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Project Manager Strategies to Improve the Delivery of Construction Projects

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This is to certify that the doctoral study by

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2018

Abstract

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

The return on investment of construction organizations is at risk because construction managers fail to execute projects efficiently. The purpose of this single case study was to explore strategies that construction managers used to deliver projects efficiently. The selected population was 10 construction managers from a single construction organization operating in Panama. The conceptual framework for this study was the McKinsey 7S. Data were collected using semistructured interviews, observations, and a review of public documents. Collected data were compiled, disassembled, reassembled, interpreted, and then conclusions were reached, as noted in Yin's 5-step analysis. Themes that emerged from the study included project experience, communication, collaboration, and resource management. Construction managers noted that the review of needed project experience in alignment with the complexity of the project is a strategy to deliver projects efficiently. Leaders of construction organizations can increase strategic performance by implementing collaboration and leadership programs in accordance with the business objectives. By improving labor productivity, construction companies can complete construction projects faster and with lower construction costs. The findings of this study could contribute to positive social change by providing communication and collaboration strategies between construction organizations and local communities to source local staff and resources. Construction managers might benefit from the findings of this study by increasing their project management skills, an effect that could result in long-term employability.

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Dedication

In loving memory of my father Luis Alberto Crespo, who provided me with the guidance to be a father and a professional engineer. I dedicate this study to my mother Dr. Mirna V. de Crespo. She gave me the support and taught me to achieve my goals through higher education and love. To my wife Karen Lee, for inspiring me through all the endless reviews and by giving me all her love during this important step in my life. To my children Lyan Grace, Gerard, and Daniela, for their sacrifice and inspiration through all the challenges of this journey. I also want to dedicate this study to my sister Kathia Crespo, and my nephew David Abrego, who were always there for me.

I dedicate this study to my friend Matt Harbison, who gave me the opportunity to be in this program and believed in changing people's lives through higher education.

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Section 1: Foundation of the Study

The construction industry is an important economic force in countries worldwide (Sfakianaki, 2015), particularly for developing countries (Zhu & Mostafavi, 2014). Potential economic drivers for the construction industry in developing countries include employment generation in local and remote locations, opportunities to more effectively manage resources, importation of raw materials, and incorporation of new technologies (Sfakianaki, 2015). To remain competitive, construction managers must constantly review and revise efficient project management strategies (Parker, Parsons, & Isharyanto, 2015).

Construction managers are not using efficient project management strategies, and as a result, they are failing to increase profitability and on-time project delivery (Akiner, 2014; Pekuri, Pekuri, & Haapasalo, 2015). In a developing economy such as Panama, the potential for repercussions of failed construction projects are significant. In Panama, the local construction industry´s activity in commercial development has increased due to the $5.3 billion investment from government and private capital from 2011 to 2016 (Kavarnou & Nanda, 2015). The construction industry requires construction managers that use project management methodologies and strategies to remain competitive and to support the growing economy in developing countries.

Background of the Problem

Project management activities such as budget control, quality assurance, scheduling, and resource management are fundamental considerations for construction managers in meeting customer requirements (Kissi, Ahadzie, & Cobbinah, 2015).

Construction managers use project management methodologies and standards—such as effective timeline management, bidding techniques, human resources, and inspections—to improve the on-time completion rate of successful projects (Kissi et al., 2015). Construction managers select project management strategies to increase business advantages and adapt to new challenges (Eskerod & Huemann, 2013). Planning efficient project management strategies should include integration of resource management, on-time delivery, and financial targets aligned with the scope of the project (Akiner, 2014).

Construction managers rely on a variety of financial and resource management strategies to improve the success rate of projects (Pekuri et al., 2015). Construction managers experience difficulty when adopting and executing strategies to ensure an on time, profitable, and successful delivery of selected projects (Akiner, 2014; Terrell & Rosenbusch, 2013). Construction managers need to consider a series of factors including long-term financial development indicators, sustainability plans, and new market segments (Wong, Kumaraswamy, Mahesh, & Ling, 2014). Heravi and Ilbeigi (2012) posited that construction industry leaders must constantly evaluate strategies that construction managers use to deliver projects.

With a population of more than 1.6 million inhabitants, Panama is one of the largest economies in Central America and the economy has been facing a fast-developing upward trend in construction over the last 10 years (Kavarnou & Nanda, 2015). The expansion of the Panama Canal, new metro lines, commercial development, and government housing solutions are the main drivers of the construction industry in Panama

(Sohn, 2016). There is a need to explore project management strategies used by construction managers in Panama to deliver on time, profitable projects.

According to Teh and Corbitt (2015), business leaders are implementing the McKinsey 7S framework to improve project management strategies. The purpose of this framework is to provide an efficient analysis of the organization through the interconnection of and alignment with these elements: structure, systems, strategies, skills, styles, staff, and superordinate goals (Singh, 2013). Although organizations can measure project changes with the McKinsey 7S framework, information is limited to the identification of specific strategies required for efficient delivery of projects (Teh & Corbitt, 2015). Further exploration of strategies to deliver projects efficiently in the construction industry is the purpose of this research.

Problem Statement

The future of the return on investment (ROI) of construction organizations is at risk if construction managers fail to execute projects efficiently (Oyewobi, Windapo, & Rotimi, 2015). Construction managers are spending 70% of their time on remedial project activities, and construction organizations report that their project profitability has decreased by $1.2 million (Akiner, 2014). The general business problem is the inefficient delivery of projects, which puts organization profitability and ROI at risk. The specific business problem is that some construction managers lack strategies to deliver projects efficiently.

Purpose Statement

The purpose of this qualitative single case study was to explore strategies construction managers use to deliver projects efficiently. The specific population was 10 experienced construction managers from a single company in Panama who had successfully implemented strategies to deliver projects. Data collection consisted of interviews and a review of archived construction project management documents, such as project charters, project plans, organizational strategies, and other records. The implications of positive social change included the potential to improve construction managers' strategies to deliver projects efficiently, which in turn, could increase managers' job security and benefits to local communities.

Nature of the Study

I selected the qualitative research method to explore the strategies that construction managers use to deliver projects efficiently. Karim Jallow, Demian, Baldwin, and Anumba (2014) argued that the use of the qualitative methodology is appropriate to understand the strategies to deliver projects efficiently. Researchers use the qualitative method to better understand the *how* and *why* of the characteristics of a phenomenon through the analysis of open-ended questions, observations, coding, and methodological triangulation (Fusch, Fusch, & Ness, 2018; Karim Jallow et al., 2014; Yin, 2017). In contrast, researchers use the quantitative method to validate relationships among variables by testing hypotheses (Heravi & Ilbeigi, 2012). The quantitative method was not appropriate because I did not test relationships among variables. The mixed method research combines qualitative and quantitative analysis to strengthen the

validation of the results requiring an increment in the needed resources and time (Venkatesh, Brown, & Bala, 2013). The mixed method was not appropriate for this research as the specific business problem was not to validate relationships among variables or numerical analysis.

