (Morse et al., 2014; Morse, 2015; Robinson, 2014). Thus, for this qualitative case study, a sample of three participants was appropriate because I focused on the experience of the participants.

I conducted the recruitment by inviting the respondents to participate voluntarily in the interview after receiving Walden University IRB approval and gathering the data of the businesses to identify the potential participants. I obtained the email information by contacting via phone the receptionists of the businesses. The recruitment email included an invitation for a preliminary phone call to explain the purpose of the study, what the study entailed, and inquired about the management experience to determine if they could be potential participants. The potential participants demonstrated success in managing the quality of outsourcing operations by managing outsourcing manufacturing operations that represented a benefit in cost for the organizations, are sustainable, and the products met quality standards with zero recalls. If the manager wished to participate in the study and met the criteria, I gathered the contact information. After executing the convenience and purposeful sampling processes, I selected three participants for the study based on the

criteria above. I selected the participants based on who had more experience to meet the purpose of the study and was available to participate in the study. When the potential participants agreed to do the interview, I set a time and date to conduct the interview. The participants of a study must have the qualities and relevant experience to help the researcher achieve the purpose of the study (Cleary et al., 2014; Etikan et al., 2016; Morse, 2015). The criteria that I defined were appropriate for the study because I selected participants who had the experience to contribute and answer the research question.

Ethical Research

In this qualitative study, I was the researcher. As such, I had the primary responsibility of ensuring that this research complied with Walden University's IRB requirements and ethical standards. Walden University's approval number for this study was 12-05-19-0580097. Researchers must approach the entire research process with a consciousness for an ethical design and working style. In parallel, researchers promote respect and beneficence for the participants of the study (Aluwihare-Samaranayake, 2012). My goal was to abide by the highest ethical standards based on the IRB requirements during my research for this qualitative study.

IRB requirements included obtaining informed consent from all participants. All the participants of the study signed the informed consent form. Results have indicated that participants benefit through participation in qualitative research (Ahern, 2012). In a research study, the researcher must obtain permission and consent from each participant to participate in the research (Ahern, 2012; Alby & Fatigante, 2014; Resnik, 2011). Thus,

I contacted each participant to obtain consent to participate in the study and documented the agreement in a consent form before I conducted the interviews.

In the informed consent, I outlined the potential benefits and risks associated with the participation in this study. There were not potential risks for coercion to participate in this study because participants did not have a relationship with me. Study participation was voluntary, and participants understood that there were no material or monetary incentives to participate. In addition to discussing the study during the initial phone call, through the consent form, I informed participants of their rights and the purpose of the research. All participants understood the purpose of the study and their rights to withdraw from the study at any time (Unluer, 2012). I also informed the participants that I would maintain their confidentiality, and I would not reveal their identities.

I interviewed to ensure minimal risk to the participants and guaranteed that the interviewees met the criteria defined by the IRB for ethical standards in the research. Before the interviews, I asked the participants in the initial contact and in the informed consent for permission to record their interview for data analysis. I followed an interview protocol (Appendix A) for a semistructured interview. Participants must understand the purpose of the research study and their rights to withdraw voluntarily at any time (Unluer, 2012). If a participant had expressed the desire to stop participating, I would have immediately ceased all recording and collection of data and deleted any data collected.

In qualitative research, the participants rely on confidentiality and trust with the researcher (Ahern, 2012). Confidentiality in qualitative research entails that the

researcher knows the identity of the participants and can track their responses but protect their identity in the study (Alby & Fatigante, 2014; Aluwihare-Samaranayake, 2012; Ferreira, Buttell, & Ferreira, 2015). The qualitative researcher can assign a number or code for each participant throughout the research study to link their responses not to need any identification (Check, Wolf, Dame, & Beskow, 2014; Ferreira, Buttell, & Ferreira, 2015; Unluer, 2012). I used the identifications, P1 for the first participant, P2 for the second participant, P3 for the third participant, and so on for each participant. The researcher should not disclose participants' names or names of the participants' companies (Ferreira et al., 2015). I ensured maintaining confidentiality throughout the study by not revealing the participants' names of the name of their company.

Trust is a function of knowing who will have access to the research's findings, the purpose of the study, and awareness of the advantages and disadvantages from the participant's side (Barker, 2013). Participants show higher levels of trust when they believe the researcher will offer unbiased insights and new information (Barker, 2013). The researcher must maintain a neutral position as the interviewer, avoiding judgments of the participants' points of view, and must not disclose personal opinions regarding the subject of the research (Alby & Fatigante, 2014; Barker, 2013; Sherry, 2013). Thus, I omitted any comments in reporting the results of my research based on opinions or beliefs during the interview about what participants told me or my opinion of the participants.

During the study, the researcher must have access to inquire with the respondents as he or she obtains data to exercise confidentiality (Brewis, 2014). The qualitative

researcher performs a review of the interviews' analysis with the participants to confirm accuracy (Ahern, 2012; Aluwihare-Samaranayake, 2012; Resnik, 2011). After I completed the final draft of the results, I provided the participants with a copy of the results for their review. According to Brewis (2014), the researcher must validate the data collection in any study. Member checking involves getting the participants' feedback or validation of their responses (Brewis, 2014). For member checking purposes, I asked the participants their opinion on the interpretation of the results, and I used their feedback as part of my validity check for the research.

I will keep and store all interview transcripts, data, and information in a locked file cabinet for 5 years to protect the participants and prevent access to the information used for the study. All electronic files of research data and transcripts will be on a Google drive for which I will be only one who will have access to the file cabinet. I will destroy all data after 5 years. I was be the only researcher who recorded, collected, transcribed, and analyzed the data of the interviews for this research study.

Data Collection Instruments

In any study, data collection is a critical component of the research (Pakhare, Bali, & Kalra, 2013). For this study, I was the researcher and primary instrument for data collection and analysis. Researchers are the primary collectors of data in a qualitative study (Tonon, 2015). Researchers must reflect as part of their role in qualitative research work to convey understanding to the readers (Mohajan, 2017). As the researcher, I ensured to gather the information to accomplish the objectives of the study.

Qualitative case study researchers use three data collection techniques conducting interviews, observing, and analyzing documents (Merriam & Tisdell, 2015). As a secondary data collection instrument, I used interviews. Interviews are a primary source for data collection in qualitative research (Alase, 2017; Morse et al., 2014; Ngozwana, 2018). Interviews can be an effective instrument to gather information and collect data (Ngozwana, 2018). Alase (2017) noted that an interview is a conversation with the purpose of retrieving data from the participants.

The participants for the interview met the eligibility criteria. I recruited participants who have used successfully standard quality compliance in internationally outsourced manufacturing processes. Once the participants confirmed they wished to participate in the study, I reached out via phone to provide more details about signing the informed consent and to schedule a face-to-face interview.

The second data collection instrument was a semistructured face-to-face interview. The interview questions used for the study are in Appendix A. The data collection influences the quality of data, and face-to-face interviews reduce misinterpretation of the responses (Van Velthoven; et al., 2018). Researchers use interviews as effective ways to expose participants' ideas and reveal participants' insights when compared to other data collections methods (Diefenbach, 2008). The interview protocol (Appendix A) contained specific questions that allowed follow-up data collection. I followed completely the interview protocol.

Merriam and Tisdell (2015) noted that the majority of qualitative studies use semistructured interviews to focus on determined questions but also to have the

opportunity to explore the topics further when necessary. Using a semistructured interview protocol, participants may share individual thoughts and information that will add value to the research (Ngozwana, 2018). Thus, the selection of a semistructured interview was appropriate as a secondary data collection method. As a secondary data collection method, I also used observations during and after the interview. In qualitative research, observation entails watching, feeling, and being present with the participants and the surroundings (Aagaard & Matthiesen, 2016). I focused on observing the participants and recording my observations. I also recorded any additional comments that the participants make throughout the interview.

Reliability and validity are critical components to evaluate an instrument in research (Mohajan, 2017). I used triangulation through data analysis, the review of the companies' standard operating procedures, and member checking as a method to ensure reliability and validity. Singh (2014) noted that validity and reliability are components critical in research to ensure transparency and minimize opportunities for bias. In qualitative research, validity is a matter of trustworthiness, utility, and dependability (Zohrabi, 2013). During data collection, researcher bias can threaten the internal validity of the research (Leung, 2015; Sutton & Austin, 2015). Therefore, I ensured to transcribe all the interviews accurately and minimized bias encountered during the interview process.

Jordan (2018) stated that the researcher, as a data collector, must focus on the participant and needs an analytical approach. According to Leung (2015), to ensure validity, the researcher must ensure that the choice of methodology is appropriate for the

study and answering the research question. A researcher can achieve internal validity in the interview data by ensuring to present the information provided by the interviewees effectively (Diefenbach, 2008; Leung, 2015; Sutton & Austin, 2015). Thus, in qualitative research, there is a need for verifying data and triangulation (Diefenbach, 2008; Merriam & Tisdell, 2015; Mohajan, 2017). As a researcher, I ensured the methodology and data collection are effective in achieving the purpose of the study. I also used triangulation to analyze data objectively and reviewed the transcripts to limit biases in the data collection procedures.

