2018

U.S. Manufacturing Sector Strategies for Effective Offshoring to China

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This is to certify that the doctoral study by

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Abstract

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by

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MBA, The University of Dayton, 2000

BA, Ohio Dominican University, 1995

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

U.S. manufacturing companies' offshoring of investments to China over the past 4 decades before 2017 has played a significant role in China's economic growth. However, as China's economy expands and the country's standard of living improves, U.S. manufacturing executives are required to take a refreshed look at current investment strategies to adjust for rising costs and a tighter regulatory environment. The purpose of this multiple case study was to explore economic strategies that U.S. manufacturing leaders used to offshore effectively to China. The study included in-person interviews of 9 purposeful sampled manufacturing leaders, fluent in English, from 2 U.S. organizations with China operations headquartered in Shanghai. The conceptual framework for this study was the total quality management theory. Four themes emerged in the data from these interviews, on-site observations, and company documentation review, including: (a) movement of innovation closer to production in China; (b) increased localization of the legacy offshoring business; (c) enhancement of China-based cross-functional teams; and (d) incrementally investing to achieve production scale. These findings suggest that U.S. manufacturing leaders need to adapt to a changing and dynamic China market by focusing on local issues to maintain global competitiveness. The implications for positive social change include equipping manufacturing business leaders with information to address offshoring-related decisions more effectively. Additional social change benefits include the overall rise in international safety standards in China, resulting from offshoring investments and the training of manufacturing workers, which prepare them for more advanced roles in the workforce.

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Dedication

I dedicate this work to my family, who have unconditionally supported my drive and passion for exploring this topic at the doctoral level. Specifically, to my father, Richard, who served 30 years at General Motors and instilled a spirit of American competitiveness in my family ever since I was a child. To my mother, Joyce, who reminded me of the importance of US-China bilateral relations regarding job creation and preservation for the American manufacturing worker.

To my wife and best friend, Min, for her constant encouragement, even when I wanted to transform this research into a relaxed hobby rather than a formal doctoral study. Finally, to my daughters, Olivia and Hannah, for whom I hope to create a lifestyle of learning in our home so they will not forget the value of education at any stage in life.

Obtaining this degree would not have been possible without your support, and it is the result of our shared sacrifices as a family. I hope to be a better son, husband, and father through this experience.

Acknowledgments

I would like to thank and acknowledge my doctoral study chair, and friend, Dr. Craig Martin, who has academically guided me since we met during my first residency in Atlanta. Throughout all of my coursework, you have consistently encouraged me and provided actionable suggestions so I can persistently move forward. I am also grateful to Dr. Romuel Nafarrete and Dr. Neil Mathur for your tireless contributions and edits throughout the doctoral study completion. Many thanks to the reviewing committee of experts who understand both me and my topic. Enrolling and completing this degree from China often made communications a challenge, but everyone's responsiveness alleviated this concern in each case. Thank you to the Walden University faculty, who have shared best practices that I will continue to apply beyond the completion of this program.

I am grateful to all the teachers and professors in my life who have encouraged me to pursue my passion of China since the late 1980's. My curiosity of China and perpetual pursuit of business and academic excellence have allowed me to arrive at this moment now.

Finally, I would like to thank all of my friends for your patience and allowing me to put my social life on hold often so I can focus on my doctoral studies. To the DBA Cohorts, for their continued encouragement and support from the moment the group was formed. I am honored to be among all of you and know I have made life-long friends as a result of this experience.

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Section 1: Foundation of the Study

Offshoring partial or full production, assembly, or services overseas has been a commonly accepted strategy amongst U.S. manufacturing organizations since the 1980s (Ebenstein, Harrison, & McMillan, 2015). This is an attractive strategy due to its perceived ability to reduce costs, direct the manufacturing worker away from more labor-intensive roles, and develop core competencies in overseas markets to potentially create higher global profit margins (Michel & Rycx, 2014; Musteen, 2016). However, with the rising costs of host country workers and stringent regulations of foreign companies via trade barriers and the loss of formerly granted tax benefits, offshoring has become a less-desirable strategy (Manning, 2014; Tate, 2014). This situation is prevalent especially in China, where millions of jobs have poured in following the country's entry into the World Trade Organization in 2001 (Stamoulis, 2013). Historically, the Chinese government has benefited economically from the continued foreign investment. However, a steady GDP decline in China will most likely lessen the offshoring appeal, and new strategies must be developed to enhance U.S. manufacturing sustainability. The purpose of this study was to explore economic strategies U.S. manufacturing leaders used to offshore efficiently to China.

In Section 1, I identify the business problem, purpose of this research, and the nature of the study, and then present the focused interview questions I asked study participants. I then explain total quality management (TQM) theory, the conceptual framework I used. Section 1 also includes definitions of keywords used throughout the study not commonly known. Further, I discuss my assumptions and the limitations and

delimitations of the research and then address the significance of this study regarding contributions to business process and implications for social change. Section 1 concludes with a thorough review of the professional and academic literature I used to inform this study before transitioning to Section 2.

Background of the Problem

The growth and power of the United States economy have historically depended on the manufacturing sector; in fact, as U.S. manufacturing goes, so goes the U.S. economy (Baily & Bosworth, 2014). The strategies employed by U.S. manufacturing leaders have shifted dramatically over the past 5 decades (Ebenstein et al., 2015). Following the domestic rise of the service economy in the mid and late 20th century, manufacturing production, assembly or services moved overseas. However, growing economies in the host countries and a resurgence of nationalism in the United States have forced business leaders to rethink existing strategies (Baily & Bosworth, 2014; Fratocchi, Di Mauro, Barbieri, Nassimbeni, & Zanoni, 2014). The need to offshore remains, but it is clear the strategy must be revisited to balance current trends (Crino, 2010). The purpose of this study was to address the economic strategies U.S. manufacturing business leaders used to offshore effectively to China.

It is important for business leaders to take a refreshed look at offshoring strategies often, not only to make more informed decisions but also to strive for excellence in a sector often viewed as critical to the success of the national economy (Denning, 2013). The American manufacturing worker represents a key demographic in the U.S. workforce, and competitive skill sets are essential for the industry’s survival.

Problem Statement

Between 2008 and 2014, the U.S. manufacturing sector lost nearly 2 million jobs, predominantly to China, because of ineffective offshoring strategies (Ebenstein et al., 2015). Despite hourly wages of Chinese production workers doubling, putting them on par with workers from both India and Mexico, the U.S. manufacturing sector has still seen offshoring increases to China (Tate, Ellram, Schoenherr, & Peterson, 2014). The general business problem is that insufficient business strategies have put U.S. manufacturing workers at a competitive disadvantage created by rising costs and stricter labor laws in China. The specific business problem is that some U.S. manufacturing sector leaders lack economic strategies to offshore effectively to China.

Purpose Statement

The purpose of this qualitative, multiple case study was to explore economic strategies U.S. manufacturing leaders used to offshore effectively to China. The target population consisted of nine business leaders who worked for two U.S. manufacturing multinational companies based in China. The selected participants have demonstrated success in implementing economic strategies to offshore effectively to China. This study has implications for positive social change by showing that U.S. manufacturing workers could improve their core skill sets through more technical training opportunities. Offshoring strategies impact the manufacturing worker in both the home and host countries; however, when assembly or production moves offshore, the U.S. worker will be forced to retool skills to remain marketable. As a result of increased professional

qualifications and increased wages due to newly-acquired skill sets, their overall quality of life will enhance within their families and communities.

Nature of the Study

This study consisted of the qualitative method to gain an understanding of the strategies U.S. manufacturers in Chinese offshoring ventures adopted to maintain or increases efficiency and effectiveness. Marshall and Rossman (2016) categorized qualitative methodology as emergent, evolving, and as fundamentally interpretive. Isaacs (2014) stated researchers use the qualitative method to explore social and behavioral issues related to business management that is not achievable with a quantitative method. A quantitative approach was not appropriate because the purpose of the study was not to test a hypothesis, make predictions, or evaluate cause and effect (Cairney & St Denny, 2015). The mixed-methods approach was not appropriate because the research question did not require both qualitative and quantitative methods (Marshall & Rossman, 2016). Hence, the qualitative approach was more appropriate for this study.

According to Yin (2014), researchers use a qualitative multiple case study design to identify and explore strategic decisions. As such, the qualitative design helps the researcher to identify and explore effective offshoring strategies some U.S. manufacturing leaders employ. Ethnography and phenomenological research designs are not used to address the primary intent of this research study. Researchers use ethnography to gain understanding and observe cultural behaviors and social conditions over long periods in the field (Baskerville & Myers, 2015). A phenomenological approach entails gaining a clear knowledge of the meaning of individuals' lived experiences and an

insightful grasp of known phenomena, or probing for newly evolving and unknown occurrences (Yaroslawitz, DeGrace, Sloop, Arnold, & Hamilton, 2015), which was not the intent of this study. As such, the ethnography and phenomenological research designs were not suitable for this type of research. Hence the choice of an exploratory qualitative multiple case study was appropriate.

Research Question

What economic strategies do U.S. manufacturing business leaders use to offshore effectively to China?

Interview Questions

To answer this central research question, I used the following open-ended semi-structured interview questions:

1. What are the benefits, past, and present, your organization has assessed as reasons to offshore to China?
2. What are the strategies your organization uses to offshore effectively to China?
3. What barriers have you encountered in implementing your offshore Chinese manufacturing strategies and how have you addressed these barriers?
4. How has your company adjusted its China strategy to keep a competitive edge, such as further moving production, to include reshoring (backshoring) or nearshoring?
5. How do you measure and then improve the effectiveness of your strategies for offshoring to China?

6. How effective has your company's offshoring strategies been to date, regarding achieving its original goals of profitability and market expansion?
7. What is the decision-making process regarding offshoring investments in your business, and is this approach comprehensive?
8. How would you define your organization's risk tolerance level regarding offshoring strategies to China? Please share examples.
9. What questions, if any, have I inadvertently overlooked that are relevant to your offshoring strategies to China?

Conceptual Framework

The conceptual framework for this study was the TQM theory, developed by W. Edwards Deming in the 1950s. Adler and Shper (2015) noted that researchers use Deming's TQM to understand how organizations succeed through continually seeking to improve the effectiveness of all facets of operations. I used the TQM theory, also known as the continuous improvement process or the *Kaizen* method, as a perspective to explore U.S. manufacturing offshoring strategies. Deming initially developed the TQM theory with Japanese executives to improve product and process quality, as well as efficiency, in the manufacturing sector (Kelly, 2013). U.S. manufacturing firms applied the same theory in the 1980s to compete against the Japanese standard, which Deming helped develop decades earlier (Kelly, 2013).

Incessant improvement through continual evaluation is the guiding TQM principle for manufacturing organizations. The TQM impact on other quality standards, such as the International Organization for Standardization (ISO), complements its aim of

operational success (Behrooz & Walter, 2016). Deming believed the human factor is also central to TQM because management through quality stems from performance and empowerment of those focused on company improvement (Paraschivescu & Caprioara, 2014). Deming provided businesses with a prescriptive model to structure manufacturing production, and although the predominant management philosophy of TQM remains throughout organizations today, many practices and tools have evolved to focus on excellence and the external environment as well (Bernardino et al., 2016).

The TQM theory serves as a key framework business leaders in the manufacturing sector use to stay competitive (Adler & Shper, 2015). Through a continuous cycle of feedback, each organization might fulfill its objectives and obligations, both internally to its shareholders and externally to the end-users of its products (Kelly, 2013). In essence, the TQM theory is a way of life philosophy, based on continual improvement (Paraschivescu & Cotirlet, 2015).

The TQM theory provides a potential lens to understand strategies for offshoring to China. Internally, organizational leaders should train production workers and offer a learning environment for job sustainability. Externally, leaders must continue to improve performance and processes for their organizations to remain competitive (Paraschivescu & Cotirlet, 2015). Deming addressed both challenges, and the TQM theory serves as a means to understand why U.S. manufacturing leaders offshore production to China. Also, the continuous quality improvement approach is useful for analyzing each implemented strategy.

The just-in-time (JIT) theory, developed by Taiichi Ohno in the 1970s, is a similar management philosophy manufacturing leaders use to reduce waste by supplying parts only when needed (Chen, 2015). While analogous in concept, the TQM approach often serves as a base to implement JIT, and these two theories are more complementary than competitive (Chen, 2015). However, unlike TQM, the JIT approach is grounded in inventory management principles only and not the full product lifecycle. Six Sigma is another theory comparable to TQM (Uluskan, Joines, & Godfrey, 2016). Joseph Juran, a Romanian-born pioneer of quality management, developed Six Sigma, which focused on measuring deficiencies in a process to identify and achieve zero defects (Sabet, Adams, & Yazdani, 2016). While the foundations of both remain grounded in achieving quality, Six Sigma principles typically are applied when TQM core values are already in place (Antony, 2015). Therefore, Six Sigma is an extension of TQM, making these two theories similar.

While the elements of the TQM theory gravitate toward continuous improvement, business leaders and researchers use the value chain theory to analyze each activity to create value but not necessarily to improve (Lindman, Pennanen, Rothenstein, Scozzi, & Vincze, 2016). The value chain theory emphasizes maximizing corporate value creation and identifying a clear competitive advantage (Antony, 2015). While value creation and competitive advantage are a part of the TQM philosophy, they are not the driving measures of success. Another contrasting theory to TQM is the business productivity theory. The cornerstone of this theory is a formula to measure the efficiency of production. Given that TQM principles apply the 5S approach (sort, set in order, shine,

standardize, sustain) to reduce manufacturing inefficiency, the productivity theory is a business tool centered on merely value-added processes and applied across any sector (Letsoalo, 2014; Singh & Singh, 2015).

Operational Definitions

In what follows, I have provided operational definitions of commonly used terms throughout the study, which might not otherwise be understood by the reader.

Backshoring: The return of formally offshored production, assembly, or services to an organization's country of origin (Arlbjorn & Mikkelsen, 2014).

Inshoring: The opposite strategy of offshoring, when the organization in the host country exports finished production either back to the home country or elsewhere (Foster-McGregor & Poschl, 2015).

Nearshoring: The relocation of production, assembly or services to a nearby region or country of the organization's parent country (Fratocchi et al., 2014).

Outsourcing: When a third-party organization, typically located overseas, either advances or completes production, assembly or performs services, for an organization who would traditionally finish it internally (Dolgui & Proth, 2013).

Reshoring: The return of formally offshored production, assembly, or services to an organization's country of origin (Tate, 2014).

Assumptions, Limitations, and Delimitations

The purpose of this qualitative multiple case study was to explore economic strategies U.S. manufacturing leaders used to offshore effectively to China. Shanghai was the selected case site for my study, while manufacturing was the focused sector

throughout this study. In the following subsections, I discuss the essential steps I took to ensure the content is valid and reliable.

Assumptions

Assumptions are a set of implied parameters to guide the researcher throughout the study and establish facts that are true, but unverifiable (Yates & Leggett, 2016). Nevertheless, making assumptions can be risky and often problematic, and this must be a consideration when conducting research and assessing the findings (Wortham, 2015). I made four primary assumptions in this research. These included the assumptions that (a) participants would provide truthful responses and avoid blatant bias; (b) participants were members of the study's target population; (c) the economic conditions, which make offshoring effective, will continue into the foreseeable future; and (d) the interview questions were appropriate. I leveraged direct data collection and avoided the use of qualitative sampling, which might have created research challenges and assumptions (Cleary, Horsfall, & Hayter, 2014; Reimers, 2015).

Limitations

Limitations restrict individuals from conducting uninhibited research and potentially impact the validity of a study's outcomes (Liu & Ding, 2016). Limitations can be both external and internal, and researchers identify them to establish credibility to curtail research errors (Chong & Yeo, 2015). In all cases, researchers who conduct qualitative studies should avoid generalization of information, because findings are always limited to the data from specific participants (Minayo, 2017). There are three limitations that might have impacted the results of this study: (a) participants might not

represent the overall ideas and culture of the organizations they represent; (b) my inability to identify and interview a balanced representation within the manufacturing sector; and (c) potential bias, given my past and present experiences both in China and the manufacturing sector.

Delimitations

Delimitations, which the researcher defines, impact the validity and reliability of a qualitative study, as information is knowingly removed from the study to ensure a narrow scope (Morgado, Meireles, Neves, Amaral, & Ferreira, 2017). Such limitations constrict the research but are necessary to guarantee a focused and achievable study (Marshall & Rossman, 2016). Additionally, in a qualitative case study, ensuring sufficient details related to the design and data are essential for completeness (Hyett, Kenny, & Dickson-Swift, 2014). There are five delimitations that might have impacted the results of this study: (a) a limited geographic spotlight on the United States and Shanghai, China; (b) a single sector focus on manufacturing; (c) a limited sample size, but enough to achieve triangulation of data; (d) a limited population, to include only those decision-makers of offshoring strategies and not the general population of manufacturing workers; and (e) potential researcher bias, given my past and present offshoring experiences both in China and the manufacturing sector.

Significance of the Study

Contribution to Business Practice

U.S. manufacturing leaders might be better positioned to make more informed decisions both in their organizations and in the market to sustain competitiveness with

knowledge from a study of current U.S. offshoring strategies. The findings from this study are potentially significant to business leaders for the following additional reasons. First, it is essential for each organization to understand both the potential challenges and solutions to offshoring complexities (Manning, 2014; Tate, 2014). Second, it is important for those researching this topic to consider other aspects related to offshoring strategies, such as the views of locally-based expatriate executives and the next wave of global low labor cost countries, including Myanmar, Laos, Vietnam, and the Philippines (Davis & Naghavi, 2011). Incorporating input from these two influences (host country leadership views and geographic investment trends) will support business leaders with central insights as they explore offshoring strategies to increase profitability. Lastly, U.S. government entities who appreciate the demands placed on U.S. manufacturing organizations engaged in offshoring might be in a better position to facilitate their business success, regarding regulations and trade facilitation tools.

As manufacturing companies continue to redefine their strategies to remain competitive, offshoring remains a leading approach to reduce costs, expand markets, and improve the value chain for local production workers. However, offshoring has proven to be a convoluted strategy that can complicate the supply chain, increase inventory, and create delays between concept, development, and product delivery.

Implications for Social Change

This study has implications for social change in two distinct areas. First, from a global perspective, when a U.S. company moves all or part of its production to China, it moves its international safety standards there too. Western parent companies have

increasingly implemented quality-based management systems such as Six Sigma, lean management, and TQM. Combined with the marked increase of ISO certifications over the past 40 years, quality standards have risen to a higher level in China (Niu & Fan, 2015). This approach raises the bar in China regarding workplace safety issues, a necessary contribution to this developing country. Second, research findings have indicated that offshoring provides a platform in the home country to retrain manufacturing workers to learn more marketable skills (Baily & Bosworth, 2014). This new catalyst for learning is a positive step for the manufacturing workforce overall, and categorically a positive social change. Successful offshoring concomitantly requires company management in the U.S. and China to train their people and further prepare them for higher-skilled manufacturing jobs (Tate, 2014).