I selected a single case study design because the purpose of the research was to explore the real-life context of the strategies that construction managers use to deliver projects efficiently. The case-study design is exploratory at its core and researchers use it to understand the results for a more in-depth analysis of the what, why, or how of a research problem in real-life settings (Bigliardi, Galati, & Petroni, 2014; Yin, 2017). Selecting a case-study design enables the researcher to explore a particular problem over a period and to identify possible solutions through the development of the research (Sinkovics & Alfoldi, 2012; Yin, 2017). The phenomenological design is used by researchers to explore a phenomenon experienced by the collective experiences of multiple individuals (Marshall & Rossman, 2016). The phenomenological design was not appropriate, as exploring the collective experience of a phenomenon was not an element of this research. Researchers use the ethnographic design to explore through the observation of cultural groups, within a local or global context, the characteristics of a problem (Mannay & Morgan, 2014). The ethnographic design was not appropriate because it was not the intent of the study to explore the cultural settings of the problem.

Research Question

The research question for this case study was: What strategies are construction managers using to deliver projects efficiently?

Interview Questions

The goal of a semistructured interview in a qualitative case study is to collect rich and meaningful data (Yin, 2017; Ziek & Anderson, 2015). I used the following interview questions that were in alignment with the exploration of strategies to deliver projects efficiently in the construction industry:

1. What is your participation in the creation of strategies to deliver projects efficiently?
2. What strategies do you use to deliver projects efficiently?
3. How do you identify strategies that worked best to deliver projects efficiently?
4. Please describe how did you improve previous strategies to deliver projects efficiently.
5. What elements are part of your strategies to deliver projects efficiently?
6. How does the organization communicate strategies that will efficiently deliver projects?
7. What difficulties do you experience when applying new strategies to construction projects?
8. What additional information would you like to share about the strategies required to deliver projects efficiently?

Conceptual Framework

Waterman and Peters developed the McKinsey 7S framework in the early 1980s (Waterman, Peters, & Phillips, 1980). The seven elements of the McKinsey 7S framework are (a) systems, (b) strategy, (c) structure, (d) style, (e) staff, (f) skills, and (g)

shared values (Waterman et al., 1980). Skills, staff, and strategy are among the most important aspects of achieving superordinate goals using the McKinsey 7S framework (Waterman et al., 1980). Parker, Verlinden, Nussey, Ford, and Pathak (2013) noted that the competencies and capabilities of individuals are influential elements of the skills element in the McKinsey 7S framework. The construction industry is increasingly complex and relies on strategies to efficiently manage resources, skills, and deliver projects (Parker et al., 2015). Singh (2013) explained that using the McKinsey 7S framework could lead to exploring strategies used by construction managers to deliver projects efficiently.

Operational Definitions

Construction managers: Construction managers are strategic and operational leaders who oversee construction projects and are responsible for effective resource management, quality assurance, schedule management, risk management, and financial controls, to monitor the performance of the project (Wang, Xu, Zhang, & Chen, 2016).

Construction schedule: The construction schedule forecasts the possible duration of a construction project within the limitations of efficient management of the available resources (Warburton & Cioffi, 2016).

Core competencies: Core competencies are a combination of knowledge, skills, and production techniques to achieve competitive advantages over changing circumstances that may become part of new business strategies (Jurksiene & Pundziene, 2016).

Shared values: Shared values serve as the interconnecting element between the soft and hard elements of the McKinsey 7S framework by helping in the improvement of the operational balance between excellence and profitability (Dahlgaard-Park & Dahlgaard, 2007).

Strategic management: Strategic management is an organizational process that incorporates cost-efficient decisions, organizational characteristics, and differentiation to provide a performance advantage over business competitors (Oyewobi, Windapo, Rotimi, & Jimoh, 2016).

Value-based management: Value-based management is a managerial effort that combines strategies, processes, decision-making stages, and metrics to monitor business performance through a constant revision of investment and profitability at a management level (Firk, Schrapp, & Wolff, 2016).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are implicit or tacit speculations that the researcher trusts to be fact, but cannot verify (Grant, 2014). I assumed that construction managers participated in planning and creating strategies for the efficient delivery of projects. My final assumption was that the review and analysis of external documentation as suggested by Cupic (2015) could be useful as a risk mitigation tool during the data analysis.

Limitations

Limitations are validation factors that affect the scope of the study and restrict the research (Connelly, 2013). The internal and external limitations included elements such

as sample size, gaps in the literature, and data collection techniques (Connelly, 2013). The availability of a construction organization within a 50-mile radius of the capital of Panama that had experience in the construction industry was a limitation in the selection of a single construction organization. The final limitation of my study was concerns about the completeness of the data issued by different sources, including interviews, documents, and observations as suggested by Houghton, Casey, Shaw, and Murphy (2013).

Delimitations

Delimitations are elements of the research that intentionally limit the scope and could affect the validity of the findings (Ellis & Levy, 2009; Podsakoff, MacKenzie, & Podsakoff, 2012). Yin (2017) and Marshall and Rossman (2016) identified delimitations as boundaries relevant to the study and within a researcher's control. A delimitation of this study was the selection of construction managers with a degree in civil engineering. I limited the selection criteria to a single organization from the construction industry in Panama with proven experience to deliver projects efficiently. The selection of senior construction managers who participate in the execution of strategies was a delimitation in the scope of this study.

Significance of the Study

Contribution to Business Practice

Construction projects are among the most important economic activities driving development in countries around the world (Idris, Nita, & Godwin, 2015). Construction managers who develop successful construction projects increase profitability and reduce

costs (Oyewobi et al., 2015). This study could benefit the construction organization by providing insights that would enable a construction manager to improve strategic management. This study could improve the identification of strategies to deliver projects efficiently by enhancing the understanding of the McKinsey 7S framework as a construction management tool.

Implications for Social Change

Human resource represents a valuable asset to the construction industry and a significant driving factor behind the development of internal and external policies for social responsibility (Lima & Wood, 2014). The effect of the growing construction industry in Panama is displacing communities and limiting access to natural resources (Sohn, 2016). By implementing sustainable business strategies that include social purpose, implementations, and outcomes, construction managers could benefit construction organizations by creating a partnership with local communities to improve local conditions and foster social development (Chell, Spence, Perrini, & Harris, 2014; Sigler, 2014). The implications of social change have the potential to improve construction managers' strategies to deliver projects efficiently, which in turn, could increase both job security and benefits to local communities (Chang-Lin & Yu-Ping, 2016).

A Review of the Professional and Academic Literature

Construction organizations develop efficient strategies for maximizing resource management, proper planning to achieve business superiority, adaptation to market changes, and achieve financial sustainability (Florence Yean & Lee, 2012). The contents

of the literature review include a critical and concise analysis of current professional and academic views on strategies for the construction industry. The review includes seminal works, peer-reviewed articles, professional journals, and government publications. The strength of the review is in the selection and assessment of critical references that built a knowledge base to support and justify this research (Seuring & Gold, 2012).

The selection of databases and keywords in alignment with the research was an essential strategy for building the literature review. I searched databases from different sources, including ProQuest Central Database, SAGE Premier, ABI/INFORM, Business Source Complete, Google Scholar, and Emerald Management Journals. The primary research terms were *McKinsey, 7S*, *strategies*, *strategic planning*, *construction management*, *financial success*, *on-time constraints*, *project management*, *excellence*, *knowledge management*, *value-based management*, *competitive advantage*, and *cultural diversity*. The total number of peer-reviewed articles in the literature review was 101. Of the total of peer-reviewed articles in the literature review, 92 articles, representing 90% of the total, were published within 5 years of the anticipated completion date (Table 1).