The researchers can achieve reliability in qualitative methodologies through consistency in the process (Jordan, 2018; Leung, 2015; Ngozwana, 2018). During the research, I remained consistent throughout the data collection and analysis by asking the same questions to all participants during the interview. I also followed the same interview protocol with all participants to enhance reliability in the data collection.

Data Collection Technique

In this qualitative study, the purpose of the researcher was to collect information about the strategies that managers use to ensure quality compliance of standards when internationally outsourcing manufacturing processes. The main objective of the data collection was to explore what are the strategies that managers can implement to help ensure quality in outsourced manufacturing processes. I interviewed three participants and asked six primary questions using follow-up questions as necessary in order to obtain rich and complete data to answer the research question. The interview guide and protocol are in Appendix A. Rowley (2012) noted that researchers must consider the time

resource. An acceptable timeframe for an interview can be from 30 to 60 minutes (Diefenbach, 2008; Harvey, 2011; Rowley, 2012). Therefore, the interview with each of the participants lasted about an hour.

The data collection technique that I used for this study consisted of face-to-face semistructured interviews. Jamshed (2014) noted interviews are the technique that researchers use the most for data collection in qualitative research. Irvine, Drew, and Sainsbury (2013) indicated that in face-to-face interviews, researchers could observe and have more contact with the participants to gather critical information. Face-to-face interviews are useful to reduce misinterpretation of the responses and provide more insight from the participants (Diefenbach, 2008; Rowley, 2012; Van Velthoven et al., 2018). Thus, in a face-to-face interview, I gathered in-depth information concerning the participants' experiences and additionally took notes on the behaviors I observed in the interviewing process.

The in-depth interviews for this qualitative research had a semistructured format to allow the respondents to feel comfortable and simulate a conversation. A semistructured interview is flexible and has open-ended questions, but the researcher can explore issues that arise in the interviewing process (Doody & Noonan, 2013). Through a semistructured interview, the researcher can follow determined questions but has the opportunity to explore topics, and the participants can share information to fulfill the purpose of the research (Jamshed, 2014; Merriam & Tisdell, 2015; Ngozwana, 2018). A semistructured in-depth interview permitted to profoundly and effectively explore the

strategies that managers use to ensure quality compliance of standards when internationally outsourcing manufacturing processes.

Throughout the complete interview, I adhered to the interview protocol (Appendix A). The researcher utilizes the protocol and consent to ensure the participants are aware of their rights (Cairney & St Denny, 2015; Jacob & Furgerson, 2012). I did not conduct the interview until the participants understood their rights and consent. According to Jacob and Furgerson (2012), the consent must be a part of the beginning of the interview's script.

I recorded the interviews with the participants' consent to the recording process. I requested the participants' consent before the interview. I tested the audio recorder before each interview to ensure the equipment was functioning correctly. The recording of the interviews is appropriate for the researcher to capture data accurately and effectively (Doody & Noonan, 2013; Jamshed, 2014; Van Velthoven et al., 2018). It is critical that the researcher tests the equipment and is also familiar with its use to record the interview (Doody & Noonan, 2013). An advantage of recording an interview is that the interviewer can engage in the process (Harvey, 2011).

After the interview, I reminded the participants of their rights and inquired about any questions. I converted the recorded interviews, created transcripts, and documented all the observation notes. Recording the interview enables the researcher to generate a verbatim transcript (Jamshed, 2014). The researcher must compare and review the data collected through the interview process (Frels & Onwuegbuzie, 2013). To verify the accuracy of the transcripts, the qualitative researcher must provide a copy of the findings

of the interviews to the participants (Ahern, 2012; Aluwihare-Samaranayake, 2012; Irvine, Drew, & Sainsbury, 2013). Thus, I provided a summary of the individual interview findings with each of the participants to ensure I captured correctly, what the participants meant to say and incorporated their feedback. I ensured to plan, followed the interview protocol, and reviewed the transcripts for accuracy.

Data Organization Techniques

Throughout this qualitative study, I complied with all required forms and permissions and obtained IRB approval to ensure compliance with the research ethics and policy at Walden University. After the data collection, I organized the data coherently and systematically. I transcribed the recorded interviews of each participant in a Word document. A researcher must review the transcripts to confirm accuracy (Ahern, 2012; Aluwihare-Samaranayake, 2012; Resnik, 2011). Dumight and Qu (2011) noted that transcripts are necessary to avoid misrepresentation of the data collected. I ensured transcriptions were accurate by comparing them to the recordings.

I coded the interviews in NVivo for data analysis. I saved the transcripts in a password protected drive for 5 years. I stored a digital copy of the interviews' transcripts in a Google drive to which only I have access, and I protected the Google drive with a password. The storage of data during and following the research is the responsibility of the qualitative researcher (Thomson, Petty, Ramage, & Moore, 2011). I stored all the transcripts by name with a detailed description to identify the information clearly. I used NVivo as an application for data organization. The computerized database software was a tool that researchers can use effectively to store, organize, and analyze the research data

to develop themes (Doody & Noonan, 2013; Resnik, 2011; Sassi, Touzi, & Ounelli, 2008). As a backup for data, I saved in a password-protected flash drive the information and for 5 years after the completion of the study. I will also keep the signed consent forms stored in a cabinet for 5 years. After 5 years, I will eliminate and delete all files concerning this researcher and shred all documents.

Data Analysis

After completing the interviews with all the participants, I reviewed the transcripts for accuracy and the interview notes. Through triangulation, I analyzed the data and identified the findings that led to the answers to the main research question, which involved the strategies that managers use to ensure quality compliance when outsourcing manufacturing processes. The analysis of a case study consists of making a detailed description of a phenomenon, and qualitative data analysis is a complex process (Bergin, 2011). In a case study, the researcher has the responsibility to prepare, interpret, and analyze data (Yin, 2018). I used data triangulation with a reflexibility approach. Reflexivity is a strategy for quality control in qualitative research in which the researcher applies the understanding of how the personal characteristics and experiences can impact the data collection (Berger, 2015).

I also followed the data triangulation to analyze the data. Researchers use strategies to execute method triangulation and data triangulation (O'Leary, 2019). Researchers can combine methodologies in a study of the same case and phenomenon (Denzin, 2012). Thus, as a data triangulation method, I analyzed the data collected from the interviews and the companies' standard operating procedures (SOPs) documentation

to perform data analysis. A researcher can collect multiple types of data through more than one method and provide a broader range of coverage of the case under study (Kaplan & Duchon, 1988). Thus, I used the interviews and triangulate with the companies' documentation concerning SOPs.

The researcher must follow specific steps to perform effective data analysis (Becho Sullivan & Bhattacharya, 2017). I followed the steps to identify the codes and themes for this study. The first step was to list specific words as codes. The second step that I performed was to validate and categorize the codes. The researcher must also validate codes and categories and construct a description of the structure of the process under study during the data analysis based on the transcriptions (Moustakas, 1994). As the third step, I developed the codes based on my findings; some of the individual codes fell in more than one theme. The fourth step was to identify the themes of analysis for the interviews.

Qualitative data analysis consists of identifying the relationship between categories and themes of data to understand deeply the phenomenon under study (Hilal & Alabri, 2013). Analyzing text involves discovering themes and subthemes (Ryan & Bernard, 2003). The fifth step in data analysis fort this study was reduction of the group codes to identify the main themes. Theme identification is an essential component of qualitative research (Ryan & Bernard, 2003). The reduction of the data to themes is a critical process for data analysis (Berger, 2015; Hilal & Alabri, 2013; Ryan & Bernard, 2003). I developed the themes based on finding links between subjects and points in the

participants' responses. Yin (2018) proposed to match patterns of data by logic based on findings as an analytic strategy.

For this case study and to accomplish the codes and theme development as noted on the steps above, I used NVivo qualitative data analysis software (QDAS). Advantages for the researcher when using a QDAS, like NVivo, include a single location for all data storage, easy access to the information, and consistency in coding schemes (Bergin, 2011; Cambra-Fierro & Wilson, 2011; Woods, Paulus, Atkins, & Macklin, 2016). Fielding (2012) noted that QDAS has the feature to link and integrate complex data. Thus, the use of the QDAS was appropriate to analyze the data for my qualitative case study.

I used the NVivo 12 as my QDAS program. Brennan and Cotgrave (2014) noted that NVivo is an appropriate management program for research and developing themes. Through the use of NVivo, the researcher can organize themes or categories in the data (Bergin, 2011; Brennan & Cotgrave, 2014; Cambra-Fierro & Wilson, 2011). The number of researchers who use QDAS has increased on an annual basis, with most studies using ATLAS and NVivo for data management and analysis (Fielding, 2012). Therefore, I had a high level of confidence about using this program.