A Review of the Professional and Academic Literature

The purpose of this qualitative, multiple case study was to explore economic strategies U.S. manufacturing leaders used to offshore effectively to China. An abundance of scholarly, peer-reviewed content exists on offshoring, especially articles related to the United States and China. To capture all pertinent information from academic journals and related open-source information, I reviewed both business-specific and multidisciplinary databases such as Thoreau, ProQuest, ScienceDirect, Emerald Insight, SAGE, the National Bureau of Economic Research, the World Bank Open Knowledge Repository, and Google Scholar.

To narrow my database searches, I focused on the following keywords, and any combination thereof: *offshoring, outsourcing, reshoring, manufacturing, production,*

assembly, automotive, trade and US-China bilateral agreements, the Asian Infrastructure Investment Bank, the World Trade Organization, the World Bank, the International Monetary Fund, the Trans-Pacific Partnership and *the North American Free Trade Agreement.* As an additional parameter, I limited most searches to peer-reviewed articles published within the past 5 years. Of the 104 sources I have analyzed in this literature review, 88 (85%) are peer-reviewed from the past 5 years, while 16 (15%) represent articles either not peer-reviewed or articles from beyond 5 years. The literature review provided below contains an exhaustive overview of recent information related to offshoring from the United States to China in the manufacturing sector. The central themes include (a) TQM, which was the conceptual framework for this study and primary driver behind offshoring; (b) evolution of the U.S. manufacturing sector and its globalization, highlighting the rise, fall, and now rise again of the manufacturing sector in the United States; (c) China's role in U.S. offshoring strategies, which addresses the evolution of U.S. offshoring to China and how future trends will impact investment decisions; (d) public sector influencers on offshoring, which evaluate how trade facilitators and bilateral treaties, as well as local government incentives, change the offshoring dynamic; (e) global supply chain challenges and opportunities; and (f) offshoring alternatives, such as reshoring, nearshoring, and outsourcing in the U.S. manufacturing sector.

Limited information exists regarding the role and scope of influence by locally-assigned expatriate executives related to offshoring, as opposed to inshoring, investments. An on-the-ground view might provide insights into not only the execution of such

strategies but also outside influences such as culture and logistics. Also, there is limited information related to the evolving nature of the American manufacturing worker once a job leaves the U.S. shores. Striving to advance skill sets in a way to increase production and profitability at home might be a critical issue for business leaders making offshoring-related decisions. While these gaps each warrant separate studies, I have included them as part of this literature review to ensure completeness of the report.

The findings in this review provided a solid foundation for my study by supplying both supporting and, in some cases, conflicting evidence to address the economic strategies U.S. manufacturing business leaders use to offshore effectively to China. The findings within each of the central themes support the conceptual framework, which is where I begin the review of the professional and academic literature for this study.

TQM Theory

Among the multiple theories connected to offshoring strategies, perhaps none is more relevant than the TQM theory. The TQM theory, developed by W. Edwards Deming, has played a significant role in U. S. manufacturing companies since its inception in the 1950s (Adler & Shper, 2015). While this theory has evolved into a strategic management approach for manufacturing organizations, it has also transformed companies throughout all industries, encouraging them to become more globally competitive (Kelly, 2013). In fact, Babula, Tookey, Nicolaides, and Infande (2015) argued that TQM, which aims to reduce variation via increased control to ensure quality improvement, first gained notoriety in Asia before being accepted in the United States nearly a half of a century later. The TQM theory provides actionable guidelines for

organizations seeking to promote a cooperative workforce and improve quality standards, thus reducing costs and waste.

TQM is useful for addressing practical issues in an organization. Its principles compliment both an internal push strategy to produce efficient output and an external pull strategy to meet customer demands in the market (Weckenmann, Akkasoglu, & Werner, 2015). Continuous improvement is often defined by a 5S approach to capture the push and pull technique: (a) standardize, (b) sort, (c) straighten, and (d) sweep to achieve a holistic organizational state of (e) self-discipline (Singh & Singh, 2015). The bifurcated tactic to reduce costs while improving customer service has challenged organizations to explore profitability and sustainability strategies more aggressively since the 1980s (Bhamu & Sangwan, 2014). In sum, Deming created a new ideology of management through 14 points to satisfy both the push and pull strategies (Adler & Shper, 2015). The value of TQM rests in the theory's proactive and reactive strategies that organizations can apply to guarantee a competitive market economy.

TQM implementation remains a critical challenge for manufacturing leaders. Although Deming's views, based on concrete and direct management concepts, can be difficult to apply during volatile times, some business leaders and academics question Deming's views as mere theory instead of practice (Pakdil & Leonard, 2015). Others have suggested that it is optimal to combine management philosophies so organizations can apply best practices from multiple disciplines, such as the case with TQM (Schonberger, 2014). Implementing any strategy requires discipline and focus, and TQM

is no exception, especially if the company is producing, assembling, or providing services in a foreign country with cultural and linguistic challenges.

Beyond TQM is an outer sphere of related management disciplines, such as lean management, which complement and can further enhance TQM principles in the manufacturing sector. Pakdil and Leonard (2015) contended that a lean management approach leads to a cultural shift within the organization, which ultimately evolves towards a TQM structure. The authors also opined that without first taking structured lean management steps, an organization could not reach its TQM objectives (Pakdil & Leonard, 2015). TQM standards are guided by continuous improvement, as this approach creates a harmonious environment in manufacturing facilities free of product defects and employee waste (Macpherson, Lockhart, Kavan, & Iaquinto, 2015). In fact, *quality* drives all related management practices, a term that naturally drives behavioral change in manufacturing organizations (Wisdom, 2014). Although names might vary among quality enhancement-related areas, the core element of performance improvement through internal analysis of processes is consistent.

In spite of Deming's aim to better an organization using the TQM approach, challenges exist throughout each phase of the effort. Although the foundation of the TQM theory centers on evaluating and optimizing firm performance, business leaders tend to overlook its importance (Ngambi & Nkemkiafu, 2015). In fact, the TQM theory is grounded on organizational effectiveness, so companies are better positioned to improve performance and sustain a competitive advantage if implemented (Mehmood, Qadeer, & Ahmed, 2014). Paraschivescu and Cotirlet (2015) asserted that TQM is synonymous with

organizational progress and it is imperative for leaders to embrace change upon accepting TQM. While manufacturing executives strive to improve company performance during volatile times, not all leaders appreciate the powerful tool TQM can become if implemented properly.

In addition to evaluating the overall performance of a firm, profitability is a related indicator of successful TQM implementation. Deming's teachings emphasized not only a results-oriented management style but also a style that involved looking beyond the short-term to achieve profitable results (Venzor & Ivanov, 2017). At the same time, application of TQM principles within industrial organizations has revealed specific guidelines that can lead to firm profitability (Diamandescu & Romania, 2016). Among the multiple factors established to define successful TQM execution, only disciplined continuous improvement results in profitability (Singh & Singh, 2015).

Implementing a sustainable and qualified TQM practice holds multiple challenges for manufacturing executives. Rymaszewska (2014) explained the difficulty of executing lean manufacturing strategies, such as inadequate resources and training, within small and medium enterprises. The author also referred to best practices from experienced manufacturing organizations that have experienced strenuous transformation to TQM, such as Toyota (Rymaszewska, 2014). Since TQM's introduction to U.S. boardrooms in the 1980s, critics have commented on its challenges in the business community. Barouch and Kleinhans (2015) specifically categorized criticism of TQM shortcomings by design criticism, implementation and results criticism, and political criticism. However, in an examination of a leading North American telecommunications company, Ali and Ivanov

(2015) showed how Deming's principles were applied to return the organization to profitability. Overcoming TQM-related setbacks strengthen organizations that offshore production, assembly, or services because this approach improves effectiveness and overall processes.

The TQM theory has permeated international strategies of U.S. manufacturing leaders. To better appreciate TQM, it is important to understand its role within an organization and know how to implement it effectively in volatile times. Additionally, manufacturing executives should understand the connections between TQM and company performance, as well as between TQM and business profitability (Pakdil & Leonard, 2015). Finally, realizing that TQM theory has numerous challenges and critics will better prepare manufacturing leaders to address each one tailored to their organization to guarantee business continuity (Bhamu & Sangwan, 2014). Ever since the introduction of TQM in the 1950s, the concepts and overall framework remain a valuable cornerstone of the strategies of organizations worldwide.

Evolution of the U.S. Manufacturing Sector and its Globalization

The United States manufacturing sector plays an important role in the success or failure of the U.S. economy. In fact, it has undergone a significant amount of management, production, and innovative challenges since the age of industrialization commenced in the early 19th century (Wu, 2012). Although manufacturing has historically been a major contributor to the U.S. gross domestic product (GDP), clear trends such as a declining workforce, a declining contribution to the nation's economy, and a rising trade deficit, predominantly with China, have isolated the sector (Baily &

Bosworth, 2014). Other labor- and financial-related issues have plagued the U.S. manufacturing sector, and new trends are emerging from overseas. Nevertheless, the evolution of U.S. manufacturing and its globalization over the past 4 decades are a critical component in appreciating the impact of TQM on the manufacturing sector and the global workforce.

A key trend in the United States manufacturing sector is the continuation of U.S.-based production facilities shifting abroad. Offshoring production, assembly, or services from the United States has benefited the GDP of receiving countries, especially China, now the world's largest manufacturing nation with nearly 25% global market share (Wang & Chanda, 2017) and soon to become the world's largest economy overall. Pisani & Ricart (2016) corroborated this offshoring trend and added that the continued investment push overseas has strengthened the sector globally as a whole, but has resulted in challenges for the United States. In fact, U.S. employment attributed to the manufacturing sector has declined 14% over the past 40 years, thus impacting the sector's negative contribution to the U.S. GDP (Baily & Bosworth, 2014). In spite of the domestic challenges caused by manufacturing offshoring, organizations continue to seek profitability solutions overseas.

The manufacturing decline in the United States has not gone unnoticed, and government officials and sector leaders alike have increased efforts to make the sector globally competitive again. In 2009, the Obama administration introduced a *National Strategic Plan for Advanced Manufacturing*, and in 2011, the same administration revealed the *Advanced Manufacturing Partnership* (Wu, 2012). Additionally, the

National Science and Technology Council launched a strategic plan in 2012 to boost innovation in the sector (Wu, 2012). Initiatives have continued to bolster a stagnant U.S. sector, once known as the most influential in the world. Recognizing the competitive decline and a manufacturing trade deficit of nearly $500 billion U.S. dollars, of which nearly 75% of this deficit accounts for trade with China, U.S. manufacturing leaders understand the delicate bilateral relationship (Baily & Bosworth, 2014). Whether looking in or investing out, manufacturing executives have faced challenges that have required both government intervention and sector adjustments to stay competitive on the global stage.

Achieving competitive advantage in manufacturing offshoring is challenging, but a key differentiating factor has been the approach to labor, both in the home and host countries. Woodard & Sherman (2015) posited that while home country low-skilled workers operate in fear of becoming unemployed due to offshoring, host country workers are of similar concern. The host country workers often face a cultural identity crisis, as customs and beliefs clash with the headquarters view. In fact, studies have revealed that the host country worker often experiences an identity crisis, which contributes to employee turnover and disruptions in the labor supply (Woodard & Sherman, 2015). Also, Woodard and Sherman (2015) argued while offshoring has created a negative impact on global employment, it affects labor issues most in the home country, due to the need to retrain a low-skilled workforce. Therefore, it is critical for manufacturing executives in the United States to invest in the workforce through training and cross-cultural management courses.

In addition to cultural trials that impact workplace performance, manufacturing leaders have entered into a new phase of offshoring, signified by communications and technology advancements, thus creating a new set of issues to address for the workforce. A recent global survey revealed the United States was heavily impacted by these challenges, creating a need to spend more on the average worker to retool skills (Winkler & Milberg, 2015). As such, a clear link exists between offshoring production, assembly or services, and the requirement to upgrade workers skills (Hogrefe & Wrona, 2015). One area in which the TQM theory has integrated into modern manufacturing strategies is the continual requirement of improving processes, approaches, and skills of the organization and its workers to maintain a sustainable environment (Kelly, 2013). Also, Winkler & Milberg (2015) argued that increased spending on employees retraining in the United States has resulted in difficulty to offshore specific processes within the manufacturing line. The evolution of skills has thus created a sharp inequality and fall in the labor share over the past several decades, leading to lower overall numbers in the workforce.

Although offshoring has resulted in a significant state of inequality among laborers in the United States, it might be reduced by education and innovation within the sector. Hogrefe and Wrona (2015) commented while low-skilled workers in the United States typically face displacement challenges, due to offshoring of their jobs to developing countries, vocational training in the interim period of unemployment has improved the sector for long-term sustainability. While Hogrefe and Wrona's (2015) perspective does not align with the views of Winkler & Milberg (2015), it provided a positive outlook for the sector. Hogrefe and Wrona (2015) further postulated offshoring

results in higher wages of those who remain in the workforce, as offshoring saves costs while forcing the workforce to upgrade skills. Therefore, these additional savings might be pushed back down to the workers with higher skills. Multiple views exist on the role of training to improve competencies in the United States offshoring market; however, it is important to assess each worker's motivation, as labor challenges permeate to each of them in different ways.

Beyond culture and training, gender also plays a significant role in understanding employment challenges within the global manufacturing sector. Kucera and Tejani (2014) expressed concern over the rising imbalance of manufacturing roles between feminization and defeminization, as structural changes have appeared, specifically in Asia. While host country workers face challenges such as cultural discord, labor-intensive sectors tend to employ women employees while technology-focused areas prefer male employees (Kucera & Tejani, 2014; Woodard & Sherman, 2015). Given the recent manufacturing trend of innovation and technology-driven strategies, female workers are losing opportunities in the workforce without taking the self-initiative to upgrade skills and enroll in vocational training (Hogrefe & Wrona, 2015). A global gender imbalance has become prevalent at the lower and higher end manufacturing jobs, although sector leaders in the United States, as well as Germany, have taken an initiative to invest in employee training across all levels (Winkler & Milberg, 2015) to mitigate this trend. Gender imbalance within the workforce is becoming less of an issue in developed countries who offshore production, assembly or services, although it remains a challenge to those countries who are the recipient of offshoring investments.

The financial disposition of displaced workers, due to offshoring, is a consideration each executive must realize when setting organizational strategies, as it can directly impact real wages and create economic imbalances in the global manufacturing sector. Davis & Naghavi (2011) credited the rise of China's economic status and role as the leading recipient of U.S. offshoring investments with the increased number of displaced manufacturing U.S. workers. Additionally, Ebenstein, Harrison, and McMillan (2015) identified the automotive sector as being impacted the strongest, due to the loss of union protection of high wages once jobs move overseas. Once manufacturing organizations offshore low-skilled automotive jobs, the unions are rendered ineffective. The direct correlation between a U.S. salary decrease and an increase in offshoring employment in China is a real consideration for U.S. manufacturing executives.

Offshoring also creates an indistinct economic impact on the home country's economy as displaced workers predominantly leave the manufacturing sector altogether for inferior jobs, while others enlist in vocational training to retool skills. This nebulous situation makes it difficult to understand traditional trade models accurately (Davis & Naghavi, 2011). In addition to offshoring, Mazumder (2014) credits foreign competition as a leading factor for the decline in U.S. manufacturing wages. While domestic competition remains, the U.S. manufacturing sector continues to experience wage deterioration from foreign manufacturers (Mazumder, 2014). Also, offshoring not only skews existing U.S. trade statistics, due to its impact on displaced workers, the strategy also gradually depletes the post-displacement wage of employees, due to a cyclical downturn in the sector overall (Crino, 2010). To fully understand the economic influence

of offshoring in the U.S. manufacturing sector, executives have to consider the trade models of past, existing and displaced wages among workers.

From a financial perspective, it is not a coincidence the number of U.S. workers decreased, and their salaries declined at an accelerating pace around the same time and following China's ascension to the World Trade Organization (WTO) in 2001. Ebenstein et al. (2015) opined that on average, a 10% offshoring increase by U.S.-based manufacturers to China is related to a 1.6% decrease in worker's wages in the United States. In fact, cost savings are realized faster in lower skilled roles within developed countries, due to the demand for high salaries, and offshoring from the United States to China, for example, is a long-term strategy to create an innovative spirit among high-skilled workers (Crino, 2010). The departure of low-skilled U.S. jobs abroad creates a vacuum in the manufacturing sector and could potentially damage headquarters performance. Thus a TQM approach is necessary to remain competitive (Ngambi & Nkemkiafu, 2015). The American and Chinese manufacturing business communities shoulder a vital responsibility to its workers to safeguard their sustainability and the continual increase of skills and wages.

However, it does not appear to be complete doom and gloom for today's U.S manufacturing worker, as sector modernization has provided opportunities via innovation to augment employee skills and prospects overall. One benefit of a robust offshoring strategy is the role of innovation, both in the home and host countries, as it often cultivates economic growth (Davis & Naghavi, 2011). For manufacturing workers, innovation enhances high-skilled jobs, while it enhances low-skilled employment in the

United States. Burnette (2015) conducted a historical review of wage discrimination and findings revealed while no clear discrimination between male and females existed in the 19th century in the U.S. manufacturing sector, a gap formed in the 20th century once innovation began to play a more significant factor in the sector. Innovation remains a central element to determine the success or failure of the U.S. manufacturing sector for the existing and also displaced worker to offshoring.

Certifying a competitive cost structure when producing, assembling, or providing services overseas remains a constant challenge for manufacturing leaders in the United States. Da Silveira (2014) argued among the various competitive categories that exist in offshoring, such as wages, welfare, and employment; perhaps none are greater than the traditional challenges of cost, quality, and service delivery. Cost savings on two tiers can be realized immediately upon offshoring from a developed to a developing country. On the first level, transferring lower skilled jobs to lower wage earners based overseas can achieve immediate savings, while on the second level, headquarters-based executives can focus on more profitable production, involving technology and innovation, thus achieving increased mid-term savings (Da Silveira, 2014). Whether it is short-term or mid-term recognized savings, cost reduction is a challenge among manufacturers as technological innovation continues to drive the sector ahead.