Table 1

Literature Review Source Content

Reference type	Total	<5 years	>5 years	%total <5 years
Peer-reviewed journals	101	92	9	90
Dissertations	0	0	0	0
Books	1	1	0	1
Non-peer reviewed journals	0	0	0	0
Total	102	93	9	91

I began the literature review with an overview of the construction industry in Panama, followed by a description of the McKinsey 7S framework and the elements that are aligned with various strategies of the construction industry. I researched the major topics of strategies, including challenges, financial success, on-time execution, and project management applications. I concluded the literature review with an analysis of opposing views of the conceptual framework and potential risks for current business conditions.

Overview of the Construction Industry in Panama

The Panama Canal is a strategic pass through the Isthmus of Panama and has a direct effect on commercial trading routes and global economic alliances (Sanchez, 2015). After the United States completed construction of the Panama Canal in 1914, the creation of the Canal Zone and selection of the United States dollar as a major currency led to Panama's major business partnership and alliance with the United States (Sigler, 2014). The population of Panama is 3.9 million and is one of the smallest countries in Central America. Panama is the economic leader in the region and follows the economic agglomeration model of services coming from Panama (Sigler, 2014). Economic and industry leaders in Panama use the agglomeration model to expand the capacity and infrastructure of the canal, and an increase in construction has a direct financial effect on the local economy (Sigler, 2014). The construction industry in Panama includes projects that range from the expansion of the Panama Canal to private sector commercial and housing projects for different segments of the population (Sohn, 2016). Government projects in the construction industry include the expansion of the canal with a new bridge

at each end of the oceanic passage, new metro lines for the western region of the capital, and several new infrastructures for promoting tourism (Sohn, 2016).

The objective of businesses in the construction industry in Panama is to generate solid projects that will be financially sustainable and will continue to grow. For the last five years, the construction industry in Panama has generated more than $5.3 billion in investment, which contributes directly to the increase of the gross domestic product of $52 billion (Kavarnou & Nanda, 2015). The 5.8% increase in the Panamanian economy in 2015 and a positive forecast for the next five years indicate that the construction industry could be the largest employment generator in the country (Kavarnou & Nanda, 2015). Construction company leaders are not achieving the next level of sustainable performance which leads to explore successful strategies in the construction industry (Ali & Abdul-Rahman, 2014).

The McKinsey 7S Framework

Organizations exist as a means to implement tasks needed to reach profitable and sustainable levels (Waterman et al., 1980). For academic theorists and business leaders, the business structure is moving away from organizational performance because of differences in efficiency, strategies, and execution (Waterman et al., 1980). Construction organizations operate in a highly competitive industry, and leaders must constantly develop strategies to achieve higher performance. Waterman et al. (1980) indicated that organizational leaders should include the development of systems and strategies as elements to add value to the organization.

Waterman et al. (1980) argued that the McKinsey 7S framework begins with the integration of strategies and organizational structure as critical points to reach a higher business performance (Waterman et al., 1980). The inclusion of strategy and structure only as elements of a business plan that follows the McKinsey 7S framework is not adequate, and leaders need to include other variables to improve longevity and business advantage (Waterman et al., 1980). The main concept of adding elements to the initial strategy and structure elements offers a building ground for interactivity and adaptability to changes in the organization. The McKinsey 7S framework and the interconnection among the elements of structure, systems, strategies, skills, styles, staff, and superordinate goals, the center of the interactivity are displayed in Figure 1 (Waterman et al., 1980).

Waterman et al. (1980) described the McKinsey 7S framework as an interaction of hard and soft elements around the superordinate goals. The hard elements are manageable by the organization policies and include structure, systems, and strategies (Waterman et al., 1980). The soft elements are influenced by the organizational culture and less tangible than the hard elements of the model (Waterman et al., 1980). The soft elements of the McKinsey 7S framework are skills, style, staff, and superordinate goals (Waterman et al., 1980).

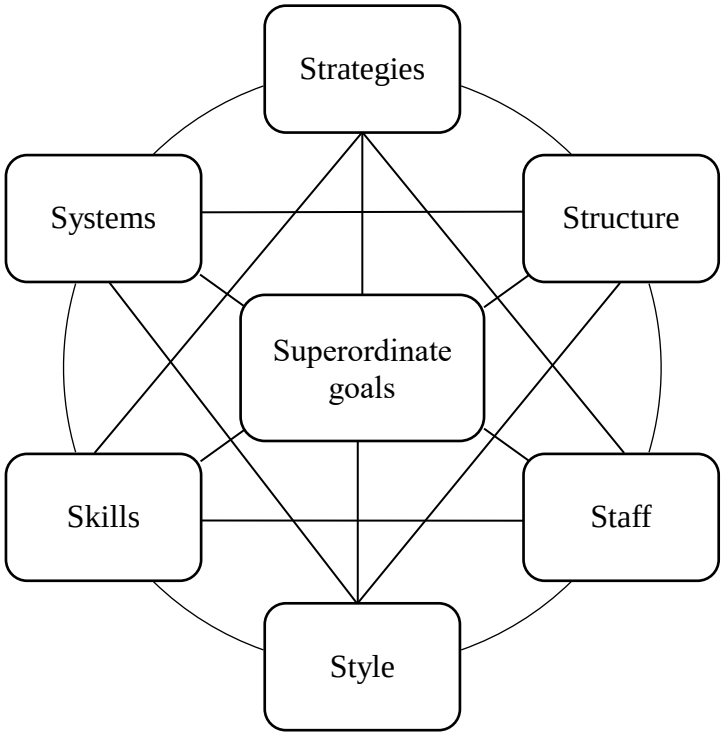

Figure 1. The McKinsey 7S framework with its interconnecting elements (Waterman et al., 1980).

The Hard Elements of the McKinsey 7S Framework

The hard elements of the McKinsey 7S framework are structure, system, and strategy (Waterman et al., 1980). The hard elements are measurable, manageable, and accountable components of the organization (Waterman et al., 1980). Dahlgaard-Park and Dahlgaard (2007) argued that the hard elements are a combination of tools and processes that require an effective balance of the interactions of the McKinsey 7S framework. The review of the hard elements of the McKinsey 7S framework could provide a better understanding of the application of the conceptual framework with the purpose of exploring strategies to deliver projects efficiently.

The structure element. The structure element of the McKinsey 7S framework was designed to drive changes and interactions between the seven areas by segmenting them in manageable parts to achieve effective organizational goals (Waterman et al., 1980). The interaction between the seven elements does not have starting or endpoints because organizations during the creation of a business plan will require different actions and solutions for effective performance (Barclay & Benson, 1990; Waterman et al., 1980).

Waterman et al. (1980) argued that *structure*, a McKinsey 7S hard element, defines the organizational state, in which functions and priorities drive results through the creation of an efficient matrix-type organization. Organizations using a matrix-style structure can adapt to temporary endeavors while also maintaining the core form of the structure. The flexibility and adaptability required for new businesses are related to the construction industry taking on projects of different segments to maximize business differentiation (Teh & Corbitt, 2015; Waterman et al., 1980).