Researchers from the United Kingdom, United States, Netherlands, Canada, and Australia have used NVivo in published health sciences journals to manage the data of their studies (Woods, Paulus, Atkins, & Macklin, 2016). NVivo and other QDAS have become an essential part of qualitative data analysis and increase the accuracy and speed of the data analysis process (Zamawe, 2015). Many alternatives were available to use

instead of NVivo. Nevertheless, Zamawe (2015) and Woods et al. (2016) found that NVivo is a program that is effective to use with most research designs. Therefore, the use of NVivo was appropriate for developing codes and themes of my case study and conducting data analysis. I used NVivo to organize the codes and themes I generated during the data analysis, and I drew conclusions based on the findings.

Reliability and Validity

Validity and reliability are critical elements of qualitative research. The validity and reliability of the research constitute the trustworthiness of the study (Anney, 2014). Elo et al. (2014) noted that the trustworthiness in qualitative research includes credibility, dependability, conformability, and transferability. Academics assess the quality of qualitative research based on the criteria of reliability, validity, and objectivity (Ali & Yusof, 2011). In this study, I used triangulation, member checking, and data saturation as elements to ensure the validity and reliability of the study research.

Reliability

In order to attain reliability in research, the researcher must document procedures from data collection, analysis, and interpretation (Drost, 2011). The researcher must take several steps, including peer examination, to achieve the reliability of the study (Drost, 2011). For a study to be dependable and reliable, the research must ensure acceptable data collection and data analysis with neutrality (Zohrabi, 2013). As a researcher, I focused on ensuring reliability and objectivity for the findings.

According to Thomas and Magilvy (2011), the researcher can use strategies to establish dependability and reliability, like peer participation in the analysis of

information and providing consistency of the research method and data collection. I attained the reliability by maintaining the consistency of data collection methods and avoiding bias. I also adhered to the interview protocol to keep the consistency. Using best practices that support the consistency of the research procedures, study methodology, and following an interview protocol, can enhance the reliability of the findings (Brod, Tesler, & Christiansen, 2009; Denzin, 2012; Drost, 2011).

Researchers can also use data triangulation to ensure reliability in the study (Heale & Forbes, 2013). Researchers may accomplish triangulation with the consistency of research methods and designs (Heale & Forbes, 2013). Thus, I attained reliability of the findings by ensuring I followed the methodology and protocol with all the participants during the research in combination with data triangulation.

Validity

In qualitative research, validity is a matter of trustworthiness, utility, and dependability (Zohrabi, 2013). Validity is a critical factor in qualitative research. Validity is vital in research and can be of content, criterion, and construction of contentment (Ali & Yusof, 2011; Jordan, 2018). Validity involves the credibility, confirmability, and truth of the research (Guba & Lincoln, 1994). Data saturation also ensures validity (Heale & Forbes, 2013). Collecting data from different sources through triangulation is a way for researchers on content validity is by conducting qualitative research studies (Bekhet & Zauszniewski, 2012).

Triangulation is a technique to reduce bias and validate the data (Onwuegbuzie & Leech, 2007; Thomas & Magilvy, 2011). Data triangulation involves the use of more than

one source of data such as interviews, other studies, or participants' or observations (Anney, 2014; Denzin, 2012; Thomas & Magilvy, 2011). To ensure the validity of the findings, I used triangulation by using the data that I collected in the interviews and the information of the companies' standard operating procedures (SOPs) concerning quality management for products outsourced from foreign countries.

As a researcher, I also ensured the validity through data saturation and member checking. I verified the data were accurate by reviewing the transcripts of the interviews with the recording for validation. Qualitative researchers must record accurately and seek feedback to ensure the validity of the data collected (Ali & Yusof, 2011; Bekhet & Zauszniewski, 2012; Cho & Trent, 2011). Validity is a process that consists of techniques or methods to correct mistakes (Cho & Trent, 2011). I ensured the trustworthiness through member checking and presenting the participants the summary of the findings and verifying that I captured what they meant to say during the interview accurately.

I also attained data saturation from the coded transcripts of the interview and requested feedback on the findings from the participants for member checking. Feedback is helpful for the researcher to improve the quality of the inquiry (Ali & Yusof, 2011; Elo et al., 2014; Mohajan, 2017). Thus, requesting feedback from the participants will help the researcher to develop the conclusion of the study (Cho & Trent, 2011). In qualitative research, member checking through verifying data, gathering, and implementing feedback, and performing triangulation are effective for data validity (Jordan, 2018; Mohajan, 2017; Street & Ward, 2012). I performed the corrections necessary based on the participants' feedback on the summary of the findings.

Triangulation and member checking are qualitative research strategies to ensure the validity and credibility of the study (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014; Elo et al., 2014; Mohajan, 2017). Triangulation and member checking was pivotal for the study and ensuring validity. The feedback from the participants and committee members was critical for the credibility of my study and research. Denzin (2012) recommended that additional professionals and researchers review the data independently to ensure data saturation and objectivity.

Summary and Transition

In Section 2, I presented a qualitative multiple case study as the research method and design for this study. I presented the population for this study based on the managers in Riverside County and the selection of purposeful and convenience sampling. I outlined the role of the researcher and the details of participants of the study. I also described the ethical research, data collection instruments, and the data organization technique. I explained the selection of semistructured face-to-face interviews as a secondary data collection instrument and the data analysis process. Section 2 also contains the details of the reliability and validity of this study. In the next section, I include the information concerning the data analysis and interpretation of the findings. I outline the impact of the results of this research on business and social change. I also present the recommendations for future research and the conclusion from the case study.

Section 3: Applications to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative multiple case study was to explore the strategies that business managers use to ensure compliance with quality standards when internationally outsourcing manufacturing processes. I interviewed three managers of manufacturing companies in Riverside County, California. I selected the participants using purposeful and convenience sampling. I collected data through face-to-face, semistructured interviews, and I triangulated data with the organizations' quality management SOPs. The findings of this research indicated that managers can ensure compliance with quality standards by implementing strategies that include (a) verifying that suppliers have a quality system, (b) implementing and controlling inspections and audits, and (c) building a reliable business-to-business relationship. In Section 3, I cover the presentation of findings, application to professional practice, implications for social change, and my recommendations for action and further research. At the end of this section, I also present personal reflections and the conclusion of this study.

Presentation of the Findings

The central research question for this study was: What are the strategies that managers use to ensure standard quality compliance in internationally outsourced manufacturing processes? I used a qualitative research method and a multiple case study design. I conducted semistructured, face-to-face interviews with three participants, each of whom had more than 15 years of experience in managing quality in manufacturing processes, especially in outsourcing production to foreign countries within multiple

industries. P1 had 15 years of experience and worked in the plastics manufacturing industry and with organizations that outsource processes to China and Mexico. P2 had more than 25 years of experience outsourcing manufacturing processes of steel production to China. P3's experience involved outsourcing manufacturing processes in the electronics and aerospace industries to China, Mexico, and Thailand. P3 had more than 15 years of experience in outsourcing manufacturing. At the time I conducted this research, all three participants, worked for companies that had at least 100 employees in the Riverside County are and more than 1,000 employees corporate-wide in the United States. The three participants had engineering backgrounds and a strong understanding of manufacturing operations.

The interviews consisted of five open-ended questions and each lasted approximately 45 minutes. I recorded the interviews for the three participants. For member checking, the three participants reviewed a summary of my interpretation of their responses. All participants provided feedback on accuracy to ensure that I correctly captured what they meant in their responses. For data triangulation, I corroborated the data on quality SOPs from the manufacturing processes of two participants. Through the review of the quality SOPs, I was able to verify the procedures that were in place and that the participants used within their organizations to ensure quality compliance, both internally and with external suppliers.

After the analysis, five main themes emerged: (a) criticality of the quality management system, (b) compliance with product quality standards, (c) standardization of manufacturing processes, (d) effective execution of inspections and audits, and (e)

beneficial relationship building. The three participants mentioned the five main themes. The five themes that resulted from the data analysis are topics that scholars have identified as vital in quality management and factors for TQM, the conceptual framework of this study.

Even though the participants work in different industries, the five main topics consistently came up in the interviews with the three participants. All the participants stressed the importance of these main topics in their responses. The themes and frequency that the participants addressed the associated topics during the interviews are in Table 1.

Table 1

Emergent Themes

Nodes/themes	N	%
Criticality of the quality management	18	26
Compliance with product quality standards	15	22
Standardization of manufacturing processes	12	18
Effective execution of inspections and audits	9	13
Beneficial relationship building	8	12
Other	6	9

Note: N represents the number of times participants mentioned the main topics (*N* =68). I rounded the percentage of themes.

The concepts of quality systems, compliance with standards, inspections and auditing have foundation on the TQM philosophy for the effective implementation of a quality management (Way et al., 2016). The main objective of the TQM approach is to ensure compliance in the processes and delivery of quality to meet the standards (Way et al., 2016). In parallel, the themes identified in this research align to strategies that

managers implement and use to ensure quality compliance when outsourcing manufacturing processes with a focus on TQM.