In some instances, offshoring challenges go unappreciated until after actual experiences are endured, such as in the case in the airline industry. Denning (2013) offered seven points to consider before investing in offshoring and based his advice on the lessons learned from Boeing executives, who offshored much of the 787 Dreamliner's

production to low-cost centers. Hoping to reduce costs and save development time, Boeing executives experienced increased costs, longer lead times and repeated safety concerns in the assembly (Denning, 2013). Da Silveira (2014) corroborated Denning's (2013) views and assessed the difficulty of production and transportation costs as two challenges in offshore manufacturing. At times, offshoring problems are predictable and can be offset by careful preparation and planning; while on other occasions, challenges occur without warning, often blindsiding U.S. manufacturing executives.

China's Role in U.S. Offshoring Strategies

The gradual rise of the Chinese economy has positioned the country to remain a significant player on the global stage for years to come; however, this increased profile has resulted in a natural movement away from being a viable location for overseas production. In fact, from 1992-2007, the average wage of a worker in China increased by 202% while the country's GDP grew year-on-year by 10.7% during the same timeframe (Ge & Yang, 2014). Scholars have inquired if China's economic rise came at the expense of other countries but findings indicated the country's growth has impacted developed countries more than developing countries (Schwartzman, 2015). Offshoring has evolved from Western organizations' focus on lowering production costs to maintain a global competitive advantage, and this race to the bottom has positioned developing countries to become attractive destinations (Schwartzman, 2015). As China continues to move up the global economic value chain, its offshoring attractiveness has become more competitive with neighboring countries in Southeast Asia.

China's role in the future of offshoring for manufacturers remains uncertain, as the country can offer other advantages to U.S.-based organizations in the face of rising costs. The government has invested heavily in infrastructure (roads, railways, ports, and airports) to ensure transportation in and out of the country remains efficient (Song & van Geenhuizen, 2014). Also, in 2015, more than 275 million peasant workers in China migrated to the major cities in search of low-end employment, such as factories owned by foreign investors (Xu & Wu, 2016). There is an intrinsic relationship between the steady rise of China's economy over the past 4 decades and U.S. offshoring investments in the manufacturing sector, indicating this entanglement will continue to maintain a manageable unemployment rate and social stability.

China has been a significant benefactor of globalization during the 21st century, due to its favorable investment environment led by offshoring initiatives. The rising labor costs in the manufacturing sector throughout China have forced economic reform and placed the nation on a path of transformation to the next stage of development (Gray & Jang, 2015; Huang, 2014). Additionally, overseas investors often treat China as multiple countries, due to the uniqueness and economic diversity of each of the provinces, autonomous regions, and municipalities throughout the country (Song & van Geenhuizen, 2014). While domestic R&D investment, coupled with inward FDI, continues to rise in China, diverse challenges present an apparent risk to its position on the global manufacturing stage (Ge & Yang, 2014). Innovation remains a critical element to define the future growth and global position of China manufacturing, along with the preservation of workers' rights.

The protection and well-being of the production worker in China's offshoring plants hold a critical role in the success or failure of this important strategy. While workers' rights are becoming more protected through union-like organizations, the government remains concerned about unrest in manufacturing facilities, often spurred by safety concerns and remuneration dissatisfaction (Gray & Jang, 2015). In 2011, China surpassed the United States as the global leader in producing manufactured goods, and the country remains one of the fastest growing economies in the world (Paul & Mas, 2016). Driven by the workforce, offshoring facilities have been the backbone of this strategy's success; however, the existing growth model might soon be reaching a point of diminishing returns (Huang, 2014). Since the 1980s when offshoring investments complimented China's economic rise, cheap labor was a leading competitive advantage to other developing nations, but as workers are demanding higher wages, production facilities must now rely on technology and innovation to differentiate from the competition (Huang, 2014). The role of the average Chinese manufacturing worker has evolved to either sharpen professional skills or lose to innovation, and as such, the direction of the current workforce might shape China's offshoring roles for decades to come.

Innovation remains as a key indicator for organizations' competitiveness in the manufacturing sector, due to a low barrier to entry. In China, patent filings and grants, which remain two key indicators of innovation, have steadily increased in parallel with U.S. FDI (Luan & Zhang, 2011). Nevertheless, patent approval and other signs of innovation in China remain insignificant when compared to developed countries,

indicating manufacturing in China still has a longer development stage to remain globally competitive at the next level (Luan & Zhang, 2011). At the same time, R&D investment in China is growing at a significant pace, averaging more than 20% year on year growth, and R&D personnel is now second to the United States, indicating a market demand in business for such roles (Bai & Li, 2011). Key indicators to benchmark manufacturing production performance remain patent filings and grants as well as R&D investment, as innovation will continue to be a differentiating driver in the sector.

Beijing and Shanghai continue to serve as the leading R&D and innovative production centers in China, due to the location's excess of qualified human capital; however, wage increases have been driving organizations to consider implementing innovation strategies outside the metropolises. Regional innovation remains underdeveloped, thus impacting offshore production, assembly or services when expanded beyond tier-1 cities in China (Bai & Li, 2011; Zhou, Yang, Wang, & Xiong, 2017). In spite of many decades of FDI in the manufacturing sector, Luan and Zhang (2011) added it does not balance the required R&D and technology transfer adequately to keep China globally competitive. Also, Bai and Li (2011) posited investment emphasis must be on quality, not quantity. Innovation serves as a single element to advance manufacturing development in China, but the current model of placing the majority of R&D and innovative production centers in Beijing and Shanghai have proved inadequate to address China's role as the leading global manufacturing country.

In addition to innovation, understanding the perception of ethics across cultures plays a vital role in offshore investments from the United States to China. The ethical

profile of a U.S. business counterpart in China can influence investment and location decisions for offshore production, assembly or services, thus impacting the direction of the sector (Gift, Gift, & Zheng, 2013). In fact, implementing a TQM approach, grounded in ethical principles, can be viewed as a cornerstone to achieving sustainable profitability for any organization (Wisdom, 2014). Additionally, Gift, Gift, and Zheng (2013) surmised focusing exclusively on the lowest price is not a long-term offshoring strategy; instead, U.S. business leaders must also appreciate his counterparts' ethical position, accompanied by other cultural and other related sensitivities. Ethics play a decisive role in offshoring investment decisions, particularly when conducting business in developing countries such as China, which holds values, modern and traditional, vastly different from the United States.

Globalization naturally allows for each country to showcase its added value to supply and value chains. Within the manufacturing context, production in China is traditionally clustered in various regions to support logistics effectiveness and create offshoring synergy from overseas investors (Wang, Lin, & Li, 2010). The industrial clustering approach has been focused on assembly, while R&D takes place either in Beijing or Shanghai or at the home country headquarters (Wang et al., 2010; Luan & Zhang, 2011). Leveraging the strengths of each location, even within a single country, might enhance offshoring output for U.S. manufacturing organizations.

To increase efficiency, offshoring production or assembly typically does not start and finish in a single destination. Instead, items are produced or processed in stages across multiple jurisdictions, which necessitates the need for reliable supply and value

chains with all manufacturing organizations (Suder, Liesch, Inomata, Mihailova, & Meng, 2015). Within global manufacturing value chains, China's role has remained relatively stagnant and struggled to advance beyond its current inexpensive, technology and intellectual property-dependent approach (Sun & Grimes, 2016). Although the manufacturing sector in China remains critical to the success of the global supply and value chains, the sector remains assembly driven (Sun & Grimes, 2016). There is a consensus among Western executives for decision-makers in China to seek alternative solutions to enhance its manufacturing sustainability, multiple factors such as brand recognition and consistent quality output must guide it (Suder et al., 2015; Sun & Grimes, 2016; Wang et al., 2010). Within manufacturing, each stakeholder must recognize everyone's contribution in the value chain, as China approaches the crossroads of assembly and innovation.

Bound by the assembly and production traditions of what now ranks China as the global manufacturing leader, but faced with challenges to define its future role in the value chain that demands technological innovation; offshore manufacturing is at a critical stage in China. Innovation has improved business functions and strategies in China for more than 3 decades, but it is not as visible in manufacturing as it is in other industries (Sun & Grimes, 2016). One way in which China can move up the value chain in global manufacturing production is through deeper regional integration in Asia (Suder et al., 2015). Also, both regional integration and the continuation of industrial clustering in China will shape and even enhance technology innovation, an element much needed in the sector in China (Wang et al., 2010). Recognizing these challenges and adjusting as

necessary will position the manufacturing sector in China to naturally transition up the value chain and move beyond assembly and production.

China has taken an increasingly bigger role in global manufacturing, overshadowing its regional neighbors, but U.S. manufacturers continue to involve other countries as valuable members of the overall supply chain. Supply chains have become more fragmented, and consumer demands have shifted to expect not only an environmentally-conscience supply chain network but one who holds high ethical standards and are cost competitive (Brennan et al., 2015). As such, China – albeit important – is a country which might not necessarily host end-to-end offshoring, due to the particular strengths of other locations, such as Thailand or Vietnam. Sacchetto and Andrijasevic (2015) argued the labor force is the key differentiating factor that defines each organization. As the cost of manufacturing labor wages in China continues to rise, Wu (2014) claimed manufacturing companies must consider factors other than cost to compete, which increases the relevance of neighboring countries in Asia. Global consumers' expectations have risen, pressuring organizations to improve each element of the supply chain to consider multiple sustainable factors.

In spite of the recent trend for U.S. manufacturing companies to reshore or nearshore production, assembly or services, Asia remains the leading offshoring destination. Researchers have indicated a trend to race to the bottom to seek lower production, assembly or services costs, albeit the shift remains in Asia from China to Vietnam or from China to Myanmar, for example (Brennan et al., 2015; Sacchetto & Andrijasevic, 2015; Wu, 2014). Also, Brennan et al. (2015) posited reshoring to the

United States will remain a difficult strategy to execute, due to the labor vacuum now present after decades of low-end offshoring positions. Liu and Chan (2014) explained manufacturing competitiveness belongs to the following three categories: economics, infrastructure and labor cost. While the United States once led the world in manufacturing production, the country now has lost its competitive position in each of these areas from decades of offshoring to Asian nations.

As a result of the size of the market and the overall scale of resources available, China remains the leading Asian market for offshore production, assembly or services. Liu and Chan (2014) acknowledged China's economic prowess to attract and retain U.S. manufacturing investment; however, challenges such as protectionism, a decentralized supply chain, and an aging workforce exist, which results in China's neighbors taking market share. Using the Chinese manufacturing company Foxconn as an example, Sacchetto and Andrijasevic (2015) explained business executives should consider local union regulations as well as local remuneration packages or workers before offshoring production, assembly or services. If handled inappropriately, these two elements can create significant damage to the manufacturer's investments overseas, impacting financial and human capital strategies (Sacchetto & Andrijasevic, 2015). Although the average wage in manufacturing production in China has tripled from 1997-2007, the country remains the leading destination for offshoring investment, due to technology investments and local leaders' ability to be flexible when managing local production (Brennan et al., 2015; Page, 2016). Although China remains a complicated investment environment, the

existing alignment by U.S. manufacturers with local laws and regulations might provide the most sustainable option to succeeding locally.

Within the manufacturing sector, the automotive sector has consecutively been a leading contributor of China's FDI from the United States. A sector fraught with challenges, such as IP infringement, environmental demands, and safety concerns, the automotive business in China has evolved from partnerships to production to R&D investments (Wang, Fan, Aybar, & Ficici, 2013). The need for manufacturing organizations to shift from production should not be viewed as a negative consequence, according to Liu and Chan (2014), and is a natural move up the value chain. Also aligned with the TQM theory, ISO9000 certification served as the genesis for many U.S. automakers who are producing, assembling or providing services in China (Wu, 2014). Wu further assessed continuous improvement leads to a quality culture, which results in quality output – an approach that naturally leads to companies conducting R&D in China (Wu, 2014). U.S. automakers are investing more in R&D in China, which is a healthy development from the organizations once only assembled for cost considerations.

Public Sector Influencers on Offshoring

The origins of offshoring centered upon enhancing organizations economic strategies and this approach has been augmented by government-influenced trade facilitators, thus creating new challenges. Brecher, Chen, and Yu (2013) postulated in the backdrop of governmental trade agreements; offshoring had created a middle-class working vacuum in the United States that has resulted in significant unemployment beyond the short term. However, for many organizations, offshoring is the first step in its

internationalization strategy, and if executed improperly, it will leave a lasting impact on its growth (Heyman & Tingvall, 2015). For example, all local employment issues, as well as the legal system of the host country regarding foreign investments, should be considered when offshoring (Brecher, Chen, & Yu, 2013; Heyman & Tingvall, 2015). Along the backdrop of government to government trade agreements remains an undercurrent of business challenges that make offshoring a complicated decision.

While government to government trade agreements predominantly are aimed to reduce uncertainties among economic strategies, such as offshoring, pre-existing problems have continued to plague cross-border investments among companies of all sizes. Challenges, such as geographic and cultural separation from headquarters, notoriously slow investment progress (Baier, Rammer, & Schubert, 2015). While others, such as intellectual property infringement and adapting to a new legal and political environment, require government involvement to safeguard an actual offshoring result (Heyman & Tingvall, 2015). At the same time, tests naturally have led to opportunities for U.S. companies to shift functions, such as R&D, to the host country as a sign of trust to local governments and show of commitment to the communities (Baier et al., 2015). Offshoring has also evolved to become a strategy executed by small-to-mid-sized organizations, thus further requiring government driven trade facilitators.

Government trade facilitators are often financial institutions that can be bilateral, regional or global cooperation agreements determined by senior trade negotiators under the instruction of the country's head of state. Examples of such facilitators that significantly impact offshoring include, but are not limited to (a) the Asian Infrastructure

Investment Bank (AIIB), (b) the World Trade Organization (WTO), (c) the World Bank, (d) the International Monetary Fund (IMF), (e) the Trans-Pacific Partnership (TPP), and (f) the North American Free Trade Agreement (NAFTA).

The AIIB is a practical example of how offshoring investments, without the support of government-intervened trade facilitators, might not guarantee success for manufacturing organizations. The AIIB, which was launched by China in 2013, currently has 57 founding members and aims to develop regional infrastructure (Etzioni, 2016). However, United States trade officials have appealed to numerous country leaders to join the organization, for various reasons (Etzioni, 2016). The United States government remains opposed to the AIIB and China's role, believing it is not a fair and balanced global platform. In spite of the concerns raised by U.S. officials, offshoring advantages remain stable, as Heyman and Tingvall (2015) have identified a positive correlation between offshoring effectiveness and overall firm quality in the U.S. business community. Nevertheless, impeded offshoring activities exist, as exemplified by the AIIB, unless participating governments are equally proactive and willing to support bilateral investments through trade facilitators.

Citing another example, the World Trade Organization since its inception has aimed to achieve justice in international trade tariffs. However, over time, the equality gap among members has widened, and when China joined WTO in December 2001, the country was economically weak and without a just rationale to have a stronger voice in the global community (Samuel, 2015). In fact, U.S. officials led the debate for China representatives to make considerable trade concessions, including 685 commitments and

7,000 reductions in its trade barriers, which resulted in 15 years of negotiations before joining (Etzioni, 2016). The WTO impact on offshoring has resonated strongly in China and the United States, and it created a mood of uneasy distrust in trade for nearly 20 years between the two nations.

The WTO enables commerce to operate in an environment of reduced tariffs globally, and in general, developing countries such as China have benefitted the most from this valuable trade facilitator. Since overcoming such a painstaking route to entry, China has risen to become the world's second-largest economy, but without reflection of that status in the WTO (Samuel, 2015). As a result of WTO regulations not being updated since 1994, its rules are now being rewritten by regional, bilateral or multilateral agreements to compensate for its shallow and weak enforcement ability (Baldwin, 2016). The U.S.-Sino relationship within the confines of the WTO represents another instance in which cross-border trade and investment strategies, such as offshoring, is imbalanced in spite of good intentions.

The United States government has established a track record of multifaceted containment of China in global trade organizations. When China joined the World Bank in 1980, the United States negotiators pushed for China to have limited voting rights, translating into an ineffective role (Etzioni, 2016). Furthermore, IMF member regulations linked the voting right to financial funding, and according to Etzioni (2016), the United States Congress obstructed the structure that would have granted China significant votes in the IMF. Offshoring makes a significant contribution to cross-border trade, and the role of such government supported entities is critical to its economic success (Heyman &

Tingvall, 2015). The rise of China's economic position on the global stage has been swift, as it plans to celebrate just 70 years as a nation in 2019.

The efforts of the developed countries led by the United States, to reduce China's position across multiple trade and finance organizations could be partly due to the world's uncertainty of China's potential and also in part to China's humble beginnings as an economically-challenged nation several decades ago. China's level of accountability in global manufacturing has dramatically increased, due to its economic rise over the past 4 decades (Sacchetto & Andrijasevic, 2015). For example, from 1970-2010, the global manufacturing market share among G7 nations reduced from 71% to 46%, in part due to the rise of developing countries, such as China (Brennan et al., 2015). This shift represents unprecedented growth, and at the time of World Bank and WTO negotiations, China's minimal role made sense; however now, as the world's second-largest economy and world's largest manufacturing nation, renegotiations might be required to place China on par with its global status today. In addition to the aforementioned public sector influencers on offshoring, others such as TPP and NAFTA maintain a significant impact on its success or failure and the current negotiations of both could represent an opportunity for China's manufacturing competitiveness.

Perhaps among all government-driven trade facilitators, the TPP has the potential to impact offshoring the most in the United States manufacturing sector. The TPP comprises of only 11 countries but represents approximately 40% of the global economy (Stamoulis, 2013). The United States government withdrew from the TPP in January 2017, in the name of protecting the American worker, as U.S. officials do not view this

pact as a trade facilitator, but instead a threat to the American manufacturing sector (Hadfield & Potter, 2017; Stamoulis, 2013). Furthermore, the Chinese government stands to lose approximately 1.2% of its exports, representing approximately $57 billion US dollars by 2025 (Zhang, 2015). This loss is due to increased global trade diversion; however, the opportunity to set rules and international business standards as a key member might be a greater reward to Chinese government officials (Zhang, 2015). While the United States and China have equally been active in global trade pacts in the past, none could be more meaningful than the shift that could commence with TPP if China joins. For the first time, China could be in a position to take a leading role to set international trade standards while the United States would remain powerless as a non-member.

If China joins the TPP, its global manufacturing dominance stands to be threatened, as production, assembly, and service prices would be driven lower by other members, such as Vietnam, Malaysia, Mexico, and Chile. The global race to the bottom, regarding manufacturing wages, might make China less attractive to other low-cost production locations, and although Paraschivescu and Cotirlet (2015) postulate change is a positive indication of TQM; this shift threatens the US-China offshoring momentum and synergies gained over the past 4 decades. The combination of China's rising manufacturing wages and TPP members' reduced global manufacturing capability could position the United States manufacturing executive to rethink its offshoring strategies with China.