Structure, as a hard element in the McKinsey 7S framework, connects the subdivisions of hierarchy and management style to the success of the alignment of the organization (Teh & Corbitt, 2015). The work of Barclay and Benson (1990) supported the structure element as a subsystem for the identification of flaws that could hinder the process of incorporating changes needed for efficient management. The selection of a structure with flexible and adaptive change management characteristics may result in achieving a performance advantage over competitors (Barclay & Benson, 1990; Waterman et al., 1980). Barclay and Benson supported using the McKinsey 7S

framework in endeavors such as new product launches, change management, and to adopt new strategies to enable an organization to work as one entity instead of distinct functions segmentation. The structure of an organization is influential for leaders selecting resources and management layers that contribute to business differentiation and competitive advantage (Teh & Corbitt, 2015).

The system element. The system is a hard element in the McKinsey 7S framework and includes tangible management activities (Barclay & Benson, 1990; Waterman et al., 1980). Waterman et al. (1980) argued that leaders in an organization should review their procedures for achieving business goals, as well as the individuals that execute them. Systems in the McKinsey 7S framework include the current policies and procedures of an organization within the administrative structure of human resources (Barclay & Benson, 1990; Waterman et al., 1980). From the project manager's perspective, the system elements include communication, policies, performance evaluation, and methods for improving efficient execution of projects (Barclay & Benson, 1990; Teh & Corbitt, 2015; Waterman et al., 1980). The organization from the perspective of a synergistic connection of subsystems that include procedures and resources allows the use of the McKinsey 7S framework as an integrator of organizational strengths (D'Aveni, Canger, & Doyle, 1995).

D'Aveni et al. (1995) argued that systems should include actions that can prepare the organization for speed and readiness when the customer needs change. The opportunity to excel when responding to a disruption in the business market is an advantage of the use of a flexible system (D'Aveni et al., 1995; Waterman et al., 1980).

Construction organizations should seize the initiative to create flexible systems for the anticipation of a competitor's move. Although the perspective of D'Aveni et al. on the McKinsey 7S emphasizes improving the relationship between quality and hypercompetition, new organizations are not making the necessary changes to align their strategies to correct alignment problems is their systems. Construction managers divide activities, processes, and integrations in alignment within the current organizational systems to prepare for changes in the management of projects.

Tracking activities and communication are the primary actions that construction managers could use to improve performance levels. Junarsin (2012) examined the use of competitive advantage by the interactivity between customer satisfaction, product excellence, and systems readiness. As competitors within the construction industry become more creative and influential in adopting new management methods, the on-time delivery of the project and achievement of customer requirements is an essential factor for the review of organization's performance systems (Junarsin, 2012). The leaders of bureaucratic organizational systems should try to incorporate and make prevalent new processes with increased efficiency (Junarsin, 2012). Leaders must also consider a proper structural context that complements sustainable strategies, such as the inclusion of the McKinsey 7S framework to manage new procedures for tracking and reaching customer requirements (Junarsin, 2012).

The strategy element. The strategy is the third and final hard element in the McKinsey 7S framework. An effective strategy is essential for organizations to grow and to achieve a higher rate of success. Sun Tzu's classic work on strategy, The Art of War,

defined strategy as a series of proportionated actions and means to achieve an objective (Pars, 2013). Sun Tzu's strategy is to achieve success by observing the competition and outmaneuvering competitors through efficient resource management (Iqbal, 2016). Construction businesses are in a constant state of competition for market capitalization and could gain an advantage from the selection of effective strategies that includes organizational collaboration (Glowacki-Dudka & Murray, 2015).

Waterman et al. (1980) posited that strategies, as presented in the McKinsey 7S framework, are planned actions and methods that can provide a competitive advantage and improve performance. Organization leaders choose strategies that will encompass resources, objectives, financial restraints, and other requirements to achieve executive goals (Waterman et al., 1980). Selecting a strategy and securing necessary financial funds are two essential elements in managing competitors and customers. Leaders in mature organizations who focus on systems that follow strategic plans to achieve competitive advantage, ensure that all procedures and policies are aligned with selected goals (Waterman et al., 1980). The strategy element under the McKinsey 7S provides faster recognition of the necessary structure and system to improve competitive advantage (Waterman et al., 1980).

Feurer and Chaharbaghi (1995) described the importance of strategic planning to reach superior business goals while adapting resources in a competitive environment. Feurer and Chaharbaghi argued that the means to understand internal actions that lead to change performance is in the identification of hard and soft elements of the organization. During the process of strategic planning, organization leaders follow a preliminary

analysis of environmental conditions, distinctive competence, resources, opportunities, and risks (Feurer & Chaharbaghi, 1995). The analysis serves as the basis for strategic development and plan for adjustments needed to achieve the proposed goals. The construction industry is in a constant competitive stage where resources, markets, environment, and customer requirement changes leading to the creation of flexible strategies by the construction managers (Feurer & Chaharbaghi, 1995; Oyewobi et al., 2015).

Oyewobi et al. (2015) argued that construction managers select strategies based on individual attributes of projects to reach financial success. Although some scholars dispute that financial performance is not the only success marker, Oyewobi et al. explained that differentiation and the cost of leadership as part of strategic management lead to improved organizational performance. Adding elements of the McKinsey 7S framework such as structure and strategy supports the inclusion of tracking performance, quality, innovation, and market segmentation as elements for strategic planning (Oyewobi et al., 2015). Construction organizations can differentiate themselves by selecting strategies that focus on tracking performance and improving quality plans.

In the McKinsey 7S framework, the strategy is a hard element essential to creating the vision of the organization (Waterman et al., 1980). Hitt (1996) supported the 7S framework by the revision of organizational subsystems to include the elements of strategy, structure, and vision. The holistic view of the organization strategies and subsystems is in constant interaction supporting business sustainability (Hitt, 1996). The use of collective learning as an organizational interaction between subsystems improves

the use of strategies in the McKinsey 7S framework (Hitt, 1996). Limwichitr, Broady-Preston, and Ellis (2015) supported the work of Hitt and Waterman et al. 7S model by demonstrating that organizations benefit from the use of collective learning as part of the successful implementation of strategies. The selection of strategies and systems as formal elements in the organization contribute to the creation of a vision and reaching a higher competitive level (Limwichitr et al., 2015).

As construction managers perform the actions needed to execute a project, organization leaders track project progress in alignment to organizational goals. Limwichitr et al. (2015) contended that organizational leaders merge strategies to other subsystems, such as structure, culture, and implementation, to prepare for changes in the business environment. Schoemaker and Krupp (2015) argued that strategy comprises several elements such as anticipation, interpretation, challenge, and alignment. Anticipation and interpretation of upcoming challenges are easier for organizational leaders to model and align by using the McKinsey 7S (Limwichitr et al., 2015; Schoemaker & Krupp, 2015). Schoemaker and Krupp noted that organizational leaders that drive core businesses should identify strategic traits at the management level as part of the next active element of collective learning inside the organization. Construction managers communicate strategies as part of the collective learning to align and assess current objectives.