Theme 1: Criticality of the Quality Management System

The theme that emerged the most number of times was the criticality of the quality management systems (QMS). The participants mentioned this topic a total of 18 times. The subtopics associated with quality management systems are (a) quality systems, (b) quality certifications, (c) good systems, and (d) quality control. The three participants highlighted the importance of QMS in manufacturing. Quality management requires process control based on conformity with the standards defined for products and services (Ibrahim, 2019). QMS are pivotal for process controls within organizations. P3 focused on the criticality of vendors and suppliers to have a good QMS. P3 stated "When dealing with outsourcing suppliers, make sure that they have a quality system already in place. If going international, ensure they have good system, and that the system is set up for what you need." P3 also highlighted the importance of reviewing the QMS before selecting a supplier.

All the participants mentioned that the QMS is critical in the manufacturing and outsourcing processes within their organizations and how QMS is also vital to control quality elements. In their study, Kumar, Maiti, and Gunasekaran (2018) found that effective QMS involves the set of interrelating aspects that establish the policies and processes for organizations to meet the objectives. P3 provided specific recommendations associated with QMS and outsourcing. P3 said "When going international, make sure

they have their system in place, and then that way, you are going to audit their system, not implement a new system." P3 also noted that the auditing the supplier's system

The three participants mentioned subtopics associated with QMS. P3 alluded to the criticality of the QMS a total of nine times during the interview. P1 and P2 addressed this topic four times each during their respective interviews. P3 provided recommendations and conclusions with foundation on ensuring that the suppliers have an effective and good QMS. P3 also noted that is critical that a third party certifies the system. P3 explored the importance of potential supplier having an ISO certification at the moment of selection. P3 said, "For me, having an ISO 9000 is a requirement, is a must." These comments aligned with the conceptual framework of this research because ISO is a foundation for TQM in organizational quality management.

P1 focused on the benefits that a good system can bring for an organization. P1 mentioned that the QMS defines the outcome for the quality of the products. P1 noted that the quality system "establishes the protocols and if these are clear, the outcome for quality coming into the door can be very good." P2 also spoke about the impact that QMSs have on the manufacturing processes: "quality systems stabilize quality in the factory," and "quality systems improve the quality control."

All the participants mentioned that selecting vendors and suppliers that have a QMS when outsourcing manufacturing processes is one of the main strategies to ensure compliance with quality standards. P3 stated, "If they do not have an ISO 9000, it is telling me that the company might not be well-structured, they may do a good job, but there is nothing that certifies them, like a standard." QMS is the foundation for the

quality control for organizations regardless of the background or industry (Ibrahim, 2019). Oschmann (2019) noted that the QMS is the leading guide for the quality manual and quality plans and procedures within organizations. Thus, the findings of this research are in alignment with the literature and the justification for why this theme emerged with the highest frequency during the interviews and constituted the top theme discussed by the participants throughout the different questions.

This theme also has direct involvement in outsourcing. P3 stated, “I have had the opportunity to select companies for outsourcing in China, in Mexico or Thailand, and one of the things that I look for first is the quality system.” QMS is one of the primary process elements for which management executes supplier-purchased selections in manufacturing processes (Fatima, 2014; Oschmann, 2019). P3 also said, “I would rather have a company that is not being audited by me, but also by a third source.” Certifications and QMS are part of the standards that organizations rely on to choose business partners, suppliers, and vendors (Hallberg, Hasche, Kask, & Öberg, 2018). The findings, align with literature on the fact that QMS has a direct involvement with outsourcing operations.

The findings of this research confirm the knowledge in quality management and expand on the importance of QMS, specifically in outsourced manufacturing processes. ISO is strongly interrelated to TQM as foundation for QMS to ensure compliance in outsourcing of manufacturing processes. ISO establishes the requirements for a QMS and outlines the documentation to meet prerequisites and conformance with quality specifications (Oschman, 2019). ISO determines the factors for implementing TQM in

manufacturing companies for quality in procedures (Ubay et al., 2017). QMS have foundation in quality management and ISO 9001 for continuous improvement in organizations (El Manzani, Sidmou, & Cegarra, 2019). ISO establishes the requirements for a QMS and outlines the documentation to meet prerequisites and conformance with quality specifications (Oschman, 2019). In a QMS, managers must outline the organizational activities, policies, procedures, plans, resources, processes, while presenting the responsibilities and authority on each level to control quality standards within the organization (Oschman, 2019). Thus, QMS has a significant tie with TQM, the conceptual framework of this study.

Theme 2: Compliance with Product Quality Standards

The topic of product quality was mentioned 15 times during the interviews. All the participants addressed and mentioned this topic or the subtopics related to this theme. The subthemes related to this theme are (a) product specification, (b) product function, (c) end-product quality, and (d) product standards.

P2 mentioned subtopics associated with product quality seven times, while P1 mentioned this topic five times, and P3, only on three occasions. P1 and P2 mentioned the importance of suppliers to meet the specifications of products when outsourcing manufacturing processes to foreign countries. Product quality is a primary factor for manufacturers and consumers in manufacturing industries (Gavidel & Rickli, 2017). P1 highlighted the importance of precise specifications for all the products that organizations will outsource. P1 stated,

> You need to verify that all drawings and details are right, and there is no ambiguity in any of the specifications because lessons that taught us that ambiguity generally is going to lead some quality issues in the product down the road.

P2 addressed how critical the aspect of meeting customer expectations is from the quality perspective and shared that "to ensure the product quality, we do a functional gauge." P2 expressed that passing the functional check is a good requirement to ensure the user and customer will be comfortable with the quality and function of the product and stated, "As long as you pass the functional check, is good and your user will be very comfortable." P3 noted that the QMS and training are essential to understand the product specifications and standards to ensure a supplier is providing a good quality product. P3 stated, "Training! When you start a new supplier you need to make sure that there were trained, that they know the product, that they build a few samples before you give them the business." P3 also said that "If you make a revision, an engineering change, make sure that you know how you are going to send a specification to the supplier because specifications are what ensure that the supplier is provided good quality product."

Academics and professionals have highlighted in previous studies the relevance of product quality for an organization's success, including in outsourcing operations (Rodrigue & Tan, 2019). In the existing literature, scholars recognized the importance of product quality as part of the supply chain and manufacturing stages. Cao and Zhang (2020) noted in their study that the manufacturer sets and defines the product quality. P3 stated, "Scorecards are essential to maintain the relationship with the suppliers and

making sure that we are healthy, making sure that the suppliers are healthy. You can ensure that the supplier is providing good quality product."

Chinese manufacturers and exporters must produce high-quality products to remain suppliers for developed countries (Rodrigue & Tan, 2019). Manova and Zhang (2009) also highlighted the importance of product quality for goods manufactured in foreign countries. P1 stated, "When we initially outsourced, we really struggled to make sure that all the specifications were clear as they could be." P1mentioned that when outsourcing, managers must manage quality in a different way. P1 explained,

> When we were producing some parts here in our facility, if there was an issue with the drawing or an issue with a specification, it was very easy to just pick up the phone and contact the, you know, R&D Engineer who is responsible for it or whoever in your Corporate office and you could make some adjustments as well. So, when you outsource, especially other countries, you can really struggle with specifications.

The participants focused on the importance that ensuring product quality has for the business. Poor product quality in manufacturing can lead to loss of customers and business relationships (Xu & Cao, 2015). The findings of this theme align with previous literature concerning the primary importance that organizations must place on ensuring compliance with product quality. The three participants mentioned that product quality is pivotal to ensure quality compliance when outsourcing manufacturing processes.

In manufacturing, quality data is required as part of the analysis and compliance with standards in processes and products to comply with TQM (Wei et al., 2017). The

characteristics of the process, materials, dimensions, and features are part of the analysis and data to ensure product quality and establish an effective TQM approach in organizations (Wei et al., 2017). Keller (2003) highlighted that perception of quality is importance in the products because represents the customers' judgement of the product. The quality product elements involve performance, characteristics, conformance, reliability, durability, fit, and function (Keller, 2003). Therefore, compliance of quality product standards, analysis, and improvement are essential elements for the TQM framework to achieve effective quality management.

Theme 3: Standardization of Manufacturing Processes

The participants mentioned 12 times the standardization of manufacturing processes topic during the interviews. The three participants mentioned this topic or the subtopics related to this subject. The subthemes associated with this theme are (a) manufacturing, (b) function gauge process, (c) running manufacturing, (d) assembly procedures, (e) outsourced manufacturing, and (f) production process. P2 mentioned this topic or the subtopics a total of six times, P1 and P3 addressed this topic on three occasions. P2 highlighted the importance of understanding the objective of the manufacturing process and what is the purpose for production and what is needed from the product. P2 stated, "For effective manufacturing, you need to make sure the factory understands what you need."

P2 also discussed the impact of the supply chain and the raw materials in the manufacturing process. P2 also explained that a manufacturer could keep the same process, production, and specifications, but if a supplier changes the material, the finished

good will change. P2 mentioned, “Manufacturers must have a qualified supply chain, to avoid issues” and “sometimes you find a supplier very qualified, very good, capable in all stages of manufacturing, effective in procedures, but sometimes the material suppliers is not stable, which affects the finished parts.”