The Chinese government remains in a quandary regarding its decision to join the TPP, as it balances considerable financial losses with elevated status in a premier and influential global trade organization, a position Chinese government officials have aspired to achieve since the country's founding in 1949. Nevertheless, China continues to diversify its strategy by simultaneously holding Free Trade Agreement (FTA) talks with South Korea, proactively negotiating the Regional Comprehensive Economic Partnership (RECN), and also pushing a stronger agenda in the 10+3 (ASEAN + China, Japan, and South Korea) organization (Zhang, 2015). Also, the Chinese government has maintained a sustainable focus on its One Belt, One Road Initiative, expanded Free Trade Zones around the country and advanced infrastructure to improve logistics and remain attractive for continued international trade investments, including offshoring (Zhang, 2015). It is clear the Chinese government continues to negotiate along multiple parallel tracks to stay competitive regarding trade and investment, and the TPP is a geopolitical, economic instrument in which can either advance these priorities or cause lasting damage to them.

Other agreements have also played a strategic role in the global offshoring environment that has impacted US-China trade. When NAFTA was enacted in 1993, the U.S., Canadian and Mexican governments each identified areas of mutual understanding and benefit, while U.S. offshoring investments to China continued to rise year-on-year (Cota, 2015). NAFTA enabled an opportunity for Mexico to transform the global trade market, as the country offered a neighboring, inexpensive and tax-preferred offshoring alternative to China (Cota, 2015). Although US-Mexico trade officially opened in 1986, significant levels of production and flow did not commence until 1993, bringing a new

competitor to the race to the bottom offshoring market (Cota, 2015). In sum, NAFTA now represents more than 25% of the global GDP, and the United States intends to revisit existing rules to renegotiate for better rights for the American manufacturing worker (Hadfield & Potter, 2017). When NAFTA passed, a competitive offshoring environment for the United States was born, that facilitates production, assembly, and services to occur closer. NAFTA's passing forced China to react, thus raising the bar for the global manufacturing sector as a whole.

While Mexico and China became attractive alternatives to production, assembly, and services, especially following NAFTA's passage, the countries' environmental woes increased. At the same time, the United States became a beneficiary of manufacturing offshoring and domestic environmental conditions improved drastically as a result of trade liberalization (Cherniwchan, 2017). Offshoring strategies within U.S. manufacturing have thus realized unintended benefits and aligned naturally with Deming's TQM theory to continuously improve process and results (Adler & Shper, 2015). There is a clear link between trade liberalization and the environment, and without public sector influencers, such as NAFTA, the U.S. manufacturing sector might be facing greater challenges beyond the financial and human capital constraints.

The Chinese government has played a key role in driving global offshoring; however, it has learned to become both proactive and reactive in the face of government trade facilitators. In some cases, such as the WTO, China has held a minimal role and became known as a rule taker rather than a rule maker (Samuel, 2015). However, at the same time, the AIIB allows China to take a leading position in setting global lending and

trade policies for all participants (Etzioni, 2016). Like the AIIB, the TPP gives China an opportunity to be proactive in world trade policies, while NAFTA has forced the country to be reactive, because nearshoring to Mexico has gained increased attractiveness than offshoring to China (Cota, 2015; Zhang, 2015). Each government influencer has a direct and substantial impact on offshoring, in particular from the United States to China, and while shared objectives exist, the impact on offshoring productivity and sustainability are vastly different.

Amidst best efforts to facilitate trade and offshoring investments through government bodies or financial institutions, commercial disputes often result in courtroom settlements or arbitration. The legal development of dispute resolution in China has significantly improved since it joined the WTO in 2001; however, reform does not match the pace outside of China (Cohen, 2014). International alliances have served efficiently to implement offshoring and mitigate risks in the host country (Lojacono, Misani, & Tallman, 2017). The authors also concluded market entry through offshoring production, assembly or providing services is not only more sustainable but also has less of a chance for litigation or legal issues (Lojacono et al., 2017). Trade facilitation organizations were established to assist in global commerce and investment strategies, such as offshoring, and although they are intended to provide an efficient platform, not all parties involved reap direct benefits.

Global Supply Chain Challenges and Opportunities

A grounded and efficient global supply chain is a vital conduit for success in offshoring. Schnittfeld and Busch (2016) posited supply chain management aims to not

only improve performance by reducing costs and making better use of improved technologies, but it also helps to streamline existing approaches thus improving standards. In fact, a better-managed supply chain positions manufacturing executives who offshore to avoid risks in production fragmentation and inadvertent miscalculations in coordination (Michel & Rycx, 2014). Additionally, Musteen (2016) suggested a reliable supply chain network can alleviate common challenges, such as quality issues, deterioration of capabilities, and cultural mishaps. The integration of a global supply chain into an efficient offshoring strategy is crucial for the success of manufacturing executives, as new challenges have presented themselves since offshoring commenced from the United States in the 1980s.

One challenge facing manufacturing leaders who manage sophisticated supply chains to offshore production, assembly or services is keeping a motivated workforce. Offshoring now defines globalization, and as a result, a growing workforce across developing countries has become more skilled and demanding (Suwandi, 2015). Small-to-medium sized manufacturing firms are also capitalizing on the benefits of offshoring; although the stakes might be higher as organizations operating on a smaller scale typically have more to lose (Musteen, 2016). Motivating the workforce, both in the home and host countries, where workers are forced to learn new skills and standards as well as adapt to new demands, remains a significant challenge to all stakeholders.

Employee motivation within the global supply chain introduces the increasingly important human resources (HR) element of offshoring, which otherwise is overlooked or overtaken by higher priorities. Zimmermann and Ravishankar (2016) addressed the

fusion of performance with HR in the offshoring design and concluded success occurs when home country leaders agree to transfer required tasks and strategies to host country management – a human touch of transparency across cultures. Within this coordinated approach, offshoring success is achieved early, as human-related risks, such as low-quality results and unreliable logistics, are mitigated even within the early supply chain stages (Schoenherr, Tummala, & Harrison, 2008). It is therefore advantageous to address the human link within supply chain management for optimal offshoring success, as companies continue to seek lower cost centers for production, assembly or services.

In most cases, the global supply chain role within offshoring defines its sustainability or lack thereof, as manufacturing leaders are fraught with challenges before production even begins in the host country. Offshoring has been identified as wealthy Western companies' search to reduce costs and explore new markets; however, all supply chain risks must be considered, given its influential and pivotal role in the process (Schoenherr et al., 2008; Suwandi, 2015). Manufacturing suppliers have become more sophisticated in capabilities and innovative delivery techniques, thus complicating the vendor selection process and driving international standards to new levels (Schnittfeld & Busch, 2016). As a result, strategic alliances have increased between manufacturers, suppliers, and financial institutions to facilitate trade and commerce finance on a global level that has given way to new competitive challenges (Suwandi, 2015). Once early-stage challenges are recognized, they can be addressed to facilitate supply chain success, which might lead to offshoring sustainability.

A gradual change in the procurement process since the 1980s has dramatically impacted supply chain and offshoring strategies. Den Butter and Linse (2008) shared procurement contains both a soft and hard side, as the environment (soft side) must balance the focus on increasing profit margins (hard side) when considering an offshoring investment. Procurement encompasses significant risk factors; however, they can be lessened through both Action Research (AR) methodology steps and by applying the Analytic Hierarchy Process (AHP) to map out processes and understand potential pitfalls before they might occur (Schoenherr et al., 2008). With the assistance of risk management tools applied throughout the procurement process, organizations are more empowered to manage supply chain elements efficiently.

In addition to improving procurement methods in the supply chain, leaders should consider other strategic elements to ensure a successful offshoring experience. Natural gravitation to innovation exists when offshoring investments occur, as firms are more exposed to new ways of producing or assembling goods (Ciravegna, Romano, & Pilkington, 2013; Valle, Garcia, & Avella, 2015). While innovation becomes more embedded into offshoring strategies, higher-waged earners have become more impacted, and investments become coupled with R&D activities (Karpaty & Gustavsson Tingvall, 2015). Additionally, research revealed an integrated global supply chain fosters innovation in the manufacturing sector, as identified by the increasing number of patent applications, and this approach results in a positive position for offshoring organizations (Valle et al., 2015). Nevertheless, while innovation does not guarantee offshoring success,

this recent trend of coupling innovation with offshoring further signifies the importance of supply chain effectiveness.

Another trend in offshoring, within the context of the global supply chain, is the increased role of the IT function throughout all stages of the process. St. John, Guynes, and Cline (2015) commented the amplified IT role impacts vendor relationships and has pushed offshoring costs higher even before production or assembly commences in the host country. Supply chain management in the context of offshoring investments aligns naturally with Deming's TQM theory to achieve higher profitability through a continual focus on improving processes and procedures (Ali & Ivanov, 2015). Additionally, trends have been identified to drive costs lower through improved measures in the IT vendor relationship, such as forming partnerships to leverage synergies and achieve offshore success (St. John, Guynes, & Cline, 2015). Rethinking the IT role within supply chain management marks significant improvements to offshoring innovation, and this added dimension is expected to apply Deming's TQM model further.

Manufacturing companies might learn from past lessons when offshoring all or part of their production or assembly. For example, cultural considerations are essential when executing offshoring strategies in the supply chain context, and within transition economies such as China, characteristics will remain from past business practices that might significantly impact present-day supply chain activities (Davis-Sramek, Fugate, Miller, Germain, Izyumov, & Krotov, 2017). Also, discovering corruption levels in the host country is a valuable consideration that is identifiable through historical precedence (Riivari & Lamsa, 2014). At the same time, assessing past cultural and corruption factors

in tandem allows for offshoring executives to shape and influence the present ways to approach supply chain management (Davis-Sramek et al., 2017). Offshoring investments allow organizational leaders to focus on their core business while at the same time aim to reduce costs; yet, understanding past trends might aid in a stronger supply chain and cross-border strategy.

Cost management remains an area of consideration for supply chain effectiveness within the context of keeping expenses low and quality high. However, research has identified situations in which higher cost locations might prove more beneficial than those found in developing countries (Ketokivi, Turkulainen, Seppala, Rouvinen, & Ali-Yrkko, 2017). These theories do not align with Deming's TQM approach, because price becomes less of a decisive factor than other considerations, such as a qualified labor force, a shorter supply chain and an eliminated cultural barrier (Adler & Shper, 2015; Babula, Tookey, Nicolaides, & Infande, 2015; Singh & Singh, 2015). Offshoring decisions are often driven by the length of the involved supply chain, as this impacts multiple variables leading to the success or failure of the investment.

Longer, more complicated, supply chains and the challenges that accompany them might cause manufacturing leaders to rethink their offshoring investments. Ketokivi, Turkulainen, Seppala, Rouvinen, and Ali-Yrkko (2017) assessed manufacturing would not disappear from host countries, but rather it is only assuming new forms and including more interdependent activities, such as R&D and innovation with an increased IT focus. As such, coordination within the supply chain of any offshoring investment is critical (Karpaty & Gustavsson Tingvall, 2015). Offshoring investments continue to evolve,

regarding stakeholder expectations, and the way organizations react to supply chain adjustments might force manufacturing leaders to reassess current strategies.

The roles of ethics and corruption in the host country remain another significant impact on supply chain and offshoring strategies. Developing countries have the most to gain from reducing domestic corruption, as a more transparent environment will make offshoring more attractive for Western manufacturing companies (Karpaty & Gustavsson Tingvall, 2015). Additionally, Riivari and Lamsa (2014) opined organizations that promote high ethical standards would be more risk averse when offshoring to locations with higher corruption-related issues, as ethics play a strategic role in the company's cross-border effectiveness. In sum, organizations must be cognizant of the local environment, as a corrupt and unethical atmosphere increases the offshoring risk across all aspects, including the attempt to fair trial and settlements in the local courts (Karpaty & Gustavsson Tingvall, 2015). When aiming to achieve offshoring effectiveness in the supply chain, mitigating corruption and adhering to high ethical standards are two areas in which company management cannot compromise.

Ethical compliance within host country operations is a category that might stymie the balance of power between the global north (developed countries) and the global south (developing countries) in the context of offshoring. Researchers have suggested international trade agreements, or trade facilitation tools, have blocked the global south from achieving a balance in the race for offshoring business equality (Suwandi, 2015; Suwandi & Foster, 2016). At the same time, offshoring back to the global north is now viewed as a more attractive alternative to reduce supply chain challenges and the risk of

operating in a perceived unfair and unethical trade environment (Ketokivi et al., 2017). These parallel tracks of the global South's perpetual ethical and corruption challenges and the global North's resurgence to reshore production and assembly might create an unprecedented new wave of globalization in the world.

When faced with business and risk challenges, U.S. manufacturing executives who offshore need to respond in a way that satisfies stakeholders expectations, both in the home and host countries. As such, if the outcome is controllable, business leaders will attempt to mitigate risk; however, if there are budget or resource constraints, the risk is typically tolerated (Manning, 2014). Finally, research findings show companies will relocate if the external risk cannot be mitigated, such as unavoidable government and trade regulations (Manning, 2014). Additionally, while relocating operations is not an ideal short-term solution, it might satisfy mid-long-term demands and might be a natural step for offshoring organizations to reduce its risk portfolio (Arlbjorn & Mikkelsen, 2014; Espana, 2015; Fratocchi et al., 2014). The risk tolerance level of each business leader drives the offshoring-related decision, and among those issues recognized to be critical, perhaps none is more significant than financial risk.

Offshoring-related costs represent a considerable threat to the organization, as both known and hidden expenses might undermine offshoring sustainability. Hidden financial risks of offshoring, such as lead time, currency fluctuation and country risks, as well as inventory and quality costs, are often considered secondary when evaluating labor costs (Espana, 2015). Also, miscalculating the actual expenditures of offshoring might have an adverse impact the organizations' performance and result in considerable

opportunity costs (Larsen, 2016). While offshoring investments have evolved over the past several decades, related expenses have risen, thus creating new challenges in supply chain management (Tate et al., 2014). The results of these fixed and variable expenses might cause organizations to rethink its overall offshoring strategy.

A critical first step in offshore risk management is to minimize all known and unknown costs by taking proactive measures, both in the home and host countries. Creating costing models, such as the Priceberg model, the five dimensions model, or Espana's comprehensive model, are effective ways to look beyond labor and monetary costs to consider the organizations' long-term goals (Espana, 2015). Also, as organizations often fail to consider costing models meticulously, financial matters are often overlooked that might impact the investments' bottom line (Den Butter & Linse, 2008; Larsen, 2016). While using a costing model is an important financial risk prevention approach, it is perhaps more critical to understand which model is most suitable for one's respective organization.

A key driver of cost management within any offshoring investment is supply chain efficiency. Bhatt, Bector, and Appadoo (2014) posited supply chain management and effectiveness are inseparable when supporting cross-border strategies. At the same time, Deming's TQM theory instituted continuous improvement, driven by the unwavering search for efficient methods and techniques (Singh & Singh, 2015). Furthermore, with a dynamic and efficient supply chain strategy, organizations can expand overseas capacities and become more competitive (Davis-Sramek et al., 2017).

The drive for efficiency, as pioneered by Deming, starts before the offshoring investment reaches the host country and continues until the completion of production or assembly.

Once the global supply chain achieves cost optimization and efficiency measures, the next step is for each offshoring organization to determine its role in the host country market. Across developing countries, typically the home of offshoring production and assembly, Western companies decide to compete for either higher profitability or greater market share (Froud, Johal, Leaver, & Williams, 2014). Additionally, while researchers believe offshoring improves the competitive position of manufacturing organizations, utilizing an efficient supply chain can equally enhance its strategic trajectory (De Felice, Petrillo, & Silvestri, 2015; Tate et al., 2014). The offshoring strategy aims to achieve a balance of profitability and market share; however, when other forces threaten the firms' competitive position, business process re-engineering (BPR) might play a significant role in securing quality and efficiency.

BPR is an essential approach when developing an offshoring strategy, as it integrates strategic vision with execution and process. De Felice, Petrillo, and Silvestri (2015) concluded a BPR approach is particularly useful to implement when a production line relocates overseas, and both efficiency and effectiveness are top priorities. Also, BPR unsurprisingly aligns with Deming's TQM theory as both theories aim to transform an organization by improving all processes of the firm (Babula et al., 2015; De Felice et al., 2015; Macpherson et al., 2015). Although offshoring investment strategies have matured, there is space for greater efficiency exists, and BPR implementation might align all stakeholders together.

Offshoring Alternatives

The movement of Western manufacturers to offshore production or assembly to China initially served as an advantageous competitive differentiator; however, rising costs coupled with quality and supply chain challenges might force executives to rethink this strategy. Essentially, the reshoring strategy has appeared, due to the failure of offshoring (Maronde, Stambaugh, Martin, & Wilson, 2015; Wiesmann, Snoei, Hilletofth, & Eriksson, 2017). Gylling, Heikkila, Jussila, and Saarinen (2015) opined companies had overestimated the benefits of offshoring, and while it can be a strategy, it should not be the only strategy. Additionally, company investment trends revealed reshoring might not represent the total movement away from the offshoring location, but instead can be a partial relocation of a single business unit or department (Fratocchi et al., 2014; Tate & Bals, 2017). The rise of offshoring investments shaped a new era of globalization, but as a result of decades-long challenges, manufacturing leaders have begun to return manufacturing home to define yet another new era.

The reshoring investment decision is the product of a shrinking profit margin and demands in the home country. This phenomenon became visible circa 2005 and had been gaining momentum among U.S. organizations, further accelerated by the global economic crisis in 2009 (Foerstl, Kirchoff, & Bals, 2016; Tate, 2014). At the same time, it became necessary to seek ways to create jobs in the United States following the crisis and stimulate an afflicted domestic economy as well as create value for end-users (Froud et al., 2014). U.S. manufacturing techniques have become more automated and

technologically dependent, thus improving the process and making production more attractive to the customer.

Other justifications, such as IP enforcement and promoting the “Made in the USA” label, might facilitate reshoring to become an attractive alternative to offshoring to China. As IP protection continues to be a key concern for U.S. manufacturing companies in China, enforcement is easier in the United States with clear laws and a balanced court system (Tate, 2014). Reshoring changes the product's country of origin, and the “Made in the USA” might be more appealing to those with national sentiment. Therefore, this shift might impact the purchasing behavior or consumers (Ancarani, Di Mauro, Fratocchi, Orzes, & Sartor, 2015; Maronde et al., 2015; Shih, 2014). The impact of offshoring on China might mean different things to different consumers, much of which has inspired companies to vigorously protect its IP and leverage nationalism to gain domestic market share.