The purpose of an efficient selection of competitive strategies is to establish business differentiation and success factors (El Sawalhi & Shrair, 2014). The use of the McKinsey 7S framework fosters the creation of interactions to review competitive

strategies. El Sawalhi and Shrair found that construction managers select competitive strategies to drive sustainable and efficient projects. Competitive strategies in the construction industry include the review of market conditions, the internal capacity to challenge competition, a master program of execution, and competitive bidding (El Sawalhi & Shrair, 2014). El Sawalhi and Shrair argued that competitive strategies should consider the characteristics of the organization along with the technical and core competencies needed by the staff to manage different elements of the construction industry. Drouin and Jugdev (2013) supported the use of competitive strategies as a link between operational efficiency and efficient resource management as an underlying factor for strategic planning. Resource management, value-based management, and identification of behaviors of external competitors are part of the core analysis for using the 7S model to drive competitive strategies in the organization (Limwichitr et al., 2015; Rausch, Halfhill, Sherman, & Washbush, 2001; Waterman et al., 1980).

The strategy element remarks that achievement of business superiority results from constant interaction with the other six elements of the McKinsey 7S framework (Waterman et al., 1980). Alshaher (2013) supported the use of three strategic factors as denoted by Waterman et al. (1980) and Rouhani and Zare Ravasan (2012): (a) mission and vision, (b) objectives, and (c) strategic plans. First, the vision and mission of the organization are essential components of the strategy element of the McKinsey 7S framework (Rausch et al., 2001; Rouhani & Zare Ravasan, 2012; Waterman et al., 1980). The effective alignment of the vision and mission with the organizational goals, and the methods to achieve them, to gain a business advantage over competitors (O'Shannassy,

2016). Second, objectives as part of the strategy element include culture and social responsibility as critical factors for success (Rouhani & Zare Ravasan, 2012; Van Cranenburgh, Liket, & Roome, 2013). The third factor is the strategic plan and requires that the organization leaders remain flexible and accessible to predict and respond to market changes (Rouhani & Zare Ravasan, 2012). The addition of strategic factors including the vision and mission of the organization, objectives, and strategic plans contribute to reaching a higher level of performance in the McKinsey 7S framework (Horn & Brem, 2013; Rouhani & Zare Ravasan, 2012; Waterman et al., 1980).

Construction organizations support the use of strategic responses to market changes and efficient resource management while meeting customer requirements. The development of the element of strategy as part of the strategic plan of the organization may include the level of responsive and readiness of the organization to changes in the business environment (Alshaher, 2013; Horn & Brem, 2013). The strategic plan of the organization should start with the alignment of the mission statement and the necessary management resources to create an effective response to changes and guidance to achieve objectives (Alshaher, 2013). From the construction and project management perspective, the inclusion of a strategic plan that sequentially considers mission and vision, objectives, and the strategy to achieve them is feasible and productive (Sánchez & Schneider, 2014). The strategic dimension of the 7S model viewed through the lens of construction managers should include a series of guidelines related to resource management, construction schedule, customer requirements, value-based management, and business

objectives, to strengthen project activities (Firk, Schrapp, & Wolff, 2016; Sánchez & Schneider, 2014).

The hard elements of the McKinsey 7S framework integrate strategy, structures, and systems as highly measurable dimensions of modern organizations, which are in constant development to achieve business efficiency (Alshaher, 2013; Teh & Corbitt, 2015; Waterman et al., 1980). Construction industry leaders can adapt to changes and improve the ability to anticipate them by focusing and aligning strategies with the mission and vision of the organization. An analysis of the components of the dimension of strategy in the 7S model indicates that businesses may improve the execution of interactive and dynamic plans that select objectives and align them with the organizational systems and structures (Teh & Corbitt, 2015).

The Soft Elements of the McKinsey 7S framework

The soft elements of the McKinsey 7S framework are skills, style, staff, and superordinate goals (Alshaher, 2013; Waterman et al., 1980). The soft elements are difficult to measure and require a strong managerial effort to use them effectively in project management (Alshaher, 2013; Waterman et al., 1980). The fundamental concept of the McKinsey 7S framework is the constant interaction and mutually reinforcing actions of the seven elements (Waterman et al., 1980). The soft elements fall within the operational scope of the human resource management process of the organization, which contributes to creating a strategic plan for implementation and improvement (Alshaher, 2013; Jankalová, 2013).

From the construction managers' perspective, a project is a series of actions and resources, limited by time and budget, to accomplish a specific business requirement (PMI, 2014). The soft elements of skills, staff, and style or culture involve selecting and improving resources. Jankalová (2013) explained that business success factors including innovation, social responsibility, customer satisfaction, and satisfaction of employees in organizations are in alignment with the soft elements of the McKinsey 7S framework. The interdependent factors of the 7S model interact to support the efficient use of resources as part of the effective project management method (Jankalová, 2013; PMI, 2014). As the soft elements of the McKinsey 7S framework are in constant interaction with the hard elements, construction companies using project management procedures should plan for a need to review business objectives and supporting resource management strategies.

The skills element. The literature defined skills as the knowledge to perform activities with a level of expertise (Alshaher, 2013; Windapo, 2016). Project management is a comprehensive set of guidelines, skills, and requirements to complete a project under certain conditions. Waterman et al. (1980) argued that skills are attributes or competencies allowing the best performance in business conditions and for creating a distinctive organization. Adding new capabilities or skills to the organization contributes an ability to explore new opening markets and remove unnecessary markets (Waterman et al., 1980). The selection of skilled people could increase the potential success of the project.

Waterman et al. (1980) argued that skills are soft elements of the McKinsey 7S framework and that they are flexible and able to support the interactions between the rest of the elements. The skills element from the project-management perspective has both hard and soft attributes (PMI, 2014; Windapo, 2016). The hard skills include technical competencies and expertise which are in accordance with the characteristics of the function or business orientation of the organization (Hannan, 2015; PMI, 2014; Windapo, 2016). Soft skills encompass a range of attributes of self-management skills and people skills that can serve as an effective guideline for improving performance in business (Hannan, 2015). Waterman et al. argued that leaders must actively and constantly monitor skills as part of the 7S model to identify the possible corrections for improving performance. Hannan supported the concept that skills are valuable for the organization as part of the management core competencies, and constant skills evaluation can be helpful to avoid project failures in an operational setting.

The construction industry is a labor-intensive economic activity that requires a broad range of skills for successful completion of projects (Hannan, 2015). Construction industries respond to competition by reducing production costs, strategically managing resources, and constantly reviewing the skills needed to increase business differentiation (Shiri, Anvari, & Soltani, 2015). The staff element of the McKinsey 7S expands on factors of common understandings, commitment to the project, attitude of senior management, education, senior management skills, user skills, support personnel skills, and effective human resource management (Shiri et al., 2015). Senior management support and user skills are two limiting elements for executing strategies (Saleh, Abbad,

& Al-Shehri, 2013; Shiri et al., 2015). Construction managers rely on strategic skills from upper management to secure economically feasible projects and support personnel skills in the organization to execute the project with a proficient level. Saleh et al. added that organizations successfully implement strategies to review and improve the skills of project teams by verifying knowledge, abilities, communication, and leadership as part of the competencies of completing projects.