P1 highlighted that understanding the manufacturing process is necessary to ensure good quality in production. P1 noted, “You need to see the manufacturing process, see how the components supplied kind of fit into the production and the end products that we were ultimately making.” P1 explained that sometimes quality issues arise from changes in the process that suppliers can make and noted “a lot of times the manufacturers overseas are trying to make improvements to the products, processes of the product itself and oftentimes, these changes in the manufacturing impact the assembly to another process or some function.” These statements align with previous research. Sharma, Gupta, Malik, and Jha (2019) noted that in order to establish high-quality manufacturing processes, production managers must understand the defects in their process and prioritize continuous improvement.

P1 addressed the need for clarity on SOPs and specifications in manufacturing, especially when outsourcing. P1 noted that, “the specifications and inspection protocols must be clearly defined,” and highlighted the importance of SOPs to ensure successful manufacturing processes. Quality data is critical in manufacturing processes, and managers use quality analysis to evaluate the data of the manufacturing processes (Wei, Feng, Hong, Qu, & Tan, 2017). Wei et al. (2017) noted that managers continuously aim to achieve effective quality management and adherence to TQM in the manufacturing

processes. P2 highlighted the actions that address quality defects. P2 explored the idea that having stability in production is critical to ensure quality in manufacturing processes. P2 said, “We need to see the process and production is stabilized.” P2 then identified how they address quality issues when outsourcing manufacturing,

> Ask: What went wrong? Then use a lot of assessment. Bring the defective samples, and re-simulate how the defect is being caused, ask for the factory to try to replicate the defect. From the process side, find out the challenge, and then solve the issue from the root cause for the defect.

The participants explored how managers can successfully manage quality in manufacturing processes. P3 noted that training is critical in the manufacturing process and that, as with any assembly processes, “You have to do the training, a lot of training.” P1 stated that the understanding of the manufacturing process is essential. P1 mentioned,

> Vendors must see our manufacturing process, see how the components that they were supplying us kind of fit into the products, the end products that we were ultimately making… because what we are producing overseas, a lot times are just subassemblies or things that we are just fitting into they fit into something greater that what they were producing themselves.

P2 established the importance of SOPs for improvements. P2 noted, “We use procedures to address issues, and our factory is growing and stabilizing quality much better.” Managers in organizations, set SOP to define the steps for quality in manufacturing processes (Iwao & Marinov, 2018). The findings of this research are consistent with the literature review section concerning the importance of SOP when

outsourcing manufacturing processes. Iwao and Marinov (2018) found that an SOP has a direct influence on quality and productivity in manufacturing processes because the workers must adhere to the procedures to perform the operations and yield better results. P2 highlighted the importance of SOPs and documentation and said, “set up a very detailed documentation, make sure looks like all the approved documentation.”

The participants also discussed the impact of changes in SOPs, and the findings are aligned with previous research. Revisions and changes to SOPs and other procedures have an impact on manufacturing and therefore, responsible managers must provide the information to the stakeholders (Iwao & Marinov, 2018). P3 expressed the impact of internal changes in production and said,

> A lot of times we make changes in house, but we do not pass them along. We do not pass them down to the supplier. And then you start seeing defects and by the time that you can catch the defect, you have a thousand and thousands of units.

P1 highlighted that managers need to set documentation properly and said, “You have to make sure that we have all these things to get them done correctly.” P2 noted that information about changes must be communicated effectively and said, “If the information is not concrete, gets lost a lot and potentially can cause a lot of problems.” P2 noted changes can be critical, especially in specifications and with personnel and stated, “You change the group and looks like it is not big deal, but for us, it is a really big deal or all this detail is going to be missing and you have to start all over again.” P3 said, “So, you have to make sure that the supplier is well-informed of your changes, of your training.” The three participants mentioned that changes in manufacturing can lead to

defects if the customer and supplier do not communicate the changes effectively and correctly.

The importance that participants attributed to controlling the supply chain are consistent with TQM and previous studies. Genta, Galetto, and Franceschini (2018) noted that in any manufacturing industry, the process to manufacture and assemble has a direct impact on the quality and cost of the finished goods. Manufacturing of products can include multiple series of assembly steps with quality inspection activities to ensure compliance with standards (Franceschini et al., 2018). Sharma et al. (2019) highlighted that organization must use several quality management methods with foundation in TQM, such as Six Sigma, cause and defect analysis, and quality control charts to have high quality manufacturing processes. Quality improvement and control in manufacturing entail a systematic approach to monitor the defects on each stage of production (Sharma et al., 2019). Managers rely on TQM principles for quality control to establish compliance with standards in manufacturing processes.

Theme 4: Effective Execution of Audits and Inspections

The participants addressed the topic and subtopics concerning quality audits and inspections nine times in the interviews. The three participants highlighted the importance of quality audits when outsourcing manufacturing processes. The subtopics were (a) quality inspection, (b) audits, (c) protocol inspections, (d) inspection SOP, and (e) audit score. P3 mentioned this topic four times, P1 four times, and P2 only once. P1 noted that it is critical to define the inspection protocols and said, “Before outsourcing you must clearly ask the vendor to audit certain number of times, defining exactly how

many times they audit, what they do if they find something wrong. So, there is a whole inspection plan as clearly defined." P1's statements align with the literature and the importance of audits. Quality inspection protocols and audits are critical for organizations to ensure that the operations comply with standards (Werner & Gehrke, 2019). P1 noted that it is important to audit the vendors physically to audit quality in outsourced manufacturing processes. P1 said,

> Is beneficial to have a group of people that are specifically there for quality control and being able to go and audit on a frequent basis to make sure the company is doing what they're saying they are doing. You could really verify and do more than just an audit check list that says they did things. You can actually have people on-site from time to time that can verify that things are really being done. I my case, this was very, very beneficial and I would recommend it for anybody who is thinking about outsourcing to another country.

The findings of this research are consistent with other studies. Werner and Gehrke (2019) noted that auditors monitor the internal quality controls within organizations through audits and inspections and confirmed that through audits and inspections, organizations can perform data analysis to identify deficiencies in the internal quality system. P1 also brought up that setting a site is critical to aid in quality control in the manufacturing process when outsourcing to foreign countries. P1 said, "We actually set up a site in that other country, so they can actually go and audit the manufacturer on a much more frequent basis."

P3 placed a significant focus on this theme and explained the importance that the data has concerning the audits and inspections and how having a third party to audits is also critical to ensure successful quality control. P3 said, “I would rather have a company that is not just being audited by me, but also by a third source.” The comments from P3 align with Zhang, Peng, Liu, and Zhang (2019), who noted that, when outsourcing, it is imperative for manufacturers to perform audits and inspections to verify the products meet quality compliance standards. P3 explained that outsourcing to foreign countries can bring multiple challenges and highlighted “the biggest challenge is not being onsite, not having a good supplier audit.” P3 said that the best way to control quality when outsourcing is by implementing internal audits. P3 noted, “Either by having someone go there and do audits onsite. I have used third parties. Every shipment that we get on site, with do a sampling audit and that helps.” Hu, Wu, Zhang, and Han (2019) noted that manufacturers perform quality inspections to ensure organizations are meeting the quality requirements of the products.

P3 noted that inspections are essential when outsourcing production. Other studies are consistent with the importance that the participants commented during the interviews. Kedong, Zhou, and Xu (2019) found that quality inspection processes are indicators of the effectiveness of the quality system. P3 said, “You can set up the standard, but if you have, let’s say after 25 inspections, 100 inspections, you have zero defects, then you can gain confidence. So, you say, ok, we have had zero defects.” P3 also explained that it is recommended to continue and have ongoing audits and inspections and said,

> It has been my experience, when you stop doing inspections, the supplier gets more relaxed, and then you start seeing defects. I would recommend, even though it costs money, I think the cost is minimal compared to the cost of reworking a lot of units, so I would always recommend some kind of inspection.

P3 explored how critical the data for inspections is when qualifying a process and vendors. Bettayeb, Brahimi, and Lemoine (2018) stated that auditors targeted the inspections on quality levels based on the quality inspection protocols and found that inspections can determine the production process effectiveness to gather quality data. P3 explained that it is critical to collect the findings data when inspecting manufacturers to evaluate their performance and noted,

> We say that an inspection requires a score of 90% and that they do not have defects when we do ISO audits, or zero findings in gaps in the processes. That is one item on the inspection and they'll get a score for that. If they have so many rejects, in the course of their first pass yield, then you document that. In China and Thailand, we use a third-party and they go and audit their system, their quality system, and also we do internal audits or sampling audits.

P2 discussed about the importance of the documentation for effective audits and inspection. P2 stated, “For inspections, you must set up a very detailed documentation, make sure looks like all the approved documentation.” In previous literature, professionals have highlighted the importance of quality audits for effective systems and compliance with quality controls (Sulaiman, Shahimi, & Singh, 2019). The findings of this research align with previous studies. Scholars have researched the significance of

quality audits in the performance of organizations and found that organizations with high-quality audits have a better performance in customer satisfaction (Sulaiman et al., 2019). Previous literature explores the relationship between the TQM framework that has a direct application with quality controls, inspections, and audits (Sulaiman et al., 2019).