Another reshoring benefit includes the reunion of production with R&D and a natural acceleration of innovation among employees as a result of this proximity. Executives realize the advantages of positioning production with R&D, as the communication flow between departments is uninhibited while cultural misgivings are mitigated, if not eliminated (Arlbjorn & Mikkelsen, 2014; Brandon-Jones, Dutordoir, Neto, & Squire, 2017; Shih, 2014). Also, the risk of supply chain disruption is naturally reduced, as this approach allows for a renewed focus on quality and timeliness of getting products to market more efficiently (Brandon-Jones et al., 2017). At the same time, reshoring has the potential to increase product innovation as the design teams and

manufacturing are operating in the same facility without a linguistic, cultural or geographic gap (Brandon-Jones et al., 2017). Given the significance of IP protection and the need for increased communication at a time when innovation and technology are competitive differentiators, reshoring production or assembly is becoming a quick and viable alternative to offshoring to China.

In spite of its advantages, the reshoring strategy does have identifiable challenges. While studies have indicated the reshoring decision results in a positive short-term stock return for shareholders, it is too early to confirm if these financial returns are sustainable (Brandon-Jones et al., 2017). Also, for the past 4 decades, manufacturing executives have encouraged suppliers to follow them overseas to stay close and responsive; however, in the reshoring environment, there is a substantial cost to consider when rebuilding a domestic supply chain to bring suppliers back to the United States (Shih, 2014). At the same time, the U.S. manufacturing sector has experienced a shortage of workers, given these jobs have been exported for decades, and there is a gap of qualified engineers and other specialists to re-establish the factory as well as a shortage of floor leadership (Shih, 2014). Given the new wave of reshoring, this trend is expected to continue for the foreseeable future, although challenges exist.

Nearshoring, or returning production or assembly to a closer location in proximity to the home country, has also become increasingly common among U.S. manufacturing companies. The benefits of this strategy include a shorter supply chain and an opportunity to maintain lower costs to the rising offshoring expenses in China (Brandon-Jones et al., 2017; Hartman, Ogden, Wirthlin, & Hazen, 2017). Nearshoring remains a key

consideration to maintain competitive advantages without fully returning to the home country. For example, labor costs in locations such as Mexico are competitive, and travel, communication as well as cultural sensitivities as less of an issue than when offshoring to China (Arlbjorn & Mikkelsen, 2014; Cota, 2015; Zhang, 2015). In spite of the initial disruptions to relocate production or assembly closer to the home country, nearshoring might become a viable option to offshoring or reshoring.

Challenges facing organizations that nearshore are predominantly similar to those who reshore production or assembly. Consumers expect organizations to evaluate the quality and the environment with greater scrutiny, making the China market harder than before to operate, not to mention increased government uncertainty, and the rising labor costs in China (Maronde et al., 2015). Additionally, shorter supply chain equates to reduced risk by increasing control over the entire production process (Ancarani et al., 2015; Gylling, Heikkila, Jussila, & Saarinen, 2015; Tate, 2014). Reasons for nearshoring are typically reaction driven by the mistakes or lessons learned from offshoring, and the need for an organization to make a change; however, such change also creates challenges.

Reshoring or nearshoring tend to be common production or assembly options among some manufacturing sectors. Organizations within technology-based manufacturing are first movers within the reshoring and nearshoring initiative (Ancarani et al., 2015; Dolgui & Proth, 2013; Fratocchi et al., 2014). Additionally, organizations who invest in Joint-Venture agreements are more likely to reshore or nearshore than organizations with Greenfield investments (Fratocchi et al., 2014). The type of investment or even sector within manufacturing might indicate the organizations

offshoring lifecycle, and it is best to take a systematic approach to research this information.

The movement of production of assembly overseas was in reaction to rising costs in the United States manufacturing sector. As the now host countries to these offshoring investments experience the same challenges, alternative investment options are being evaluated, such as bringing production home or close to home (Fratocchi et al., 2016). Like Deming's TQM theory, one objective of any shoring decision is to optimize firm performance and increase its competitiveness (Ngambi & Nkemkiafu, 2015). At the same time, there are decision drivers to test the viability of how to position any investment, including maintaining it in China (Fratocchi et al., 2016). Once manufacturing executives consider the full investment costs, they will cross-check the China investment against other strategic locations to determine the most favorable location to assemble or produce.

A third alternative to offshoring is to move production or assembly to an external organization entirely, or outsourcing. U.S. manufacturing outsourcing to China began in the 1970s with low value-added products and then moved to auto production and assembly in the 1980s (Dolgui & Proth, 2013). This movement coincided with the movement of students and highly-skilled professionals from China to the United States (Khan & Bashar, 2016). At the same time U.S. outsourcing demands on China increased, China's low-end labor force blossomed while a significant percentage of its technical population moved to the United States for advanced studies and employment (Khan & Bashar, 2016). The outsourcing strategy loses much of the control from headquarters; however, products remain produced or assembled affordably.

It is unclear which phenomenon will drive the next wave of globalization, as offshoring has been a determining factor in the present stage. Researcher's fear a global imbalance might occur soon, as reshoring, and to a smaller degree nearshoring, will create the same vacuum of low-end laborers that offshoring and outsourcing created when it left the United States (Khan & Bashar, 2016). However, as TQM centers upon achieving internal efficiency to create external competitive advantages, any strategy (outsourcing, offshoring, nearshoring, or reshoring) must apply these concepts to help balance the global economy (Khan & Bashar, 2016; Weckenmann et al., 2015). Each investment decision comes with consequences for manufacturing executives to consider, and where to produce or assemble is one decision that has plagued U.S. manufacturing leaders for decades.

Transition

I started Section 1 with the background of the problem and continued to explain the foundation of this study, which included the problem and purpose statements. I also provided the nine research questions I used during the semi-structured interviews. Additionally, this section included an overview of the conceptual framework as well as commonly used terms throughout my study, i.e., operational definitions. I also provided an overview of the assumptions, limitations, and delimitations, followed by a summary outlining the significance of my study. Section 1 concluded with a thorough review of the professional and academic literature related to this study, focused on six sub-themes related to strategies for effective offshoring to China in the United States manufacturing sector.

Section 2 will begin with a review of the purpose statement and continue to explain my role as the researcher. It also contains information regarding how to select participants for the study, the research method and design, population and sampling, ethical research, data collection techniques, instrument, and organization. This section concludes with the information on the reliability and validity of the study.

Section 3 will include information regarding the purpose statement and research questions. This section will also contain information relating to the presentation of the findings, the applications to professional practice, implications for social change, recommendations for action, further research, and my reflections. I will conclude this final section with a summary and a conclusion about this study.

Section 2: The Project

Section 2 contains information concerning the purpose of the research study and my role as a researcher exploring economic strategies U.S. manufacturing leaders used to offshore effectively to China. Topics addressed in this section include information on participant recruitment, the research method and design, the target population and sampling, research ethics, data collection, instrumentation, organization, analysis, and techniques. Section 2 concludes with information regarding the reliability and validity of the research study, a transitional summary, and an overview of Section 3.

Purpose Statement

The purpose of this qualitative, multiple case study was to explore economic strategies U.S. manufacturing leaders used to offshore effectively to China. The target population consisted of nine business leaders who work for two U.S. multinational manufacturing companies based in China. The selected participants have demonstrated success in implementing economic strategies to offshore effectively to China. This study has implications for positive social change by showing that U.S. manufacturing workers could improve their core skill sets through more technical opportunities, thus augmenting their professional qualifications and enhancing the quality of life within their families and communities. As a result of this improvement, manufacturing workers in the United States might receive higher wages resulting from retraining and higher skill sets.

Role of the Researcher

The role of a qualitative researcher involves engaging participants to collect, analyze, and interpret data (Yin, 2014). Researchers should know their role to understand

the overall onsite data collection process (Harland, 2014; Shaban, 2015). For this study, my role as the researcher involved selection of an appropriate research method and design, recruitment of potential participants, and collection and analysis of the data. As part of my role, I developed themes and have presented the findings of the research in the next section (see Collins & Cooper, 2014).

Merriam and Tisdell (2015) postulated that an existing relationship between the researcher and the research area facilitates a researcher's familiarity with the field of study. Similarly, Yin (2014) indicated that researchers who have a natural connection with the research topic remain motivated throughout the research study. In this study, the relationship between me and the research area was multifaceted. My father worked in the automotive sector for 30 years, and discussions about manufacturing trends and strategies have been present in family conversations since I was a child. Additionally, I have a deep-seated passion for China and have been researching the growth and development of this dynamic country since I began studying Mandarin in 1993. Finally, I have lived consecutively in Shanghai since 2006 and have worked over a decade with a myriad of manufacturing organizations who offshore from the United States. Due to these personal and professional experiences, I have become naturally cognizant of the current challenges facing U.S. manufacturing companies who offshore to China.

The Belmont Report protocol provides researchers with actionable information regarding moral and ethical principles to ensure the protection of human subjects in a study (Morello-Frosch, Varshavsky, Liboiron, Brown, & Brody, 2015). The Belmont Report also contains information to guide researchers in mitigating all forms of bias

during the data collection phase of the research (U.S. Department of Health and Human Services, 1979). The three principles listed in the report include respect, beneficence, and justice. Hence, in keeping with these principles, I worked to show full respect to all participants, ensure the welfare of each member, and assure participants of their privacy and confidentiality during the data collection process.

Researchers are required to avoid personal bias and assumptions to enhance the credibility of the research study (Greene, 2014; Yin, 2014). To mitigate bias and to avoid any personal affiliations, it is imperative for the researcher to be conscious of the research environment (Malone, Nicholl, & Tracey, 2014). Therefore, I made sure I did not engage participants who had a previous or current relationship with me. Also, I ensured I did not include personal viewpoints in my data collection and analysis to guarantee objectivity.

Interview protocols are helpful to achieve research objectives in a more structured manner during data collection (Van Schendel et al., 2014). Researchers who use clear and concise interview protocols increase chances to avoid missing relevant information from participants (Luhrmann, Padmavati, Tharoor, & Osei, 2015). Therefore, I used an interview protocol (Appendix A) during data collection to avoid deviating from the purpose and procedures of the study.

Participants

A researcher must develop criteria to select participants who are eligible and possess knowledge and understanding of the research topic (Latiffi, Brahim, & Fathi, 2016). Researchers who apply eligibility criteria to potential participants have increased chances of achieving an appropriate sample size for the study (Wirth et al., 2014).

Similarly, developing eligibility criteria aids participants in attaining accurate data about the research study (Yin, 2014). In this study, I required that participants were English-speaking business leaders who had worked for their current U.S. manufacturing company for a minimum of 1 year.

Gaining access to participants requires tactful strategies so they are comfortable interacting with the researcher (Greene, 2014). One approach used by researchers to gain access to participants is to first request permission from the gatekeepers of an organization (Borschmann, Patterson, Poovendran, Wilson, & Weaver, 2014). In a research study, gatekeepers have the potential to recruit participants (Cheryan, Master, & Meltzoff, 2015). Hence, once Walden University's Institutional Review Board (IRB) approved my study, I sent a cooperation letter to each gatekeeper (Appendix B) explaining the purpose of the study and requesting permission to contact each participant. Once the gatekeeper approved my request, I sent an invitation letter (Appendix C) to each participant and engaged them in a semi-structured interview guided by open-ended questions.

Furthermore, it is essential for researchers to develop a trustworthy relationship with each participant to gain access to their precise views (Holloway & Galvin, 2016). Researchers' success in the data collection process depends on their ability to earn the trust of participants in the attempt to develop a good working relationship (Kral, 2014). More importantly, a researcher who builds a positive working relationship with each participant is more likely to avoid unnecessary disputes during the data collection process (Khalfan, Maqsood, & Noor, 2014). Consequently, to build rapport and establish a

sustainable working relationship with participants, I assured them of their confidentiality and privacy. In the findings section, I will refer to each participant using an abbreviation. For example, Participant 1 from Company 1 will appear as P1-C1.

Research Method and Design

Qualitative research methods and designs are used by researchers to explore a phenomenon of interest (Marshall & Rossman, 2016). A qualitative case study involves interviews, observations, and company documents to understand a research problem (Yin, 2014). To explore economic strategies U.S. manufacturing leaders use to offshore effectively to China, I used a qualitative case study and interviewed nine experienced business leaders who work for two U.S. manufacturing multinational companies and who are China-based.

Research Method

The qualitative method was the most appropriate research method for my study exploring economic strategies U.S. manufacturing leaders use to offshore effectively to China. Qualitative researchers gain an understanding of the experiences and realities that confront participants (Elbeltagi, Kempen, & Garcia, 2014), and they also have the opportunity to leverage interviews to explore organizational problems that require attention (Merriam, 2014). Similarly, researchers can address the specific research problem meaningfully through the use of qualitative research methods (Bristowe, Selman, & Murtagh, 2015). For this study, I used the qualitative research method to ensure openly effective interaction with participants through face-to-face interviews to collect data.

I did not use either the quantitative or mixed methods research approach. The quantitative research method involves the use of mathematical models to test a phenomenon (Westerman, Spence, & Van Der Heide, 2014). Also, researchers apply the quantitative method to examine causal relationships between variables (Pluye & Hong, 2014). The mixed methods approach involves the use of both qualitative and quantitative methodologies (Fetters, 2016). As noted by Molina-Azorin (2016), researchers use a mixed methods approach to explore and confirm a phenomenon in the same research inquiry. For this study, I did not test the causal relationships between any variables, and I did not use two methodologies to confirm the same research inquiry. Hence, I used neither the quantitative nor the mixed methods approaches for this study.

Research Design

A case study design is a reliable research design used by researchers to understand human experiences through the use of diverse data gathering techniques (Yin, 2014). Researchers use a case study design to improve their understanding of a bounded system (Yazan, 2015). Likewise, researchers use a case study design as a bounded system to conduct a descriptive analysis of the why and how of a research problem using multiple sources of data (Yin, 2014; Shekhar, 2014). Hence, I used the qualitative case study design to understand the why and how of my research problem regarding economic strategies U.S. manufacturing leaders use to offshore effectively to China.

I did not use the ethnography and phenomenological research designs for my study. Wall (2014) noted that ethnographic researchers study the culture, beliefs, and values of a group of people in society. Researchers use ethnographic research design to

connect a person's life to a particular cultural setting (Gill, 2014). Phenomenological design aids researchers who intend to study lived experiences (Chan & Walker, 2015). It was not my goal in this study to research either the culture of people or the lived experiences of participants. Hence, I did not use ethnographic or the phenomenological research designs. Further, given that the purpose of this study was to explore economic strategies U.S. manufacturing leaders used to offshore effectively to China, which involved a bounded system, both ethnographic and phenomenological designs were not appropriate for this study.

As part of the research method and design, it is important for researchers to ensure data saturation when new information adds no new thematic ideas to the collected data (Fusch & Ness, 2015). Mejia and Phelan (2014) advised researchers to continue gathering data until achieving a confirmed level of data saturation. For this study and given the high profile of this research topic, I made data saturation a top priority. I used semi-structured interviews to collect and analyze data from selected participants until data analysis patterns demonstrate data satiety.

Population and Sampling

Purposive sampling was best suited for this study. Researchers apply purposive sampling to break up research into smaller sections for effective analysis before being aggregated together (Barratt & Lenton, 2015). Also, researchers use purposive sampling to maximize data collection in a manner that helps to analyze data effectively (Marais & Van Wyk, 2014). Similarly, Suen, Huang, and Lee (2014) recommended that researchers apply the purposive sampling technique to select participants who possess knowledge

about the research topic and can communicate their experiences more expressively. Hence, I used purposive sampling to select experienced participants who possess knowledge about economic strategies U.S. manufacturing leaders use to offshore effectively to China.

The population of this study consisted of English-speaking business leaders who work for two U.S. manufacturing multinational companies and who are China-based. With the use of purposive sampling, I identified nine business leaders who provided information I used to address the central research question. Researchers must select an optimal sampling size to collect data needed for the study (Wei et al., 2014). Robinson (2014) reported that researchers could sample up to 16 participants to ensure data satiety. When I collected data from each participant, I made data saturation a priority and ended the data collection process when no new thematic ideas emerged (see Morse, 2015).

Researchers use eligibility criteria to ensure appropriate selection of participants for the research study (Taylor, Swerdfeger, & Eslick, 2014). Hence, I used several eligibility criteria to ensure I engaged the appropriate participants who possessed the required knowledge to meet the purpose of the study. To be eligible for this study, participants were required to be English speaking business leaders who had worked in China for a U.S. manufacturing company for a minimum of 1 year. Participants who met the eligibility criteria were engaged in a face-to-face interview and answered prepared interview questions, including the central research question.

Ethical Research

To ensure ethical research, I followed the informed consent form as an ethical guide. Researchers must explain the ethical research guidelines to each participant to avoid ignorant participation (Magalhaes Bosi, 2015). The informed consent form includes relevant information about the study, participation benefits, and potential risks to participants to understand the purpose of the study (Rigter et al., 2014). Similarly, Hammersley (2015) explained researchers should ensure participants have reviewed the informed consent form to reduce the chance of falling into any risk. Hence, I used the informed consent form as an ethical guide and made sure participants read, understood, and signed the form before each interview began. Additionally, I provided participants with a copy of the signed consent form for their records.

As part of the research ethics, potential participants should be informed adequately at the time of recruitment of their right to withdraw (Jarvik et al., 2014). It is essential for researchers to give each potential participant the option to withdraw (Gibbins, Bhatia, Forbes, & Reid, 2014; Harriss & Atkinson, 2015). Consequently, I informed participants of the purpose of study with associated risks and assured each of them of the liberty and flexibility to withdraw from participating without consequences.

Protecting the identity of research participants is essential to ensure their privacy (Connelly, 2014). It is unethical for researchers to fail to protect the identity of participants, as it could result in unforeseen risks (Earnshaw, Lang, Lippitt, Jin, & Chaudoir, 2014). As the researcher, it was my primary objective to keep the identity of the participants confidential. To ensure the privacy of participants, I did not use any

identifiable information outside the scope of this research. Additionally, I assigned codes to each of the participant's identity to avert exposing their information. I did not include the names of participants and their organizations. More importantly, I stored all data securely. For electronic data, I stored the data with password protection on a hard drive, and I stored hard copies in a fireproof locked safe for a minimum of five years. After this period, I will destroy all electronic and hard copies of data to avoid any form of data leak.