The competitive market of the construction industry is in constant development, with companies building on internal skills to adapt and achieve competitive advantage (Arora, 2016). Actively using strategies that could become useful to prepare for a market opportunity or to adjust for a challenging project, for example, is an element that could include skills management with the support of strategic human resource management (Arora, 2016). Soft skills such as communications, leadership, innovation, and knowledge transfer are tied directly to organizational goals in the trend of human-performance improvement (Arora, 2016). The use of human-performance improvement is in alignment with the strategic content of the skills element in the McKinsey 7S framework, as it helps to identify performance gaps in needed expertise and an opportunity to improve through constant monitoring (Arora, 2016; Matteson, Anderson, & Boyden, 2016). Project-oriented organizations should plan for a continuous review of the variety of skills needed to maintain a competitive edge in both soft and hard areas of their business.

Strategies and skills are essential elements for managers implementing projects in the construction industry (Matteson et al., 2016; Parker et al., 2013; Senaratne &

Samaraweera, 2015). Nevertheless, the hard skills that managers possess are difficult to adapt if the organization changes its approach to business, leading to a decreasing performance effort in the project (Matteson et al., 2016). In this sense, changes in managerial skills must precede the evaluation of the strategic objectives of the organization (Domínguez-CC & Barroso-Castro, 2017). The skills element of the McKinsey 7S framework strengthens the strategic vision of the organization by the support of best practices and adaptation to changes in the competitive field (Domínguez-CC & Barroso-Castro, 2017). The possibility of exploiting both hard and soft skills while including them in organizational strategies could help a project management team to improve performance in the organization (Domínguez-CC & Barroso-Castro, 2017; Marx, 2015).

Strategic skills management is a requirement for keeping an organization competitive and sustainable. Organizations should focus on developing the hard and soft skills of managers to successfully advance a strategic collaboration effort between their business objectives and the resources available to maximize success (Glowacki-Dudka & Murray, 2015). Managing the element of skills in the McKinsey 7S framework requires that organization leaders engage in monitoring and adjusting to what is successfully working to meet the business requirement. Creating a collaborative organization by selecting and engaging strategies, skills, and objectives to create a business advantage as well as a culture of performance improvement contributes to supporting excellence in the organization (Glowacki-Dudka & Murray, 2015).

The style element. The element of style in the McKinsey 7S framework is

defined as the characteristics of an organization's culture and the interactivity between management actions and strategies (Waterman et al., 1980). Waterman et al. suggested that the two main attributes of style are its ability to change organizational performance and strategic orientation. The contents of the element of style include leadership type, innovation, and communication as part of the strategic management concept to achieve business objectives (Idris et al., 2015; Waterman et al., 1980). The element of style represents a collection of the differences in cultural diversity that supports reaching operational objectives (Idris et al., 2015).

Construction managers execute projects in a diverse cultural environment. Pasaribu (2015) contributed to the element of culture or style by supporting the use of leadership and human resource management as drivers for efficient project management. The use of encouragement, rewards, training, and leadership as factors of human resource management supports the integration of the style element to increase organizational performance (Pasaribu, 2015). Construction managers might include the element of style to increase the level of success while adapting to a different cultural environment.

Alshaher (2013) noted that leadership, communications, organizational culture, and executive support are four factors that can drive performance within the element of style in the 7S model. Leadership, in strategic terms, is the ability to influence individuals to achieve a business objective (Alshaher, 2013). Buvik and Rolfsen (2015) added that a leadership style follows the organizational culture for building lines of trust and communication between project members. Construction organizations use transformational leadership and effective communication to drive innovation and

strategic knowledge to increase business performance (Krog & Govender, 2015). Communication is a critical factor in the development of efficient teams and leadership programs that influence business performance (Senaratne & Samaraweera, 2015). Construction managers drive and engage the cultural environment of the organization and executive support to implement active engagement and support from the project team (Senaratne & Samaraweera, 2015).

Waterman et al. (1980) posited that the style or cultural element in the McKinsey 7S framework could function as an identifier for participation, effective leadership, and group differentiation regarding team activities. Construction managers measure effective leadership and active team participation as metrics of the element of style (Zarei, Chaghouee, & Ghapanchi, 2014). The use of nominal teams, identification, and problem-solving are part of the group differentiation characteristics of the elements of style in the McKinsey 7S framework (Zarei et al., 2014). Construction managers need to identify and implement a cultural differentiation plan to improve project efficiency.

Zarei et al. (2014) indicated that including a human resource plan that follows the McKinsey 7S framework provides an accurate diagnosis of the style element of the organization and increase business success. The diagnosis of the style element includes measurement of effective human resource management and the influence in reaching the goals of the project (Ghapanchi & Aurum, 2012). The development of human resource management from a firm diagnosis includes leadership behavior, and a robust relationship with the organization's cultural style (Ghapanchi & Aurum, 2012).

The staff element. The staff, as a soft factor of the McKinsey 7S framework,

includes guidelines and concepts for the development of a management workforce with a high level of performance (Waterman et al., 1980). The staff element includes organizational actions such as selecting for and fostering mainstream efficiency through continuous review of the pool of management resources (Senichev, 2013; Waterman et al., 1980). Project organizations looking for improved performance can review their current human resources practices to develop a plan that includes specific strategies to promote career progression in the company. Senichev added that the staff elements of the 7S model are directly related to the structure and strategy of the organization. Organizations using the 7S model could consistently review competencies and operational needs and dynamically adjust to changes that lead to achieving the goals (Alshaher, 2013).

Three stages in the analysis of the staffing factor in the McKinsey 7S framework are recruiting, socialization, and progress (Waterman et al., 1980). Although organization leaders focus on human resource management to plan for recruiting and development, the socialization effort is the stage that top management follows to expose recruits to the practical operation of the business (Alshaher, 2013; Senichev, 2013; Waterman et al., 1980). The staff element for construction organizations includes the review and creation of a talent management plan that incorporates the available positions for a project, core competencies, training, and management support (Alshaher, 2013; Jurksiene & Pundziene, 2016). The contents of the talent management plan include critical information that construction managers use as part of the strategies for working with diverse teams (Senichev, 2013). Diversity management in the construction industry

provides operational benefits to the organization by reinforcing different interactions between organizational culture, strategic definitions, and human resource management (Senichev, 2013).

Successful construction managers follow standards and behaviors that contribute to satisfactory results (PMI, 2014). Critical success factors, including project manager behavior, are elements that ensure competitive performance in the organization (Allen, Alleyne, Farmer, McRae, & Turner, 2014). Expanding on the element of staff in the 7S model, Allen et al. (2014) suggested that successful construction managers should work on building a trust relationship with executive management, gather information on lessons learned, and interact with the human resource department to craft a development strategy for the project team. The way in which a project manager interacts with the human resources department, to secure training to improve competencies and fortify relationships with stakeholders, can influence project success (Allen et al., 2014; Venodha, 2016). The interaction with stakeholders and identification of improving competencies are in alignment with strategies for increasing performance in organizations using project management (Venodha, 2016).

One principle of management is how to remove variability in outcomes using controls and standards (Denning, 2012). Denning argued that organizations are driving innovation and resource allocation as part of the strategic competencies training for project teams. Investing in training and reviewing actual competency needs in project teams reduces variations in performance, and from the staffing-element perspective improves alignment between the other elements of the model (Denning, 2012).