The three participants recognized the importance of inspections and audits to manage quality when outsourcing manufacturing processes. The importance that the participants attributed to the audits and inspections is consistent with the framework of this study and previous literature. Through quality inspections, organizations can audit the manufacturing processes of vendors to understand the capability to prevent defects (Rezaei-Malek, Mohammadi, Dantan, Siadat, & Tavakkoli-Moghaddam, 2019). Quality management has a direct relationship with quality inspections systems and efficiency in achieving quality goals (Sulaiman et al., 2019). Auditors use inspection protocols to review the product attributes and compliance with specifications as outlined in effective TQM systems (Sulaiman et al., 2019). Zhang, Cao, and He (2019) also found that quality inspections are necessary for organizations to meet the quality standards and specifications. This theme was relevant for the participants to explore the strategies that managers implement and use to meet quality standard specifications under the TQM framework to execute effective auditing on systems and protocols.

Theme 5: Beneficial Relationship Building

The beneficial relationship building topic was mentioned eight times with the participants. P1 addressed this topic or the subtopics four times. P2 and P3 discussed this topic on two occasions. The subtopics related to this topic were (a) vendor relationship,

(b) business relationship, (c) customer relationship, and (d) communication. Even though participants mentioned this topic only eight times, the participants significantly deepened on this topic and shared its importance and various perspectives of strategies that worked for them in the past. This theme is consistent with existing literature, and studies by Chen (2018), Lacity and Willcocks (2017), and Martins, Duarte, and Costa (2018) in which the authors have emphasized the importance of building a productive outsourcing relationship.

P1 and P2 discussed the challenges in building a strong relationship between the organizations when outsourcing manufacturing companies to foreign countries. P1 said that one of the main strategies that P1 used in the past was to set up a location in a foreign country because the distance becomes a challenge. Khan et al. (2019), who noted that one the main challenges associated with offshore outsourcing is the geographic distance between the two businesses, supported this finding in the literature. P1 noted that communication could become a problem to address the manufacturing issues that arise. Khan et al. found that different time zones can impact communication for business matters negatively. P1 stated, “We actually set up a site, or well, a, yeah a site in that other country, where they can actually go and audit the manufacturer on a much more frequent basis.” P1 stated that one of the primary advantages of doing this is that there is a better understanding between the organizations.

P1 also addressed that setting a site in a foreign country is beneficial for communication due to the cultural factor. P1 noted that when managers set a site in a foreign country, the organization has locals working and said, “They spoke the language,

they were of the same culture." P2 noted that when outsourcing you might deal with customer service or contacts who speak English. However, P2 said "the customer service contacts might not able to communicate clearly your message to the right people who will actually do the work." These findings are consistent with the studies from Chaurasia (2018) and Yang, Wang, and Zhao (2019). Chaurasia (2018) noted that culture and technology represent a challenge when outsourcing and the business to business relationships. Yang et al. (2019) noted that cooperation and behavior can be different between the cultures of the organizations and countries and impact the outsourcing relationship. P1 said,

> If possible, setting up our location even if it's just a very small group of people that are specifically there for quality control and being able to go and audit on a frequent basis to make sure the company is doing what they're saying they are doing is beneficial.

P1 continued to emphasize that growth of the business also impacts the operations and added, "As you get bigger and bigger from the outsourcing internationally standpoint, you know, it will probably make more sense to actually have people on site on that country of origin." P1 noted that setting a location in the country will help address a lot of the challenges that come up when outsourcing offshore.

P2 also noted that face to face visits are critical to building a relationship between organizations, and therefore the quality management aspect of outsourcing. P2 noted that visiting the factories is critical and highlighted, "we go there, besides those customer service guys, or sales manager, we call and we visit." P2 said that managers must know

the people who are performing the work and know the team to build a relationship and managers must visit the factory to do this. P2 noted,

> If the information is not concrete, gets lost a lot and potentially can cause a lot of problems. That is what we realized, so we visit and call to the real working people to the meeting, make sure the working guys understand what we need. Not just, the sales managers or the ones who can speak English. So, fully understand what you really need is very very important… to the right person, otherwise you lose a lot of time back to source, back to the source, because you really needed this.

P2's statements addressing the importance of communication to build an effective relationship when outsourcing are consistent with the findings of other scholars in previous studies. Khan et al. (2019) found that effective communication and project coordination between the supplier and the customer are the main strategies to achieve success when outsourcing offshore. In their study, Martins et al. (2018) found that if a buyer and supplier have a collaborative and strategic communication, the relationship will be more effective between them.

P2 expressed that managers must have an effective relationship for successful quality management in outsourcing. P2 also noted that is best to visit the location to address quality problems and issues when outsourcing. P2 said,

> Usually, I go to visit. Visit the factory, call the right people there, then we'll search… What went wrong? Then use a lot of assessment, like bring the defect samples, and re-simulate how the defect is being caused, as for the factory redone it. From the process find out the challenge, and then solve the issue from the root

> cause. Usually, we have a lot of attention in the process, so again, we go there and address the issue to right persons. Email back and forth is probably not sufficient. You must, this is why at the beginning, I have been every year, average, three times at the factory. Eliminate the issues, have meetings, then see the results.

The findings from the interview with P2 have alignment with the conceptual framework of this research. Jain and Khurana (2016) noted that TQM and ISO should be a foundation for establishing processes in outsourcing relationships. Jain and Khurana highlighted that TQM, in alignment with communication and quality certifications, facilitates strategic and successful outsourcing between organizations. P2 strongly recommended to visit the source and stated, "Keep the contact with the right person. Very, very important." P2 noted that a good relationship with the vendors is necessary for quality management. P2 stated that a good relationship and frequent visits allow to manage quality better and said "we helped them improved their quality control there."

P3 expressed the importance of building a solid outsourcing relationship with the suppliers to manage quality in the process and ensure the importance of information sharing. P3 said, "So you have to make sure that the supplier is well-informed of you changes, of your training. You have to go see it, you have to keep a good relationship with the supplier." These statements are supported by previous researchers. Jain and Khurana (2016) noted that communication and knowledge sharing are pivotal elements for an effective outsourcing relationship that delivers quality in products and services. Yang et al. (2019) found that information sharing of activities and data is required to cooperate between businesses and to achieve success in the relationship. P3 said, "So, in

order to have, in order have a good quality of the product… you have to have a good relationship."

P3 addressed that several challenges from outsourcing can have resolution by having a good relationship with the supplier. P3 said, "I think is a key practice because then, is not only the system supporting it, but it's a relationship. They want to make sure you are happy, not just as the supplier but as a customer, as a human, so you want to keep a good relationship with the supplier." P2 also touched base on the importance of knowing the people within the organization P2 averred,

> You need to know your supplier, not just the boss… There is a factory, is a big process, but I can call almost 20 people's names. Some, QC Manager, when she started working was a little girl like this. Now, she is a mom with two kids. Someone, was foreman in a meeting a couple years ago sitting in a corner, now is the Production Manager… We call them, much easier to talk to them, rather the customer service person in the office.

The three participants heavily recommended to build a good relationship with the vendor as a pivotal strategy to manage quality in outsourced manufacturing processes. These findings are compatible with previous research and the conceptual framework of this study. McIovr (2016) and Zhang et al. (2019) noted that outsourcing relationships in manufacturing help to complement capabilities in operations and manage quality. Ibrahim and Altahawi (2018) also noted that a successful outsourcing relationship, organizations must monitor their suppliers to oversee the effectiveness of processes and communicate effectively.

Building a relationship is pivotal for organizations for an effective supply chain with outsourcing processes (Martins et al., 2018). Zhou & Jiang (2012) also found that adapting and developing a better outsourcing relationship between organizations positively influences process quality and therefore, apply TQM in the operation. The focus that P1, P2, and P3 held during the interview in the how building a stable relationship has a direct positive impact with the quality management when outsourcing manufacturing processes is congruent with the academic literature and TQM conceptual framework.

Other Themes

The participants also explored with less frequency other topics considered secondary topics during the interview. These topics were: (a) contracts and agreements, (b) scores and yield, (c) offshore locations, and (d) customer service. The participants mentioned that these topics are still important but fall into a lower priority to define strategies to manage quality in outsourced manufacturing processes.

P2 and P3 indicated that the contracts and agreements are pivotal in the legal aspect when outsourcing, but the relationship between organizations surpasses the importance. P3 mentioned, “Suppliers want to keep the contract… If you don't follow up and you do not keep up with them, is hard to know how quality is going.” P2 stated that contracts are helpful; however, the ability to have a good relationship and talk to the supplier is more helpful and prevents issues with quality. P2 pointed out, “Talking to the right person, the one going around daily, saves a lot of time.” These statements are both, consistent and inconsistent with the literature. Zhou and Jiang (2012) concluded in their

study that effective outsourcing is not limited to the contract or agreement between the organizations, and that is a matter of building a cooperative relationship between the two parties. On the other hand, Ibrahim and Altahawi (2018), indicated that having clear contracts and agreements are vital to manage the outsourcing relationships and execute effective in the buyer-purchaser agreement. Thus, researchers have differed in the importance attributed to the contracts and agreements when outsourcing manufacturing processes.