Obtaining the university's IRB approval is mandatory before entering the practice settings to collect data (Hammersley, 2015). The IRB approves the researcher to collect data based on critical factors. The factors include a research design allowing (a) a minimized risk to participants, (b) a reasonable risk compared to the anticipated benefits, (c) an equitable selection of participants, (d) attaining and properly documenting consent forms, (e) ensuring the interviewees' safety, privacy, and confidentiality, and (f) protecting vulnerable participants (Cseko & Tremaine, 2013). The Walden University IRB's approval number is 01-30-18-0599887, and it will expire on January 29, 2019.

Data Collection Instruments

The researcher who performs the study is the data collection instrument (Williamson, 2015). As the principal data collection instrument, I used three of the data collection techniques recommended by Marshall and Rossman (2016). They include interviews, document review, and casual observation. I used semi-structured interviews as my primary data collection technique, along with casual observation, and a review of company documents, such as policies and procedures, operations manuals, activity logs, and other related useful information. These data collection techniques facilitated me to

explore economic strategies U.S. manufacturing leaders use to offshore effectively to China.

To ensure an effective data collection process, I followed the interview protocol guide (Appendix A) to guarantee proper alignment of the interview questions with the research study. Researchers use interview protocols to ensure interview questions align with the research to avoid inadvertently omitting essential components of the study (Castillo-Montoya, 2016). During the discussions, I engaged participants in nine interview questions that did not exceed one hour per participant. Before I commenced each meeting, I sought the permission of participants to record the conversation for transcription purposes. As suggested by Petrova, Dewing, & Camilleri (2014), researchers must explain the purpose and confidentiality of recording interviews with participants before collecting data.

To ensure the reliability and validity of the study, I provided participants with the summary of the interpretations for review in a member checking process. Member checking is a technique used by researchers to ensure participant validation to explore the credibility of results (Birt, Scott, Cavers, Campbell, & Walter, 2016). Similarly, the process of member checking involves follow-up with participants on each original theme generated during the data collection process (Aziato, Dedey, & Clegg-Lamptey, 2015). Also, I triangulated the data by reviewing other company documents, such as policies and procedures, operations manuals, activity logs, and other related useful information, to improve the credibility of the data. Researchers use secondary data to support primary

data collection process to address the research question holistically (Alsayed, Maguire-Wright, & Flickinger, 2016).

Data Collection Technique

Data collection involves techniques used by researchers to collect, store, and manage data (Taylor, 2017). Similarly, Yin (2014) explained data collection methods involve a process of gathering data from participants. The data collection procedure for this study involved semi-structured interviews guided by one central research question and nine open-ended interview questions. I also incorporated casual observation and a review of company documents to support primary interview data. Researchers should endeavor to make prior arrangements with participants to secure adequate time for their convenience (Ruiz & Garcá-Garcés, 2015). To conduct successful semi-structured interviews, I scheduled the date, time, and location of choice with each participant in advance of the interviews. During the meetings, I used casual observations to precede the analysis of interview data as recommended by Yin (2014).

Using semi-structured interviews involves both advantages and disadvantages. The use of semi-structured interviews allows researchers to increase their understanding of research questions (Jamshed, 2014; Poonpon, 2017). A primary benefit of using semi-structured interviews is the opportunity for researchers to gain information which was previously unknown (O'Keeffe, Buytaert, Mijic, Brozović, & Sinha, 2016). A disadvantage of using semi-structured interviews is participants might be selective in the type of information they provide, which in turn might impact the quality of the information for the study (Owen, 2014). Also, reviewing company documents is helpful

to ensure methodological triangulation to strengthen and enrich the information used for data analysis (Ndanu & Syombua, 2015). Those who fail to review company documents might miss actionable details to support primary interview data (Hashem et al., 2015).

Researchers use member checking to enhance research reliability and validity (Aziato et al., 2015; Birt et al., 2016). Qualitative researchers use member checking as a technique to establish the credibility of their study (Blikstad-Balas, & Sørvik, 2015). For this study, once I completed the interviews, I provided all participants with a summary of their responses to validate the accuracy of information and to avoid the false presentation of data.

Data Organization Technique

Qualitative researchers use data organization techniques as a critical element to ensure efficient data analysis (De Waal, Goedegebuure, & Tan Akaraborworn, 2014). Yin (2014) explained researchers use data organization techniques to secure data and enhance effective data analysis. Similarly, researchers use data organization techniques as a way to group and interpret data in a more meaningful manner (Brennan & Bakken, 2015). To ensure effective data organization of the study, I generated a Microsoft Excel file to log information on interview data, a labeling system, and information required to enhance the analysis of the study. I also made sure to code transcribed data files as a security measure to promote participants privacy.

Tracking and guaranteeing the security of raw data should be the primary concern of the researcher (Chang & Ramachandran, 2016). Researchers who fail to ensure data security breaches the confidentiality, authenticity, integrity, availability, and

identification of user data (Bhanot & Hans, 2015). I stored all electronic data in a password protected file on my personal computer, to securely preserve participants' information. I stored all non-electronic data in a fire-proof locked safe, and plan to maintain it in the safe for a minimum of five years. Similarly, Grossoehme (2014) indicated data confidentiality involves the preservation of data from leaking. To avoid data leak, I maintained sole access to all copies of data, and plan to destroy data types after five years permanently.

Data Analysis

Qualitative researchers use data analysis techniques as a means to interpret data (Yin, 2014). Sousa and Figueiredo (2014) indicated researchers use data analysis techniques to evaluate the results of data collected from participants. Data analysis took place after I have interviewed all potential participants via semi-structured interviews. To ensure an efficient data analysis, I incorporated the use of methodological triangulation. Researchers use methodological triangulation to support and guarantee the credibility of the study (Burau & Andersen, 2014; Yin, 2014). Therefore, I supplemented recorded interviews with multiple data source, such as data from reviewing company documents and casual observation during the data analysis process.

The first step to ensure a logical and sequential process during data analysis is to transcribe all information collected from participants into a Microsoft Word document. Qualitative researchers establish reliability through accurate data recording and transcription (Lewis, 2015). After effectively transcribing all recorded interviews, I confirmed the data collected from the review of company documents were included in the

study to increase the confidence in the study findings as indicated by Yin (2014). To ensure I have collected relevant data from company documents, I sought participants assistance to narrow my search. I also gained permission from members to photocopy relevant pages of relevant company documents. The next step involved the need to categorize all data collected into topical themes for analysis and presentation to readers.

The conceptual plan for coding and identifying themes for this study involved the use of the NVivo research software tool. The NVivo software provides automatic analysis of the conceptual content of data collected to aid researchers in their attempt to make conclusions about research data (Sotiriadou, Brouwers & Le, 2014; Yousef, 2015). Researchers use the NVivo software to develop themes of the findings (Lunny, McKenzie, & McDonald, 2016). Similarly, Zamawe (2015) explains features of the NVivo software, such as multimedia functions, coding, and the emergence of themes, provide an opportunity for researchers to perform data analysis efficiently. Therefore, to identify themes for this study, I used the NVivo software to make certain data was analyzed effectively from the information collected from each participant.

Researchers ensure key themes are correlated and aligned with the literature of the study through the use of thematic analysis (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). Qualitative researchers use thematic analysis to provide an interpretation of participants' meanings (Crowe, Inder, & Porter, 2015). Hence, to analyze data in a way that correlates with the literature of the study, I used thematic analysis to classify data collection more productively into important themes as recommended by Brooks, McCluskey, Turley, and King (2015).

Reliability and Validity

Yin (2014) explained researchers ensure reliability and validity when evaluating the rigor of research findings. The reliability and validity of a study is a way researchers ensure the trustworthiness of results of research (Nummela, Saarenketo, Jokela, & Loane, 2014). Cronin (2014) added researchers need to make sure the reliability and validity of a study involve dependability, creditability, transferability, and confirmability.

Reliability

The reliability of research study includes the dependability and consistency of the research findings (Duncan, & Fiske, 2015). Dependability guides researchers to focus on the reliability of the data used in the results of the study (Kornbluh, 2015). Consequently, I applied member checking to guarantee the dependability of the study to minimize errors in the interpretation of the data. Member checking involves engaging participants to verify the findings of the research (Bartholomew, Pérez-Rojas, Lockard, & Locke, 2017). When member checking, I shared a summarized copy to all participants and requested a review of the transcribed data.

In addition to member checking, I applied multiple data sources as a methodological triangulation strategy to ensure the reliability of the study. As recommended by Leung (2015), researchers should verify the content of data accuracy with other data sources to support findings. Researchers make sound judgment through methodological triangulation by using multiple lines of evidence to ensure the reliability of the study (Joslin & Müller, 2016; Noble & Smith, 2015).

Validity

Researchers use validity to ensure the quality of qualitative research data (Kihn & Ihantola, 2015; Leung, 2015). Researchers establish validity to guarantee the outcome of the study is consistent with the purpose of the study (Mentiplay et al., 2015). Researchers achieve validity by ensuring the credibility, transferability, and confirmability of the findings (Claes, Van Loon, Vandevelde, & Schalock, 2015). Hence, when I conducted my study, I ensured the findings were credible, transferable, and could be confirmed to ensure the validity of the study.

Credibility. Researchers establish the trustworthiness of the study through the credibility from the perspective of participants (Hajli, Sims, Featherman, & Love, 2015). The judgment of members regarding the interpretation of findings promotes the credibility of the study (Subramaniam et al., 2015). As such, I ensured the credibility of the study and used a member checking strategy as an opportunity for participants to review the summary of findings and confirm I did not include any information outside of what participants provided. Member checking is a way to make sure the research findings and interpretation of a researcher are accurate (Ciemins, Brant, Kersten, Mullette, & Dickerson, 2015).

Confirmability. Researchers involve the corroboration of research findings by consulting external research methodologist who possesses extensive experience with qualitative descriptive research (Connor, Mott, Green, Larson, & Hickey, 2016). Similarly, researchers use confirmation to increase the trustworthiness and assure rigor of the study (Al-Natour, Qandil, & Gillespie, 2015). Yin (2014) added researchers ensure

confirmability of the findings through multiple data sources. Therefore, I used multiple data sources to corroborate the research findings and to assure the rigor of the study.

Transferability. The concept of transferability provides readers the opportunity to understand the context of the study from their perspective (Palinkas et al., 2015). Researchers achieve transferability when users can apply the findings of the study to other situations, groups, or industries (Rapport, Clement, Doel, & Hutchings, 2015). As noted by Sarma (2015), the reader of the study is a primary determinant of transferability in qualitative research. Hence, to ensure readers can make an educated assessment of the study, I provided very detailed information and the source of data to allow readers to determine whether the study is transferable to their situation.

Data saturation is when researchers discontinue the collection of information because no additional information provides a new theme (Fusch & Ness, 2015; Mejia & Phelan, 2014). I made data saturation a high priority during the research and data collection process. I stopped collecting data once additional information did not help in the formation of any new theme.

Transition and Summary

I started this section with the purpose statement and continued to explain my role as the researcher. Section 2 also contains information regarding how to select participants for the study, the research method and design, population and sampling, ethical research, data collection techniques, instrument, and organization. This section concluded with the information on the reliability and validity of the study.

I will introduce Section 3 with the purpose statement and research questions. This section will also contain information relating to the presentation of the findings, the applications to professional practice, implications for social change, recommendations for action, further research, and my reflections. Section 3 will finish with a summary and a conclusion about the research study.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative, multiple case study was to explore economic strategies U.S. manufacturing leaders used to offshore effectively to China. Business leaders in the manufacturing sector seek successful strategies in offshoring to improve efficiency and the competitive position of the organizations they represent. Section 3 includes the strategies identified by manufacturing business leaders to achieve these objectives. This section includes an introduction, a presentation of the findings, discussions of applications to professional practice and implications for social change, recommendations for action and further studies, and a conclusion. With the completion of this study, I have added to a body of knowledge on business practice and have made a positive social change impact.

The collection and analysis of the data from the semi-structured interviews, company documents, and on-site observations provided adequate data saturation, which resulted in four major themes that highlighted actionable strategies for offshoring effectiveness from the United States to China in the manufacturing sector: (a) movement of innovation closer to production in China; (b) increased localization of legacy offshoring business; (c) enhancement of China-based cross-functional teams; and (d) incrementally investing to achieve production scale. These themes, as well as supporting sub-themes, included unique insights into current strategies undertaken by U.S. manufacturing companies operating in China and outlined the trajectory of each strategy for years to come.

Presentation of the Findings

The central research question of this study was: What economic strategies do U.S. manufacturing business leaders use to offshore effectively to China? During my analysis of interview data from participants, four major themes emerged: (a) movement of innovation closer to production in China; (b) increased localization of legacy offshoring business; (c) enhancement of China-based cross-functional teams; and (d) incrementally investing to achieve production scale. Using NVivo software, I identified the themes based on the frequency mentioned in each participant interview in addition to observations of both participating companies' business practices. In the process, sub-themes emerged within the major themes.

The four primary themes represent strategies created, augmented, and currently implemented among U.S. manufacturing companies with production in China to enhance offshoring effectiveness. The movement of innovation closer to production in China has been a slowly advancing strategy to ensure manufacturing efficiency, while the increased localization of legacy offshoring business strategy reflects the China market's growing importance to each global organization. The enhancement of cross-functional teams on the ground represents the cornerstone of the TQM theory designed to improve quality and communications across the organizations' local business units. Incremental investment to achieve production scale evinces the manufacturing leaders' desires to remain risk averse in China's challenging operating environment. While the first three themes identified confirmed existing understanding of offshoring strategies to China, the fourth theme provided a new perspective to my knowledge of this topic. Each theme, either directly or

indirectly, was useful in addressing the overarching research question and tied naturally to the TQM conceptual framework.

Theme 1: Movement of Innovation Closer to Production in China

The first theme that emerged from the interviews was the movement of innovation closer to production in China. Wang, Guo, and Yin (2017) argued that while building innovation competencies can be cumbersome and costly; benefits can be realized over time to support organizational strategies at the local level. Of the nine participants I interviewed from two companies, all acknowledged the business advantages of tying innovation closer to manufacturing. Among the evident reasons, such as increased efficiency and a competitive edge, less obvious explanations emerged, such as nurturing a maturing talent pool and supporting global demands from China. Integrating a dedicated innovation platform into the China operations to fulfill delivery capabilities rounded out the sub-themes that emerged from the participant interviews.

When discussing leveraging innovation to enhance efficiency, P3-C1 believed the organization's decision to establish a local R&D center in China was a "natural, more mature, and stable approach to developing more independently from headquarters." P4-C1 corroborated this view and stated, "a local R&D center made the China business stronger than before" when facing the market and responding to headquarter demands. The foundations of the TQM theory position an organization to improve overall performance, which is consistent with the respondent's views on developing a local innovation center (Mehmood, Qadeer, & Ahmed, 2014). P2-C1 added:

> If our China operations want to have an innovation site, then it also needs to have a manufacturing capability there as well. If the innovation center gets away from the manufacturing side, it will not have good efficiency.

The integrated approach of manufacturing with innovation in a single location fosters timely and effective communications amongst each team in addition to tailoring products to customers' local needs.

Local innovation centers also provide a competitive edge to U.S. manufacturing companies in China. P6-C1 mentioned:

> We need innovation because we have met many challenges in China. For example, we are building up a product, but I know many local companies in China are also building-up a similar product too. We have an R&D center in Shanghai, and there is a lot of talent there, a lot of scientists. For research, I think it is not a big move, but for manufacturing, it's obvious. It's better for mechanical parts, because of the labor and the manufacturing scope.

The rise of local manufacturing competition in China has become more evident to U.S. offshoring leaders, and developing local innovation centers strengthens the competitive position in the current environment. Paraschivescu and Cotirlet (2015) argued pioneering leadership will improve performance and processes to remain competitive. Given the market size in China, both of the companies I researched established local innovation centers to remain in front of their global and domestic competitors.

Another sub-theme that emerged from the discussions was nurturing an innovative talent pool, which has grown significantly over the past 10-15 years. P6-C1

explained, “The Chinese government has a lot of good policies. It is very open compared to the past. In summary, there is a big talent pool here; there's a lot of options for capable, bright, talented people.” With a growing number of talents in China, a surging demand exists for organizations to create positions that match market needs, including for R&D centers. It is important for U.S. offshoring companies to respond, and P1-C2 added, “We see gradually with all this change, we can now find quite a wide range of research talent in the local market.” Moving innovation closer to production in China addresses an HR need and allows for manufacturing organizations that embrace this strategy to remain more competitive.

Among the nine participants, eight stated that the main driver behind moving innovation closer to production in China was to support global demands and address local needs. P3-C1 said:

> R&D is important for us globally. We are doing global R&D in China, and we are taking more and more responsibility regarding the global platform. We are the supplier now, providing components for other sites globally to build. This approach creates more opportunities for our local business, and the China market now is second behind the United States regarding innovation.

The above findings advance current research regarding global organizations leveraging technology and innovation in China to become differentiating factors from the competition (Huang, 2014). P2-C2 added,

> I think for China, our company has also proven China is the center of excellence for innovation because the market is huge. You can see tailored or customized

> special requirements, and they are used to everything designed in the U.S., and some of this decision goes to China.

The global organization can address other strategic matters once it places the responsibility on the China operations to not only produce but also innovate.

According to P1-C2,

> We have our engineering center in China and have started to develop our products for the local market. The engineering center now has grown significantly, and we not only develop the local products, but they can also participate in the global projects and support the products in the whole organization. So we are not only manufacturing but also establish engineering and technical capability locally in China. That's helpful for us to grow because without the engineering capability or this technical support, it's difficult to grow the products, or how to focus on this market to serve customers.

Connecting innovation with production in China also represents a transfer of technology once held by the United States. Innovation continues to become embedded into offshoring strategies, which has positioned manufacturing leaders to increase R&D-related investments (Karpaty & Gustavsson Tingvall, 2015). P5-C1 confirmed other participants' views and added,

> I do see a shift of having more R&D in China. Next generation new products are being designed in China for the global market. From this, I see a shift to let us play a more important role during the R&D phase. That's why we are also trying to shift legacy products in ownership from global to China. From this point, it is

> not the new design, but it's the ownership transfer. That means we would also like to have the China team grow and mature during the transfer activity.

Interview findings and current research revealed that integrating an innovation center into the U.S. manufacturing company's core business in China can facilitate success for the local operations. In fact, P1-C1 opined that the most pivotal improvement in his organization is that the innovation platform is present in China and the manufacturing facility now "can grow and nourish the whole organization." The trend to innovate locally alongside manufacturing is gaining momentum for U.S. offshoring businesses, but nearly half of the participants believed it is still in the early stages and the United States will continue to lead innovation efforts for at least the next 10-20 years in the manufacturing sector.