Construction industries using project management methodologies are dealing with soft elements, such as human resources, in which the lack of strategies to improve performance can be mitigated through effective gap analysis of the staffing policies (Parker et al., 2013). The analysis of a staff element in the McKinsey 7S framework confirms the constant interaction between competencies, staff specialization, and human resource management to increase performance in projects (Parker et al., 2013; Waterman et al., 1980).

The superordinate element. The conceptual meaning of superordinate goals in the McKinsey 7S framework comprises the fundamental ideas, aspirations, and goals of a business organization (Waterman et al., 1980). From the perspective of organizational performance, superordinate goals are the concise values that provide direction toward the future operational state that the organization needs to achieve (Waterman et al., 1980). In the McKinsey 7S framework, the term superordinate goals refer to the overarching need for the organization to become efficient and to the champions that avidly influence and promote the organizational goals (Alshaher, 2013; Waterman et al., 1980). Construction managers should acquire enough information from upper management to create an effective bridge between the organizational goals and project members to execute the superordinate goals (Bianchi, Quishida, & Foroni, 2017).

A management theory such as the McKinsey 7S framework is a set of guidelines for managers and other organizational members regarding how to deal with specific organizational issues and the potential to achieve goals efficiently (Heusinkveld, Benders, & Hillebrand, 2013). The guidelines in the McKinsey 7S framework involve constructing

a collaborative effort between hard and soft elements in a collective effort to suppress competitive pressure (Heusinkveld et al., 2013). As part of these guidelines, the superordinate goals' underlying content refers to establishing standards, communication of values, and strategies for remaining innovative in the competitive market (Heusinkveld et al., 2013). Organizations are broadening strategic efforts to include active communication of goals and the identification of new strategies to relieve competitive pressure by creating business differentiation (Spitzeck & Chapman, 2012).

Regarding the practical use of the McKinsey 7S conceptual framework, the literature referred to superordinate goals as *shared values* that include culture, communication, and the fundamental values that the organization follows (Král & Králová, 2016; Rouhani & Zare Ravasan, 2012; Teh & Corbitt, 2015). Supporting the practical application of the McKinsey 7S framework, Král and Králová argued that the practical effect of promoting shared values is that of increasing a manager's ability to adapt, develop, and design values that incorporate changes efficiently. The McKinsey 7S element of shared values is interdependent and in alignment with the current objectives of the organization (Král & Králová, 2016). The term *shared values* is a concept that underlines practices that increase efficient productivity with the support of social collaborations with the communities, is attributable to Porter and Kramer (Dembek, Singh, & Bhakoo, 2016). Consequently, the practical application of shared values in context drives policies of the organization as a behavior model for top management, to strengthen company identity, and to champion the strategic effort to balance the social effect of the business in communities (Dembek et al., 2016).

The dominant emphasis of the McKinsey 7S conceptual framework is to achieve management excellence through the interdependent activity of the various components, in alignment with the creation of shared values (Orr & Sarni, 2015; Waterman et al., 1980). In line with the strategic management literature, companies that incorporate value creation generate higher and more efficient financial sustainability than organizations using an economic-only model (Teti, Perrini, & Tirapelle, 2014). The strategic benefit of creating shared values offers the prioritization of favorable actions to increase market competition while building a social commitment that results in a positive reputation for the organization (Teti et al., 2014). The strategic intent for construction industries to use the concept of shared values includes the reasons for a vision, a mission, and values that enhance business differentiation (Naipinit, Kojchavivong, Kowittayakorn, & Sakolnakorn, 2014). When the developing of shared values is by organizational objectives, construction organizations following the McKinsey 7S framework start implementing sustainable actions and policies for improving performance (Naipinit et al., 2014; Kelley, & Nahser, 2014).

Construction organizations drive business that will create positive or negative effects on the communities in proximity to the construction projects (Zhu & Mostafavi, 2014). Managers should focus on developing a strong organizational culture that reflects the importance of shared values and collaboration from all stakeholders to achieve business sustainability while supporting social responsibility for the communities close to the projects (Naipinit et al., 2014). The McKinsey 7S framework is a model for analyzing organizations and their effectiveness while evaluating the interactivity between the

respective elements to reach the organization's superordinate goals or shared values (Singh, 2013). Construction managers following the McKinsey 7S framework can incorporate concepts such as leadership, communication, and strategies for increasing shared values to increase positive effects on communities (Parker et al., 2013; Singh, 2013).

The conduct of top construction managers is a highly valuable management tool that conveys and reinforces the selection and communication of strong values to operational managers (Shah, Irani, & Sharif, 2017). The use of the McKinsey 7S framework facilitates top construction managers the alignment and improvement of internal aspects of the organization to be successful (Singh, 2013; Waterman et al., 1980). Singh and Beschorner (2013) argued that top construction managers use leadership and effective communication to promote shared values to improve organizational performance. Beschorner noted that the model from Porter and Kramer emphasized on creating shared values as a smart method for economic growth, while managers following the McKinsey 7S emphasized on using values as behaviors and characteristics to achieve business excellence.

The McKinsey 7S conceptual framework contrasts with the performance assumption that the model is useful for the effective diagnosis of efficient processes, analysis of current strategies, and change management (Hardaker & Ahmed, 2013; Shah et al., 2013; Singh, 2013). The specific business problem for this study is that some managers lack strategies to deliver projects efficiently. The McKinsey 7S framework presents an efficient integration of strategies and organizational elements to improve

performance and support business differentiation (Hardaker & Ahmed, 2013). Mišanková and Kočišová (2014) noted that the strategic implementation of the McKinsey 7S conceptual framework is an efficient model that supports strategies to improve the restrictions of budget and timeline of a project. Construction managers who use the McKinsey 7S framework could reinforce the importance of creating shared values as a key element for influencing the implementation of efficient strategies to drive project success (Mišanková & Kočišová, 2014). Construction managers can assess the benefits of using the McKinsey 7S framework in organizational strategies to successfully implement and integrate operational changes.

Opposing and Expanding Theories of the McKinsey 7S Framework

The McKinsey 7S framework is the conceptual framework for this study. The McKinsey 7s framework is a holistic approach that comprises hard and soft elements in alignment with operational goals as the criteria to achieve business excellence in the organization (Waterman et al., 1980). Shiri et al. (2015) noted that business excellence is the optimal performance level for organizations using the McKinsey 7S framework regarding operational sustainability and competitive advantage. The critics of the McKinsey 7S framework focus on the limited and complex interactions as a requirement for identifying possible gaps in performance (Asif & Gouthier, 2014). Hermel and Ramis-Pujol (2003) proposed that the use of the McKinsey 7S framework create an imbalance in the organizational management by creating confusion in management terms, limiting discussion of implementation, promoting continuous sustainability, limiting diversity in organizations by applying a single recipe for success, and reducing the

integration of different management structures. Although the McKinsey 7S framework provides standards to reach business excellence, the absence of assigned responsibilities for inadequate management and weak strategies may result in poor management integration (Hermel & Ramis-Pujol, 2003).

Senge (2006) argued that to reach business excellence requires discipline, shared vision, mental models, team learning, and systems thinking for understanding business complexity. Senge noted that learning organizations might reach business excellence by the inclusion of quality metrics as part of the strategic management. The basic rationale for opposing the McKinsey 7S framework is that leaders need to use adaptive learning and the commitment of individuals to execute business strategies instead of the constant interactions between hard and soft elements of the model (Fillion, Koffi, & Ekionea, 2015). The integration of systems thinking, adaptive learning, quality metrics, and mental models with business strategies facilitate organizations to reach business excellence (Fillion et al., 2015; Senge, 2006).