P3 also highlighted the importance of scorecards and said, “So, it's not just going there and watching the lines and making sure that they are doing it right. We keep a scorecard, and they have to sustain a level.” P1 and P2 also explained that the data, yield, and scores are important to measure the performance of the supplier. These findings are accordant with the previous research from Hu et al. (2019) and TQM conceptual framework. Hu et al. established that the manufacturer's quality inspection yield and scores can be a deciding factor to select providers and make optimal decisions within the supply chain. In manufacturing to achieve TQM, quality data, and understanding of the production yield are required as part of the analysis and compliance with standards in processes and products (Wei et al., 2017).

The three participants mentioned some of the common locations that managers select to outsource manufacturing processes. The participants noted experience in outsourcing manufacturing to China, India, Mexico, or Thailand. In the existing literature, scholars have conducted several studies concerning outsourcing to China and India. Pearce (2014) established that China, India, Mexico are selected by organizations

to outsource due to the lower costs associated with manufacturing. Yang et al. (2019) explored the importance of cooperation in outsourcing relationships with Chinese companies. Jain and Khurana (2016) studied that alignment in communication and quality certifications for strategic outsourcing to India. Niazi, Ikram, Bano, Imtiaz, and Khan (2013) noted that China and India are the Asian countries that take the majority of outsourced operations and contracts. I could not find literature to support P3's statements about outsourcing to Thailand.

The three participants addressed the importance of customer service. P2 indicated that understanding what the customer wants is essential to manage quality in outsourcing manufacturing processes. However, P2 also said that to achieve that understanding, "talking to others past the customer service guy or girl is necessary." P3 also mentioned, "The supplier must make sure you are satisfied and happy as a customer." P1 mentioned that communication with the customer as part of the service is essential and stated, "I have experienced they will make those changes without notifying us, as the end customer."

In general, I found consistency of the findings in this research with the previous literature and alignment with TQM framework based on what scholars argued in earlier studies addressing quality management and customer service. Hallberg et al. (2018) noted that leaders within organizations add business value through QMS to improve in operations continuously, and therefore, customer service. Scholars have argued that QMS improves customer service quality within organizations (Zarei, Karimi, Mahfoozpour & Marzban, 2019). TQM has a foundation in meeting the customer's expectations (Hu et

al., 2019). Therefore, TQM is essential as a base to develop many procedures concerning quality management when offshoring. Oschman (2019) sated that customer satisfaction is the final determination of product and service quality based on the value and meeting the needs and expectations. The relevance attributed to this theme by the participants is in agreement with other studies.

Applications to Professional Practice

Managing quality in outsourcing operations is a challenge for managers in manufacturing organizations. Findings from this study contribute to the existing body of knowledge, presenting successful and effective strategies that managers use to manage quality in outsourcing manufacturing processes. The findings of this study also add to the existing literature addressing key factors in which managers must focus on implementing these strategies. Aligned with Hallberg et al.'s (2018) study, findings emphasize that certifications and QMS are pivotal to manage quality and standards when having business to business operations. The findings of this study are consistent with Oschman's (2019) research, in which the author established ISO is a primary foundation for effective procedures, documentation, and conformance with quality specifications. The findings are also consistent with Klimenkova, Geller, Skripko, Gravchenko, and Fedorenko's (2019) findings concerning organizations selecting QMS and ISO as necessary factors and requirements to initiate and maintain trade operations between businesses and compliance with standards. The findings of this study are in line with Du, Xu, and Li's (2018) conclusions that several stages and many outputs in the supply chain can affect the

quality of the product, and Iwao and Marinov (2018) attributed importance to SOPs in manufacturing processes.

Despite the fact that this study focused on large-size businesses in Riverside County, California, the findings concerning the strategies to manage the outsourcing manufacturing processes may be applicable to other geographical locations and business sizes due to broad scope of TQM. This statement is in line with Milenkovska and Novkovska's (2019) study in which they concluded that leaders could establish efficient TQM and QMSs following models proved to be functional in other countries. Although this study explored aerospace, plastics, and steel manufacturing companies, the findings of this study may be transferable to multiple industries and sectors. The main professional application of this study is to provide business managers with strategies they may implement and use to ensure compliance with quality standards when internationally outsourcing manufacturing processes and protect the profitability of the operation.

Implications for Social Change

Managing quality in outsourcing operations is essential to ensure the operations are financially successful, and the products are compliant with quality standards. Wibisono et al. (2019) noted that offshore outsourcing relationships present challenges that may place at risk the operations and organizations must establish proactive strategies to address the risks. This qualitative case study has potential positive social change implications by providing managers strategies to comply with standards for higher quality products, and fewer recalls on society, allowing a lower risk for individuals and protecting the safety and health of the consumers. The findings from this study may have

potential implications to contribute to social change by allowing managers to decrease operational costs and recalls associated with quality defects and influence more employment opportunities in the communities within Riverside County. The findings of this study can also aid managers to promote the growth of their business and enhance the quality of life by promoting development, stability in jobs, and educational opportunities for individuals. The findings of this study may allow managers to generate more profit and, therefore, have a higher percentage of dollars allocated to taxes and donations to non-profit organizations and institutions that promote a better quality of life for the communities.

Recommendations for Action

Managing quality in outsourcing operations is essential to ensure the operations are financially successful and the products' quality in manufacturing processes. By implementing and using the strategies shared by participants of this study, managers may ensure compliance with quality standards when internationally outsourcing manufacturing processes. I recommend managers and other business leaders who plan to outsource partial or total operations to foreign countries to review the findings of this study and implement the strategies in their organization. Based on the findings of this study, I recommend three actions that can be beneficial to managers and business leaders when outsourcing manufacturing processes. The recommendations are to (a) review and learn the internal and suppliers' QMS, (b) implement effective audit and inspection SOPs, and (c) build and maintain a good relationship with the suppliers.

Review and Learn the Internal and Suppliers' QMS

The review and learning of the QMS link directly with the first three themes that emerged from the data analysis. Managers must review and learn the QMS to understanding the criticality of the system in manufacturing processes and compliance with product quality standards. QMS entails methods and procedures to control and maintain the quality of the products or services of organizations (Rönnbäck, Witell & Enquist, 2009). Therefore, managers implement and use QMS to establish the foundation to accomplish the goals and objectives of the businesses concerning quality management. Participants in this study highlighted the primary importance that the QMS has in their organizations and their suppliers to ensure consistent quality manufacturing processes and understand the structure of the business.

The participants stated that an effective QMS becomes the foundation guiding the processes and compliance with the standards defined. According to Oschman (2019), organizations use QMSs to outline the organizational activities, policies, procedures, plans, resources, processes, while presenting the responsibilities and authority on each level to control quality standards within the organization. These elements are critical to achieving the quality levels in products and services with consistency and, consequently, improve the performance. Oschmann (2019) noted that the QMS is the foundation of the quality manual and the procedures constituting quality within organizations. Once managers familiarize themselves with the internal and vendors' QMS, it may be easier to identify gaps or liabilities in the organizations' operations and manufacturing quality. Managers must understand their own and their vendors' QMSs to ensure alignment in

processes and quality control or if deficiencies are present, to be proactive, and establish countering measures.

Implement Effective Auditing and Inspection SOPs

The implementation of effective auditing and inspections for SOPs has associations with the third and fourth themes that emerged as findings of this study. The execution of the effective auditing and inspections alludes to the verification of the compliance with product quality standards. According to Iwao and Marinov (2018), SOPs have a direct influence on quality from the manufacturing processes to yield positive results. Thus, audits and inspections of SOPs are essential in manufacturing processes to outline the steps to ensure quality compliance, and companies with higher quality standards and controls, like Toyota, adhere more effectively to SOPs in their manufacturing processes and all activities (Iwao & Marinov, 2018). Thus, managers must establish SOPs within their processes, including the audits and inspections.

The participants mentioned how critical it is to follow inspection protocols, perform regular audits, and adhere to SOPs to ensure quality when outsourcing internationally. Quality audits and inspections involve testing procedures, processes, and internal controls organizations ensure compliance with quality standards and systems (Werner & Gehrke, 2019). Arson Welay, Rosidi, and Nurkholis (2019) performed a study to evaluate the impact of internal control systems and concluded that quality audits are critical and have a positive effect in inspections and quality compliance and ability to detect issues. Participants reinforced that having an effective quality system involves

following SOPs and that performing regular audits and inspections reinforces internal controls, especially when outsourcing to foreign countries.

Participants also stressed the importance of addressing issues quickly and reacting to the challenges that arise in the outsourcing process. All of the participants shared how they implemented corrective actions, additional inspections, or modified the SOPs to react to current problems and prevented them in the future. Thus, managers need to ensure that their organizations perform audits and inspections to verify suppliers are complying with the SOPs, evaluate the data, the effectiveness of the SOPs, and implement any necessary corrective actions as strategies.