Theme 2: Increased Localization of the Legacy Offshoring Business

The second theme that emerged from the interviews was the increased localization of the legacy offshoring business. While Lojacono, Misani, and Tallman (2017) found that companies who engage in cross-border alliances are less likely to offshore production, trends in China point to a decreased reliance by U.S. manufacturing companies on local joint venture partners and movement to independent structures to serve the local market. Each of the participants interviewed concurred that foreign manufacturing companies in China predominantly have become less-dependant on joint venture agreements due to unwanted obligations by the local partner. Localization strategies are now giving U.S. manufacturers a competitive edge with reduced costs, quicker response time in the market, and increased efficiency. Furthermore, participants

unanimously responded that a localization strategy augments the manufacturing talent pool in addition to improving local supply chains and encouraging technology transfers from the United States. Participants also confirmed that offshoring activities still exist in the China operations but are now being complemented by a local strategy to serve and support the world's second-largest economy.

When exchanging views on how investment strategies have evolved upon entering China, P1-C1 commented,

> In China, which is a very large and growing market, we have a footprint and can feed our customers demand easier and quicker. We can do this at a lower cost, because now instead of an import, it is a local product. We entered China with the expectation to export our products back to the home market, but also realized the local market needs it.

Some U.S. organizations have expanded their China strategy to include a local focus. As P3-C1described, "We now have two strategies: local for global and local for local, as local for local directly serves China in China, while local for global serves the world from China." Maintaining duel investment tracks also helps organizations navigate an often-complicated Chinese regulatory environment, as the companies maintain a local business license.

Nevertheless, competing locally in China hosts an array of unique challenges. Participants from both companies interviewed commented on the maturity and sophistication of the local competitors in China. For example, P4-C1 remarked: "the local companies are not so local anymore. They are very quickly moving up – ambitious and

aggressive to attack the Tier 1 & Tier 2 markets. I can feel the speed of this." P1-C2 added, "we have started to see the local players, and they have strong financial support. They can buy or invest in a lot of technologies, invest in people and acquire companies." All participants commented on the rewards of doing business in China but cautioned of the local companies, whose leaders have observed and learned from the past 4 decades of offshoring production from Western organizations.

Five of the nine participants also mentioned the significance of implementing a localization strategy to offset complications when importing overseas products. P1-C1 stated:

> It was a continuing challenge to deal with imported products, as we used a lot of imported material when we first set-up the China facility. We did not appreciate the costs associated with that, the timeline to import the material, and the logistics in general. There were lots of times when we struggled with the imported parts, especially with the long customs process. We say it's going to arrive this day, but it is in Customs for 1-2 weeks, or the paperwork is wrong.

All participants agreed that leveraging their respective manufacturing facilities in China not only gave each organization a competitive edge but also assisted in reducing costs across all business units. Zheng and Wang (2017) corroborated P1-C1's assessment of the unexpected offshoring expenditures and addressed cost-effective approaches to mitigate the financial risk. Based on feedback from multiple participants, in spite of such hidden costs, offshoring underpinned early investment decisions and justified continuing activities.

Another sub-theme disclosed during the interviews regarding the increased localization of legacy offshoring organizations was how the combined local and global strategies allow Western manufacturing companies to respond to market demands faster. According to P1-C2,

> At the very beginning, we just shipped products to China for manufacturing from North America or other parts of the world. These products at that time were not very suitable for the local market needs, but as the market evolved and grew, local buyers began to form or generate their requirements, some local variance. We needed to follow that trend of meeting our customer's expectations, which meant localized products. In the first ten years, we focused on how to manufacture, how to make it more efficient. Then ten years later, then we started to establish our engineering capability.

For Western firms producing in China, this disciplined approach shrank costs and facilitated product expansion for the market, a theme also supported by Eckel and Irlacher (2017).

Given the evident market opportunities in China, it is critical for manufacturing companies to be on the ground and close to the customer. However, maintaining sustainable interest in this market was a reported challenge among participants. P2-C1 then stated:

> When members of the management team change; the views will change too. We have some leaders who strongly believe in China, and want to make significant

> investments here. However, other leaders don't think this way, especially in our sector. Our senior leaders change very fast, every 1-2 years.

Comments from three participants revealed while the external market in China demands tremendous manufacturing needs, sector leadership's erratic views are at times not aligned in this way. It is important to develop a focused, localized plan that responds to market needs, so U.S. manufacturing leaders remain convinced of a sustainable investment strategy. As mentioned by P5-C1:

> China is the biggest market, which is the reason why leadership selected China as our manufacturing base. As China has almost 1.4 billion people, it accounts for a force in the global population. This market is too big to ignore.

Supply chain efficiency was a key phrase shared throughout each of the interviews. Respondents commented how their respective organizations achieved a greater production efficiency once the supply chain localized in China. It took several years to reach the current point of efficiency, as explained by P4-C1:

> For China, the biggest advantage is the supply chain of industrial components. China is a very special country where we have a lot of manufacturing activities. This is a big advantage where we can buy a lot of components with good quality and with a price advantage. As China has done a lot of manufacturing initially by those foreign companies on the platform, the environment developed naturally. This is a strong thing to China manufacturing now, and especially we have local suppliers developing in the past 20 years. They are following the international company standards, such as ISO9000.

As also validated by Musteen (2016), supply chain alignment alleviates challenges and reduces production distractions so organizations can focus on serving market demands more efficiently.

Two recurring themes within the context of increased localization of the legacy offshoring business included technology transfers from the United States and organic talent development. P1-C1 pronounced:

> Originally, one of our key products was built originally in the United States, and the manufacturing of the assembly unit transferred to China. In that time, our U.S. facility not only transferred the manufacturing, but they transferred the design here too.

Participants agreed design transfer helped China operations not only mature local operations, but this strategic movement also gave the factory credibility among its global peers. According to P4-C1, "the overall feeling is we are well-recognized inside our company's global supply chain." Developing local talent initially created a challenge for U.S. manufacturing firms offshoring to China; however, as the market matured and the facility localized, this changed. P1-C2 added, "in the beginning, we needed talent from outside Mainland China. Like myself and others, even from North America. Gradually, we started our local recruitment, training, and coaching with local people." Fundamentally, transferring technology to increase the capabilities of the local manufacturing plant will attract and retain local talent, and these two core principles are aligned with the movement to increase localization and maintain both a global and local offshoring approach.

Theme 3: Enhancement of China-Based Cross-Functional Teams

The third theme that emerged from the interviews was the enhancement of China-based cross-functional teams. As U.S. manufacturing organizations have grown to scale in China, employee capabilities are more specialized for adequate staff to be on site from each business unit. The benefits of this trend from offshoring companies include more agile, efficient, and effective China-based teams than before. Also, convenience to connect and clarity or purpose of role enhance communications for all employees at the local level when working with colleagues from the U.S. headquarters. Organizational teamwork fosters growth and positions employees to achieve continual improvements in quality, a benchmark of the TQM theory (Ali & Ivanov, 2015). Of the nine participants interviewed, five commented on the relationship between developing local teams and improved quality and performance in the workplace.

Agility is a quality best appreciated by those working in an unfamiliar or fast-paced environment. Manufacturing in China calls for leadership to develop agile talent to address issues swiftly and competently. When asked about the key challenge to developing cross-functional teams, P1-C1 opined:

> I would say the one challenge we initially experienced was breaking down barriers by face-to-face communications. We can go back and forth and argue about something over the phone for months, but if we meet for five minutes, we understand the problem easier and can easily solve it. Communicating via face-to-face communication is critical in this business. I am not sure how they worked more than eight years ago when trying to break into China with no presence here.

This agility cannot be achieved instantly, and for many organizations, it takes years to accomplish. P1-C1 continued,

> I think from my observation, we execute first, and then we stumble. Overall, the organization as a whole realized the issue, and we have become agiler and more risk takers in those strategies. We have positioned ourselves to be more successful in it, and I think it is still evolving.

A second nuance in developing cross-functional teams in China has been the preference to work first in teams and second in the local language before presenting ideas and strategies to headquarters. Burris (2017) highlighted Chinese cultural behavior through a postcolonial theory and explained gravitas placed on local teamwork first, as it drives confidence when addressing Western business practices. P2-C1 added,

> Shanghai is home to our greater China headquarters. From a communications point of view, it is quite easy to speak with the guy sitting in the Shanghai office to get the order filled. When they want to talk with the U.S. and European sites, they always feel a cultural difference.

Cultural innuendos still play an important role in the success or failure of offshoring investments to China and working closely with local teams can facilitate more often than not successful outcomes.

Participants from both organizations mentioned recognition from the global leadership of the benefits of having complete teams on the ground in China. There is a central need to work not only across borders efficiently, but also collaborate with other sites within China effectively.

Furthermore, a teamwork culture and having the right people in the room during offshoring projects alleviate coordination challenges and improve effectiveness (Einola, Kohtamaki, Parida, & Wincent, 2017). P5-C1 mentioned the value of hiring in-house trainers to assist:

> We often ask how we can improve efficiency during manufacturing. For this, this site has a separate group called Business Transformation consisting of consultants or experts to help employees think about what kind of important other activities we can define that enable us to improve our efficiency.

Each organization might take various approaches when offshoring to China, as all strategies are not the same; however, achieving efficiency connects to the core principles of the TQM theory offering guidance to U.S. manufacturing leaders.

It is common to question the roles and responsibilities of each employee or facility when establishing a platform in a newly-established business. Based on the comments from two participants, confusion existed when aligning work between multiple factories and guaranteeing it is within each factory's core capabilities. P1-C1 commented:

> Eight years ago we struggled up to 3-5 years into this venture. There was a lot of struggling and clashing with the organizations asking why are we doing it this way? Why are we supplying back to this facility when we are right here in this facility? Why are we supplying over to this facility when logistically it doesn't make sense? We are shipping back and forth across the globe, back and forth between three factories when it was not necessary. We did not have this strategy, as it was more important to get in the market simply. There was a lot of struggling

> with defining the footprint for each site and what we were going to do from that standpoint. Alignment was important and getting aligned with our business.
>
> P3-C1 succinctly addressed this theme and stated:
>
> We have a cross-functional team here, such as a marketing team, engineering procurement, and operations, and we call it the manufacturing Center for Excellence (COE). We also have the supply chain COE, engineering design COE, and even the customer voice COE. Together, we have the marketing side, and then we can have the right supply base around us. We have the right design engineering capability and also the manufacturing ability. So we have the whole chain, which is an end-to-end approach. Then we can better serve the China market.

Based on participant feedback, alignment, clarity, efficiency, effectiveness, and agility describe why it is important to establish on-the-ground cross-functional teams within the China-based manufacturing facility.

Theme 4: Incrementally Investing to Achieve Production Scale

The fourth theme that emerged from the interviews was headquarters' decision to invest in China incrementally to achieve production scale. Zheng and Wang (2017) addressed the unplanned costs related to offshoring, as well as the need to maintain a conservative approach during the early stage investments. Multiple participants reiterated how their past and current organizations remained risk averse during the early initial investment years and manufactured only lower-end products until factory capacity and

employee capabilities achieved scale. In particular, one organization took an incremental approach, as described by P1-C2:

> With the growth in China, we began by establishing a small office to include functions like HR, finance, and then more and more branches. Then we began to add factories and operations until we became bigger and bigger. Now we are home to a regional headquarters in Shanghai for our global organization. So we transformed it from a small office to a regional headquarter, which has also changed the organization.

P1-C1 continued,

> The original plan was always meant to try and get a footprint in China and serve the local market. However, it was difficult in the beginning, as there were multiple contracts in place with a lot of the vendors in the China market between the other sites, between the U.S. and European facilities. Those contracts were set up for 5-10 years at a time. So the initial approach was for us to import some of the products back to the U.S. market, and we served as a type of sub-assembly of that market. The market growth plan in China was small at first, but in the past 3-5 years, it's been a quick ramp up.

Each participant outlined the benefits for a methodical investment in China, as described below.

Before making a sizeable investment, it was important to secure the local supply chain, as explained by P1-C2:

> We started from a limited investment, and then it grew with the market growth. I think that is conservative. For certain investments, if you do not have the channels or the market, and start with a huge investment, there will be a challenge, and it will be risky. Before you open up the markets, it still takes time to establish the supply chain.

Additionally, P1-C1 addressed the importance of securing a strategic location first and then growing as an offshoring organization after that:

> Looking back ten years ago, our focus was to identify and set-up in a strategic location, a real presence in China. Before, there was no footprint, no growth in China for the company. Now our China facility is the only multi-modeled site globally, as we have all business units under one roof.

Whether it is the supply chain or the strategic location, participants from both organizations agreed an incremental investment was the best approach in the first investment period.

Also, nurturing the appropriate talent for the China manufacturing facility was an important sub-theme in the interviews. According to P2-C2:

> We used to assign multiple responsibilities to several managers, had to wear several hats. Compared to 20 year's ago, now the people can have the right way of thinking, a good grasp of English and have the subject matter knowledge and skill in the marketplace. So much better than before. Still, the talent war is there.

While a skilled talent shortage exists in China today, the situation had greatly improved compared to when U.S. manufacturing firms first established a presence in China. P4-C1 reflected on this situation and added:

> At this site, we hear announcements that we are producing a lot of different diagnostic equipment. We only need one product manager who can manage five different units, and we can have the resources ready. I think overall it is good. I haven't seen many barriers or challenges especially here. We have the R&D team, which is strong. We not only have manufacturing laborers, but also have good engineers, and also business leaders. Many of our top leaders studied and worked in the United States, and I think this is good for us.

Securing the right resources within the China offshoring location is an important challenge to address, and talent often needs to be seconded from headquarters to establish a solid HR foundation (Paz-Aparicio, Ricart, & Bonache, 2017).

Other advice related to this theme included to first manufacture only easily transferrable products before building capacity in the China factory. P5-C1 explained,

> This factory started in 2010, and if we look at our progress, one of the key strategies the management team applied early was to start with low-end production – or those products easier to be transferred are being able to adopt in faster and quicker ways. Now, the China team can enlarge the scope of our products. In the early stages, we were transferring low-end products, which have a big impact on the overall business. When I say overall business, I mean those products are in greater demand in the China region earliest. Typically, one product

> transformation will take about 2-3 years for us to go through the preparation, readiness, ramping up, and then normal production. Nearly once a year, we might have 1-2 products shipped from headquarters, so it is a step-by-step approach instead of at one time.

U.S. manufacturing facilities in China received incremental investments due to other reasons too. For instance, P1-C2 commented that his organization preferred to see the demand first before investing significantly. P2-C2 believed the risk of investing in China was too high to warrant significant funding, which also corroborated P6-C1 views on the need to understand the local environment, including the government policies and regulations, before building large production capacity. Also, P4-C1 stated the sector, in general, moved slowly in China and his organization was simply following the pace of the market. Lojacono, Misani, & Tallman (2017) substantiated investment risk exists in offshoring host countries for multiple reasons, which typically initiate a more conservative approach from headquarters.

P2-C1 provided a gentle reminder to remain customer focused and be risk adverse when investing in China:

> If we talk about the company strategy, we don't want to put every egg in a single basket. The factories in China are really important, but the company doesn't want only to have one location. We need to have at least one factory in the United States as well. According to my understanding, the main reason is to please the Chinese customer and other country's customers. Some don't want to have the made in China label. Even our market, the Chinese customer, doesn't want the

> premium product made in China. So we will always have a facility outside of China to make premium products to please this kind of customer. This is one reason our company will never put everything in China.

All nine participants delivered a consistent message during the interviews that were within the parameters of the mentioned above four themes. P3-C2 captured the message with the below thoughts on offshoring from the United States to China in the manufacturing sector:

> When I first got sort of heavily involved in manufacturing strategy nearly 20 years ago, it was this period of the wave of globalization, which happened in light of China's accession to the WTO. Tremendous cost differentials existed, which made a whole lot of global sourcing decisions on paper, from a cost perspective, very easy to make. It was very easy for a long time to say, China or bust, and over time as costs in China have risen, as people have been more cognizant or thoughtful about hidden costs regarding challenges of managing over distance, that very easy dramatic differences have gone away. What I see now is you've got sort of hype around reshoring and brought stuff back to the home country, and a lot of that is feel-good politics stuff. There's the economic reality behind it, but it's getting hyped. It's not very subtle. What I see on the ground now is a need to recognize the processes of global economic integration fundamentally are still playing out. Whatever political cycles happen, there are ups and downs. The quality of infrastructure in Asia broadly, and especially in large multi-city metropolitan clusters in Asia, is still improving at an unbelievable rate. Whether

> it's the broad integration of greater Shanghai, or to a degree, we look at the lower Malay Peninsula or parts of India. Economic opportunities are still just huge, but they are less going to be defined by national borders and big picture easy yes-no's, it is going to be more subtle. So all of the sorts of dynamics underlie this topic, they are playing now still.

Applications to Professional Practice

Since offshoring activities began from the United States to China in the manufacturing sector nearly 4 decades ago, strategies have categorically been stagnant. Organizations continued to race to the bottom to find the least expensive production location for its goods, which led them naturally to China (Blanton & Blanton, 2016). However, just as many of the worlds' economically maturing nations have developed into formidable economies, so has China and its domestic growth driven the Chinese government to rethink matters such as labor cost, land grants, and tax discounts (Fratocchi et al., 2014). A refreshed look into current offshoring strategies employed by U.S. manufacturers located near but outside of Mainland China is essential for the companies to remain competitive globally and for business leaders to appreciate the complexities of doing business in modern China.

This study is of value to the U.S. business community, as the findings provided strategic value to understand the rationale behind offshoring decisions of manufacturing leaders doing business in China. I applied the TQM theory as my conceptual framework and conducted a thorough review of current offshoring-related issues. As a result of this approach, the findings of this study are grounded in a comprehensive model to share

authoritative research on this important topic for current manufacturing executives. Furthermore, the interview questions offered a structure for a modified strategic assessment that revealed useful competitive approaches and current best practices. The results of my study might provide additional support for theories beyond TQM. Specifically, the just-in-time and Six Sigma theories might warrant further study; however, the TQM approach is the most appropriate theory for this current study (Chen, 2015; Sabet, Adams, & Yazdani, 2016).

It is important to appreciate the rationale behind an offshoring investment decision to understand further why this strategy centers in Asia, specifically China. Striving for manufacturing excellence is a bedrock for achieving a competitive advantage in the sector, and the values outlined in the TQM theory provide the groundwork for quality achievement in an organization (Paraschivescu & Caprioara, 2014). While TQM views advocate improvement of current practices, this concept goes beyond just a theory, as it is still applied in business today and is therefore relevant for this study. In fact, interviews confirmed organizations continue to leverage the TQM model to improve local production to compete not only regionally, but also globally. The TQM theory is also applied to drive innovation next to manufacturing as well as form China-based cross-functional teams. This standard has now been fully integrated into the DNA of many organizations to position leadership across all manufacturing sectors (Adler & Shper, 2015). For this study, the TQM concept has served as the bridge that connects ideological views to business relevance and application in the manufacturing sector to improve practices.

Initial research findings indicated offshoring production or services to China historically has a significant and positive impact on improving quality and reducing the cost for a global organization overall. However, based on information gleaned from the interviews, this strategic approach has shifted to drive the competitive advantage for the local market and to position the organization as a local firm, rather than a U.S. company establishing a presence in China to export finished goods back to the United States. The localization theme is consistent across the manufacturing sector, based on the interviews, and companies are now looking elsewhere, outside of China, to focus on cost savings in production. The nature of the interview questions and the semistructured interview format allowed each participant to provide tailored recommendations for what they perceived as ways to improve offshoring efficiency in their organization.

For many U.S. manufacturing organizations, traditional offshoring investments now extend beyond China to other frontiers in Asia and Latin America. The results of this study provide strategies beyond historical offshoring approaches to implement, such as producing in China for the China market and seeking alternative geographies for conventional offshoring production or assembly. Implementing the strategies identified in this study might also provide the opportunity to gain access to additional resources and identify new markets. The study results included the recommendations for implementing new offshoring approaches in China as well as guidance for further research. Manufacturing leaders might find the study recommendations useful to understand and apply tactics for improving quality and cost-effective production and assembly in China.

Implications for Social Change

Stakeholders should not underestimate the continued value or role offshoring has in today's communities. Manufacturing leaders must also appreciate that just as all products have specific life cycles, services do too (Sychrova, 2012). Offshoring investments impact not only the economic conditions of those making the decisions in the home country but also the recipients in the host country. My study provided evidence consistent with prior research about the need to reevaluate existing offshoring investment strategies, as business models have shifted and now require a refreshed look into the production and assembly of goods (Denning, 2013). This research added to add to the body of knowledge related to how stakeholders within the U.S. manufacturing sector approach U.S. offshoring as well as how society, in general, have both accepted and rejected this strategy over the past 4 decades (Sacchetto & Andrijasevic, 2015). Therefore, the implications of this study for social change are numerous.

Although offshoring investment decisions are driven predominantly by members of the global business community, the ripple effect significantly impacts society. For example, Wang and Chanda (2017) reported adding ten manufacturing jobs in China creates 3.4 additional jobs in the non-tradable sector, an impact on the overall GDP that cannot be overlooked in a country now responsible for 24.5% of the world's global manufacturing output. The social change implications of this study provide manufacturing business leaders, and those around them, with informed information to address offshoring-related decisions more effectively. Additional social change benefits include the overall rise in international safety standards in China, due to offshoring

investments and the continual retooling of manufacturing workers, which prepare them for more advanced roles in the workforce.

From a global perspective, when a U.S. company moves all or part of its production to China, it moves its international safety standards there too. Quality-based management systems, such as Six Sigma, lean management, and the ISO certifications have become the benchmark for doing business in China (Niu & Fan, 2015). This approach raises the bar in China regarding workplace safety issues, impacting both the professional and social fiber of the Chinese community. Second, offshoring investments retrain manufacturing workers, both in the home and host countries, to learn more marketable skills (Baily & Bosworth, 2014). This approach to learning is the right step for the manufacturing workforce overall, and categorically a positive social change. The offshoring investment requires the U.S. and Chinese management teams to train their people, and further prepare the workers for higher-skilled manufacturing jobs (Tate, 2014).

The findings also enhanced existing information regarding the role offshoring has in the global economy, as this body of knowledge applies to both business and social research. For example, this research also defends findings supported by the TQM theory, which promotes the continuous push to enhance manufacturing output through rigorous reviews of standards, approaches, and methods for quality improvements (Adler & Shper, 2015). The natural and unremitting drive to improve business practices clearly transmits positive social implications for all stakeholders.

Recommendations for Action

The findings in this study, along with the related academic literature, provided several recommendations for action. Given the impact and importance of offshoring investments in the manufacturing sector to the global economy, the interest level of this topic among my professional and academic network is high. The results of this study remain relevant to a significant percentage of the population for both stakeholders in the manufacturing sector and those who purchase products in the United States and China. Over the past 4 decades, the shift from *Made in Japan* to *Made in Taiwan* to now *Made in China* has impacted consumer purchasing habits in the United States; and as China is responsible for nearly 25% of the global manufacturing output, it will take years for this trend to shift again (Wang & Chanda, 2017). Directly, professionals working in manufacturing and everyone influenced by the performance of this sector should pay attention to the findings of this study. Indirectly, anyone who owns or has purchased a *Made in China* product also has an interest in the results of this study, given the label might change soon to *Made in Vietnam* or *Made in Cambodia*.

While conducting the interviews for this study, I observed several participants who conceded the original purpose to offshore to China has changed, as it has become now more of a localized strategy designed for the products to be sold in the China market. U.S. manufacturing organizations now implement a *China for China* strategy for most of its local production. As an expatriate living in China, the environment around me now has been impacted by the findings described in this study. U.S. manufacturing leaders either based in or working with other developing nations, such as Vietnam or Cambodia,

also have an interest in the findings of this study. These locations in Asia might represent the next wave of low-cost manufacturing beyond China, as this study has highlighted the continuing race to the bottom. U.S. manufacturing executives with investment interest in these countries can learn from the past 4 decades of China offshoring.

To raise the awareness of the study in China, each of the participants and community stakeholders will receive a summary of the findings. Positioning local champions within these two organizations and beyond will support my outreach to stimulate further interest in this highly-relevant topic. Also, I plan to share the results of this study to broader audiences by presenting the research findings to local Chambers of Commerce, the U.S. China Business Council and interested manufacturing associations in the United States and China.

I work for a professional services firm and have been advising Western clients on their China investments in Shanghai for more than a decade. Many clients are operating in the manufacturing sector and have a direct interest in the results of my study as well. Finally, upon completion of the DBA program, I plan to work as an adjunct professor and will also share my findings with my students. I aim to use the study results as a teaching tool for business leaders and stakeholders to ensure the application of my proposed recommendations.

With the continued demand to offshore as a cost-advantage strategy and the need for organizations to stay competitive globally, manufacturing leaders in both the United States and China can use the findings of this study to implement or enhance existing strategies to solidify manufacturing effectiveness through elements outlined in the TQM

theory. These findings also can advance existing knowledge about offshoring production from the largest global economy to the second largest global economy, making this study of significance to academic and business circles as well as government think tanks alike. The content and timeliness of this study has a far-reaching audience.

Recommendations for Further Research

This study explored what economic strategies U.S. manufacturing business leaders use to offshore effectively to China. The target population included China-based business leaders, fluent in English, with at least a year of working experience with a U.S.-headquartered manufacturing organization. The two organizations highlighted in my research maintain their China-based manufacturing facilities in Shanghai and have a history of offshoring to China. I interviewed nine participants and reviewed related company literature to gain on-the-ground insights into offshoring investment strategies. I also conducted a thorough review of the academic literature regarding offshoring matters between the United States and China.

One limitation to this study was the geographical boundary placed on the participating companies, as I focused on Shanghai only. Regarding geographic size, the United States and China are similar; however, the cultural mix in China is so diverse, and each province is unique to one another. As such, the business practices and overall attractiveness for offshoring investments vary greatly. For example, if Guangzhou or Chengdu, also known as manufacturing hubs in China, become the focus areas, it is likely strategies will be different from the findings in this study. Given results might vary if alternative locations, instead of Shanghai, are examined, I recommend conducting further

research of different locations in China. After the research is complete, efforts should be made to determine if there are similarities from the U.S. offshoring perspective, to determine if investment patterns exist beyond provincial boundaries.

A second limitation of this study was the focus on large U.S. manufacturing organizations. A strength of the U.S. manufacturing sector is the company variances in size, output, and overall market position. As such, there are unique insights to be learned from the small-to-medium sized enterprises (SMEs) who offshore production to China as well. The TQM approach is a cornerstone of the U.S. manufacturing sector no matter the size of the organization, and this strategy is necessary to remain competitive for U.S. companies (Ngambi & Nkemkiafu, 2015). Future research could also consider the perspectives of SMEs, as the offshoring investment approach might be more conservative and focused on different factors when producing or assembling in China.

A third limitation of this study is the sample size of interview participants. Offshoring strategies encompass a myriad of approaches that aim to achieve both sustainable profitability and employee retention in the U.S. manufacturing sector. I selected nine participants from two organizations to share their perspectives and experiences within this scope. I believed a multiple case study was warranted to ensure balanced perspectives strengthened credibility to findings; however, perhaps two participating organizations was too narrow of a view. Due to the continuous evolving offshoring investment environment, I recommend further research to encompass 20-25 participants from 3-5 organizations. In this way, the researcher would be assured a robust result and appreciate the diversity of this complex strategy. A larger number of

participants and participating organizations will also allow the researcher to offset a key limitation of this research.

Finally, it would be interesting to compare the viewpoints of manufacturing leaders based in the home country to those assigned to the host country. This study considered only the perspectives of those working in the China subsidiaries, who are the recipients of U.S. offshoring investments. While the input from the China-based executives remained valuable and insightful; having the headquarters input in a similar research study might facilitate a more balanced outlook to the rationale behind such investments. During the participant interviews, I learned that each organization depends on specific departments within headquarters to set the offshoring strategy, and the overseas subsidiary leadership only provides limited input. Thus, in future studies, participation from home country executives might provide a much-needed angle to explore the implementation of offshoring strategies further.

These recommendations for further research offer an opportunity to explore this topic through alternative approaches. However, limitations within the research exist, and future studies should consider each chance to overcome them. Limitations can be both external and internal, and it is important to establish credibility to curtail research errors (Chong & Yeo, 2015). Circumventing participants with a known bias and focusing on those participants with direct access and experience to the desired information are two critical approaches to avoid future limitations. Through targeted discussions surrounding the central research question of my study, I ascertained unique findings related to manufacturing-related offshoring investments from the United States to China. While

outside the scope of this research, these four recommendations could provide additional depth to this topic.

Reflections

I had hoped to enroll in a DBA program since completing my MBA in 2000. However, over the course of the following 15 years, I shifted my focus from academic aspirations to professional as well as personal pursuits. Then, once my youngest child started her formal education, I began to research academic options and decided a DBA degree was the best fit across all aspects of my life. Although I have accumulated a comprehensive understanding of doing business in China over the past 25 years, I lacked a formal study to broaden my knowledge and perspective about a China-related topic. In retrospect, this pursuit at this time in my life was an ideal fit, and it challenged me in ways I did not imagine regarding achieving academic excellence and intellectual stimulation.

Selecting the topic for my doctoral study came naturally. The cyclical performance of the manufacturing sector influenced me since my childhood. My father worked for General Motors for 30 years, and he often spoke of the changes taking place related to offshoring American jobs. Also, the mystique of China has attracted me since I was a teenager, and as a Sophomore in college, I joined an eye-opening semester abroad in central China. In 2006, I moved to Shanghai, and have been working in China since then. The combined influences of my family and China throughout my adulthood has now intersected at this doctoral study. Exploring offshoring strategies from the United States to China in the manufacturing sector in a structured and scholarly way allowed me

to pursue my passion that has impacted all aspects of my life. In hindsight, I cannot think of a more suitable research topic, would give me the same drive and enthusiasm as this one has done for me.

Nevertheless, as I had direct exposure to neither U.S. offshoring results nor the Chinese rise in manufacturing output, I carried no preconceived ideas regarding the study topic. Although I understood challenges existed related to U.S. manufacturing offshoring to China, I took an unbiased approach throughout the research process, and the desire to understand more served as my driving motivation. I remained attentive throughout the entire research process to stay impartial. Based on my direct observations during the interviews, all participants seemed comfortable during the discussions, and they naturally answered each question to the best of their abilities, without bias.

During the review of current academic literature related to offshoring, I explored six subthemes that resulted in my study of over 200 peer-reviewed articles. The findings from the literature review formed the foundation of knowledge to prepare me for company interviews and concluding analysis. I had the privilege to speak with nine professionals working in two organizations whose organizations offshore to China. I also learned of the participants past and current experiences working in manufacturing in China. The DBA study process, which integrated various elements of research and independent thinking as well as required the ability to convey findings intellectually, positioned me to become an expert on a narrow topic of great interest to decision-makers in the two largest economies in the world.

Although I have devoted much of my personal and professional life to understanding better all elements defining the U.S.-China bilateral relationship, I gained new insights throughout this study. Before I began my research, I assumed reshoring production back to the United States would gain significant momentum and become critical to the success of manufacturing companies. However, reshoring does not appear to be an attractive alternative to producing in China and restoring a sector once plagued with an unfavorably competitive environment (Dolgui & Proth, 2013). I also learned technology transfer from the United States to China, as part of the offshoring investment, is real and increasing quickly. Findings revealed R&D-related headcount in China is second to the United States, and the overall investment in R&D has grown approximately 20% year-on-year (Bai & Li, 2011). Additionally, when conducting participant interviews, innovation remained a pivotal theme in China manufacturing, which reinforced the country's place as more than just being a member of the world's factory. Western companies in China are applying for more patents and investing in innovation; themes mentioned in both articles and interviews from this study.

My views on this topic have changed now that the study has been completed. In fact, I am convinced manufacturing offshoring is the lynchpin to harmonious economic cooperation between the United States and China. The experience I gained from this doctoral process was positive and has encouraged me to conduct additional research on this topic. I have learned of the importance to tailor each offshoring investment to the strategic need of the organization. While I leveraged the knowledge of scholars to advance and explore this topic, I anticipate future scholars will do the same with this

study. Given my unique access to the matters described in this study, I hope to continue to contribute to this topic for years to come.

Conclusion

The purpose of this qualitative, multiple case study was to explore economic strategies U.S. manufacturing leaders used to offshore effectively to China. The target population consisted of nine China-based business leaders who worked for two U.S. manufacturing multinational companies. The central research question was: What economic strategies do U.S. manufacturing business leaders use to offshore effectively to China? I used a triangulation collection technique, as I obtained data through semi-structured interviews, on-site observations, and company documentation review. I achieved data saturation, as no new information, explanations, or themes emerged from the data when I took these collection procedures.

The findings from this research underscored the importance to review existing offshoring strategies from the United States to China in the manufacturing sector. The traditional investment approach is no longer advantageous for U.S. executives, who are feeling the impact of increased costs of the Chinese worker and more stringent regulations of foreign companies, via trade barriers and the loss of formerly granted tax benefits. Also, a resurgence of nationalism in the United States has forced business leaders to rethink existing offshoring investments. Applying insights from both this research and other scholars findings might assist new strategies to improve the performance of those company's who offshore to China.

Taking the research time constraints and the previously-mentioned limitations

into consideration, this study simply explored strategies and findings might not apply to every U.S. manufacturing company that offshores to China. I believe the mentioned recommendations for action and additional research will contribute to offshoring strategies and social change. The research findings highlighted four themes for U.S. manufacturing companies making offshoring investments in China: (a) movement of innovation closer to production in China, (b) increased localization of legacy offshoring business, (c) enhancement of China-based cross-functional teams, and (d) incrementally investing to achieve production scale.

Based on my research findings and interview results, it is clear the new face of offshoring to China has emerged in the form of a bifurcated strategy that emboldens a local strategy while assuming a stronger leadership role in innovation and talent development. I recommend U.S. manufacturing leadership embrace sustainable concepts of what built the sector more than a century ago and reflect further on Deming's TQM theory to drive future success. A mutual appreciation of the manufacturing abilities in China and the United States among its business leaders equates to mutual success in the sector globally.

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Appendix A: Interview Protocol

Interview: Strategies for Effective Offshoring to China in the United States Manufacturing sector

1. I will begin each meeting by greeting and thanking the participants for agreeing to join the discussion. Next, I will introduce myself, share my objectives for the meeting, and explain the research topic to each participant.
2. I will explain the voluntary nature to participate and the flexibility to withdraw at any time.
3. I will ensure each participant reads and asks related questions before signing the informed consent form.
4. I will give participants a copy of the consent form to keep.
5. I will inform participants of the interview procedures, which involves the use of audio recording the interview.
6. I will aim to limit each interview to less than an hour, including the follow-up questions.
7. I will inform each participant I will share the transcribed interviews with them to ensure appropriate interpretation of their responses.
8. At the end of each interview, I will thank the participants for agreeing to take part in the research study.

Appendix B: Cooperation Letter

<Community Research Partner Name>
<Contact Information>

<Date>

Dear Mr. Klatte,

Based on my review of your research proposal, I at this moment permit you to conduct the study entitled U.S. Manufacturing Sector Strategies for Effective Offshoring to China. As part of this study, I authorize you to engage current company employee and review relevant company documents. Individuals' participation will be voluntary and at their discretion.

We understand our organization's responsibilities include allowing 6-8 English-speaking business leaders who are based in China and have worked for their organization for at least a year. If at any time, there are changes in circumstances related to this request, we reserve the right to withdraw from the study. Also, I confirm I am authorized to approve research in this setting, and this plan complies with the policies of the organization.

I understand the data collected will remain entirely confidential and might not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University Institutional Review Board (IRB).

Sincerely,

<Authorization Official>
<Contact Information>

Appendix C: Invitation Letter

<Address Block>

<Date>

Dear Sir/Madam,

I am currently pursuing a Doctorate in Business Administration at Walden University, and as part of my capstone doctoral study, I invite you to participate in a research study on U.S. Manufacturing Sector Strategies for Effective Offshoring to China. I have selected you to participate in my doctoral study, due to your professional experience and sector knowledge related to offshoring strategies to China. Nevertheless, your participation is voluntary and confidential. Please read the enclosed consent form and let me know if you have any questions before participating.

Your participation is dependent upon the following criteria: (a) English speaking business leader with China-related professional experience in a U.S. manufacturing company, and (b) having worked at your current organization for a minimum of a year. If you satisfy this criterion, kindly notify me via the contact information provided below. I will contact you again via phone to arrange the meeting.

The interview, which will not exceed an hour, will be audio-recorded and transcribed to ensure an accurate reflection of your responses. The interview location will be decided in advance, to ensure a secure setting. To validate completeness and accuracy of themes, I will share my interview transcript with you to confirm my interpretation of your responses.

Please do not hesitate to reach out to me with any preliminary questions, and thank you in advance for your assistance in my Doctoral research.

Sincerely,

Mr. Timothy Klatte
Doctoral Candidate
Walden University