Build and Maintain a Reliable Relationship with the Suppliers

This recommendation has alignment and connection with the fourth theme that emerged during the findings concerning beneficial relationship building. An outsourcing relationship presents challenges on quality management and a reliable relationship is beneficial for the customer and the supplier. Managers face issues due to the geographic distance between two organizations when outsourcing internationally (Khan et al., 2019). Thus, organizations must establish and sustain productive and effective relationships with their international suppliers. Yang et al. (2019) found that effective relationships in outsourcing operations enhance cooperation and communication, which are pivotal for quality management. The participants explored the benefits of having a good relationship with the suppliers and how these benefits translate into a positive impact during the operations and reactions when quality issues arise. Two of the participants highlighted

that visiting the supplier and having the supplier visit the organization is one of the most effective strategies to manage quality.

The participants indicated that ensuring that the supplier understands the purpose of the product that they provide allows them to have insight into the quality and be proactive about potential issues and solutions. The three participants indicated that seeing the manufacturing process provides valuable benefits for both parties. Conflicts and issues are likely to arise in business outsourcing relationships, and the key is for managers to collaborate and communicate effectively to resolve problems with the supplier in outsourcing relationships (Lacity & Willcocks, 2017). The participants highlighted that when there is a good outsourcing relationship, cooperation and communication improve, allowing the process to perform inspections and audits go smooth, and there is a continuous improvement from both parties. Managers must focus on building an effective and reliable relationship as one of the core strategies to manage quality in outsourced manufacturing processes.

Dissemination of this research will occur through the publication of this study in the ProQuest/UMI database. I will also provide a summary of the findings to managers in the area and the participants of this research, and I will encourage them to share with other business managers to promote the distribution. I will also seek opportunities to share the findings of this study with other professionals and peers through business seminars and training.

Recommendations for Further Research

The findings of this study provide insight into the strategies that managers can use to manage quality standards in outsourced manufacturing processes. This study presented two limitations. One limitation is that the organizations of the participants have outsourced manufacturing operations specifically to Mexico, China, and Thailand. A second limitation is that the participants of this study are managers who worked for companies located in Riverside County. These two limitations restrict the generalizability of the study.

Recommendations for further research are to study the quality management strategies that managers who outsource manufacturing processes to other countries besides Mexico, China, and Thailand to learn the factors of similitudes and differences. Even though the findings of this research may be applicable to multiple regions or sizes of businesses, additional recommendations are to extend this research to other geographic locations, including other counties within the state of California and even other states to expand the generalizability of this research. The expansion of this research may also aid in identifying any possible differences that are applicable to specific regions or sizes of companies. Researchers may assist with a more comprehensive understanding of effective strategies to manage quality standards compliance when outsourcing manufacturing processes through the expansion of this study to other regions.

Another recommendation to expand this research is to study different sizes of organizations. The participants of this research worked for large-size organizations. The strategies that managers from smaller or mid-size companies use to manage quality

compliance may differ significantly from larger organizations. Large size organizations have a different structure, and more departments and support compared smaller size companies which might face different challenges when managing quality compliance in outsourced processes.

As outsourcing in manufacturing processes continues to prevail in business, managing quality must be a priority for managers. Future qualitative researchers should explore effective quality management strategies used in multiple industries to identify patterns and how managers can apply different strategies depending on the industry. Quantitative researchers may study the relationship between the themes identified in this study and TQM or other variables concerning the quality or the performance of the organizations. Researchers may also perform studies in other regions and further study each of the themes identified as strategies to manage quality compliance in outsourced manufacturing processes.

Reflections

The doctoral program has been a challenge that tested my will and resilience. When I started this journey, I did not have any children. Through this journey, I gave birth to my oldest son, and then, my twin sons. I also endured medical complications and found myself in an extremely challenging role at work. At moments, I thought about quitting. I sincerely believe that once we embark on this journey, it is our resilience what keeps us going. I became more resilient, more patient, a better professional, and a person than I was during this journey. My family was my pillar and the biggest motivation to keep going.

I decided to explore the strategies to manage quality in outsourced manufacturing processes for my study because I am passionate about my work. In my line of business, manufacturing, I continue to witness how pivotal outsourcing operations are and how, at the same time, it entails a full breadth of challenges. Amid the Coronavirus (COVID-19), which originated in China, and its impact on California, I continue to realize how critical is outsourcing and how the strategies to manage quality compliance remains of primary importance. Circumstances brought reassurance to the impact that outsourcing operations have on the economy at a global level and the relevance of this study.

Conclusion

The purpose of this qualitative multiple case study was to explore the strategies that business managers use to ensure compliance with quality standards when internationally outsourcing manufacturing processes. I used the TQM as a conceptual framework in application to outsourcing processes and collected data using face-to-face interviews with the participants. After the data analysis, I identified five main themes related to the strategies that managers use to ensure quality compliance in outsourced manufacturing processes. The five themes that emerged during the data analysis have a direct relationship and foundation on the TQM framework. The implementation of QMS, inspection protocols, and quality auditing concerns the procedures to execute TQM in manufacturing processes (Oschman, 2019). Besides, an effective TQM approach requires communication and strong collaboration in a business to business relationship (Khan et al., 2019). Therefore, the five main themes that emerged as results of this study reinforce

and connect with the critical components of the conceptual framework defined for the foundation of this research.

The findings of the study revealed that managers must be familiar with the quality management system. The findings of the study also demonstrated that managers who outsource to foreign countries must ensure that the suppliers have an established system to comply with the quality standards of the products in the manufacturing processes. Other strategies shared by the participants involved conducting regular inspections and audits and build a reliable relationship with the suppliers to address proactively the issues that can arise when outsourcing manufacturing operations. Outsourcing operations is undeniably critical in manufacturing, and effectively managing the challenges of operations should remain a priority for managers in organizations. Deng et al. (2017) highlighted that in order for outsourcing operations to be effective in foreign countries, manufacturers must raise the quality levels and work collaboratively in the business-to-business relationship. Thus, implementing strategies to ensure compliance with quality standards in outsourced manufacturing processes is pivotal for organizations to be successful when outsourcing internationally and avoid quality issues in the products that can impact the financials of the business negatively.

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Appendix A: Interview Protocol

Time of interview:

Date:

Background Information

Years of Experience:

Interview Introduction

Before we begin, I want to thank you for your time. I sincerely appreciate your participation. My name is Claudia Contreras, and I am a doctoral student enrolled in the D.B.A. program at Walden University. The purpose of the meeting is to conduct an interview to explore the strategies that you use or have used in the past to ensure compliance with quality standards when internationally outsourcing manufacturing processes. First, please note: (a) the interview is audio recorded for coding and analysis, (b) the treatment of your answers is entirely confidential, and your identity will remain anonymous at all times, (c) the study will not report on individual participations, and (d) you may withdraw at any time.

I appreciate you taking the time from your schedule to help me conduct this study. Please note there is no right or wrong answer. If you believe you are not in a position to answer any given question, simply inform me. After a few questions on your background and experiences, I will ask you a set of open-ended questions. Please feel free to elaborate or illustrate how you feel appropriate when answering these open-ended questions. When I ask follow-up questions, I am seeking clarification about what is being

asked, since some of the questions have different meanings. Please ask me to restate any question for which you may need clarification.

Finally, I want to remind you that this interview is voluntary, and you may choose not to answer any questions during the interview. I will be taking notes as you respond. I would also reiterate this interview is being recorded.

Do you have any questions before we begin? (I will address as needed)

Let's get started with the interview.

Interview Questions

1. What strategies have you used and work best to ensure compliance with quality standard when managing the outsourcing of manufacturing processes internationally?
2. What are the main challenges you have encountered to implement quality standards compliance when internationally outsourcing manufacturing processes?
3. How did you address the key challenges that you encountered to ensure compliance with quality standards when outsourcing manufacturing processes internationally?
4. What differences did you find in your organization's results through the implementation of different strategies to ensure compliance with quality standards when internationally outsourcing manufacturing processes?

5. What else would you like to share about the strategies managers use to ensure compliance to quality standards when outsourcing manufacturing processes internationally?

Interview Wrap-Up

Thank you again for participating in this research study. I will contact you in 2 business days for a follow-up to review the summary of my interpretation of your interview responses.

Interview Follow-up

This is Claudia Contreras, and I thank you again for your time to participate in this study. I am providing a summary of my interpretation of the responses to the questions in the interview. I will provide the question and succinct synthesis of the interpretation in a paragraph. At the end, I will ask: Did I miss anything? Or, what would you like to add?

Appendix B: Letter of Invitation

Dear Manager,

My name is Claudia Contreras, and I am a doctoral candidate at Walden University pursuing a Doctor of Business Administration with a specialization in Supply Chain. I am conducting a qualitative research study as a part of my doctoral study project titled, *Strategies to Manage Quality in Outsourced Manufacturing Processes*. Your lived experiences and knowledge will be of significant value if you are a manager who has used strategies to ensure successful quality standard compliance in internationally outsourced manufacturing processes. This study, supervised by my committee chair, Dr. Kathleen Andrews, will aid in fulfilling the academic requirements for this degree.

I am asking for your participation. Your participation will include a completely confidential 30-minute to one-hour long interview of lived experiences on your success to manage quality in outsourced manufacturing processes. Based on your acceptance and agreement to participate in this study, please sign and return the attached consent form.