Another strategic model for achieving organizational excellence is the 4P framework, which differs from the McKinsey 7S because it uses four interlacing elements (Dahlgaard-Park & Dahlgaard, 2007). The underlying assumption behind the 4P model is that excellence comes from the interaction of people, partnerships, processes, and products (Dahlgaard-Park & Dahlgaard, 2007). The 4P model attempts to overcome the difficulties that managers encounter when trying to implement the McKinsey 7S framework using quality management, by implementing efficient strategies for incorporating culture changes in leadership at the managerial level (Dahlgaard-Park &

Dahlgaard, 2007). Balodi (2014) supported the inclusion of structure, strategy, and leadership as elements supporting the use of the 4P model to increase competitive intensity and strategic organization. As a result, the differentiation lies in the 4P application of the organization partnership characteristics and the implementation of leadership with an explicit focus on quality integration (Balodi, 2014).

The causal model of organizational performance and change by Burke and Litwin (Khan, 2015) incorporated multidimensional factors including motivation and work-unit climate to attempt a dynamic diagnosis for organizational performance. The model of organizational performance and change differs in context from the McKinsey 7S, as the latter intends to drive performance and change from the effect of causality between the elements (Khan, 2015). The two models have common elements of strategy, structure, culture, and skills. Khan argued that the causal model of Burke and Litwin emphasized individual and organization performance as a causal link with external environmental elements. The comprehensive model for diagnosing organizational systems, by Cummings and Worley (Král & Králová, 2016), expanded on the McKinsey 7S framework by linking the input of the environment with the interdependent elements of the design components. The common components of the models include strategy and structure. The inclusion of climate, technology, and human resource management as differential design factors also drives the interaction for reaching excellence in organizational performance (Král & Králová, 2016).

The term *hypercompetition* is the description of a competitive and dynamic business environment in which retaining a beneficial advantage for an extended period is

unsustainable (Da Cruz & Starke-Rodrigues, 2013). D'Aveni et al. (1995) noted that the application of the term hypercompetition in strategic management refers to an understanding of the competitive pressure system and the need to avoid static models of excellence. The new 7S model expands on the original concept in content by incorporating the effects of hypercompetition and business disruption with the elements of quality, knowledge, protection from external sources, and strategic alliances with financial entities (D'Aveni et al., 1995). Wabwile and Namusonge (2015) argued that the hypercompetitive market has strategic and unpredictable characteristics that require improvement over previous excellence-based models. Hypercompetent organizations implement strategic knowledge gain and customer satisfaction as disruption indicators; and revise business rules and signal strategic intentions for achieving superior performance (Pauwels & D'Aveni, 2016).

Leaders in hypercompetitive organizations seek to disrupt the status quo to gain advantage and improve performance through strategic market positioning and effective resource management (Pauwels & D'Aveni, 2016). Using the new 7S model for disrupting businesses is a competitive tool that leads organizations to adapt to changes, improve quality processes, and adopt new human resources techniques and superior customer values (dos Santos, Melo, Claudino, & Dumke de Medeiros, 2017). For construction organizations, the hypercompetition model revolves around dynamic strategic interactions, providing for the development of competitive moves and countermoves that allow leaders to conceptualize strategies and tactics for market dominance (dos Santos et al., 2017).

Organizations following the hypercompetition or new 7S model value the experimentation and evolutionary learning of creating strategies to react to challenging and unpredictable market conditions (Valaei, Rezaei, & Ismail, 2017). Organizations in the construction industry can use strategies that enable innovation, learning capabilities, and disruptive tactics to reach a sustainable and competitive stage (Valaei et al., 2017). Business models including the hypercompetition framework are shifting the strategy view away from the limited vision of operational activities to a customer-needs model that actively promotes the implementation of innovation and explorative strategy to increase future value (Savic, Ograjensek, & Buhovac, 2016). The hypercompetition business framework provides the implementation of strategies that incorporate collaboration at different stakeholder levels as a successful performance driver (Savic et al., 2016).

Leaders in organizations using a business excellence model are competing in dynamic markets that require them to plan for strategies to explore constant effective interactions between the internal elements of the company (Savic et al., 2016). Business leaders focus on interactions, causes, knowledge, and disruption as fundamental elements to achieve a business excellence model (Macpherson, Lockhart, Kavan, & Iaquinto, 2015). The specific business problem for this study is that some managers lack strategies to deliver projects efficiently. As the conceptual framework is the McKinsey 7S, which is an excellence-based model, Macpherson et al. noted that organizations driving effective strategies rely on value-based management, innovation, communication, and training of collaborators to support the excellence model. Construction organizations can improve

business performance by adopting a business excellence model. Table 2 displays the elements and strategies of different business excellence models.

Table 2

Summary of Business Excellence Models

Business model	Elements	Strategies
The McKinsey 7S (Waterman et al., 1980)	Structures, strategies, systems, skills, staff, style, and shared values	Interdependence and value creation from constant revision
The learning organization (Senge, 2006)	Customers, adaptive learning, leadership, systems, and shared vision	Focus on quality as a driver for intrinsic motivation and constant learning at all organizational levels
The 4P model (Dahlgaard-Park & Dahlgaard, 2007)	People, partnership, processes, and products	Quality management, cultural changes, innovation, and communication
The causal model of organizational performance and change by Burke and Litwin (Khan, 2015)	Structure, systems, environment, leadership, mission and strategy, culture, performance, climate, management practices, skills, motivation, individual needs, and values	Causality and adaptation to the external environment by a collaborative effort
The comprehensive model for diagnosing organizational systems by Cummings and Worley (Král & Králová, 2016)	Structure, strategy, environment, technology, human resource management, climate, and processes	Interdependence and inclusion of technology as a notable factor for strategies
The Hypercompetition or new 7S model by D'Aveni (Pauwels & D'Aveni, 2016)	Superior stakeholder satisfaction, strategy, positioning for speed, strategic intent, and sequential strategic thrusts	Interdependence and focus on disrupting competitive advantage

Strategy as a key organizational concept appears in four of the models shown in Table 2. A most notable use for an excellence model is to achieve business superiority through the increased value of products (Waterman et al., 1980) and efficient management of resources (Kermanshachi, Dao, Shane, & Anderson, 2016; Král, & Královά, 2016; Savic et al., 2016). Construction projects are complex in the degree of knowledge needed and the number of challenging interactions involved, leading to a need for careful planning of efficient project management strategies to achieve optimum performance (Kermanshachi et al., 2016). Analysis of the degree of complexity of a project requires identifying known characteristics and the relationship with the actual implementation of the strategic plan (Kermanshachi et al., 2016). The McKinsey 7S conceptual framework includes standards for reviewing strategic implementation, and constantly revising the internal elements results in a dynamic reduction of project complexity (Kermanshachi et al., 2016; Pauwels & D'Aveni, 2016).

Project Management Strategies

Construction managers follow standards from the project management discipline for sustainable development, efficient resource management, development of soft competencies, and improvement in competitive strategies (Esa, Alias, & Samad, 2014). Construction managers are influential during the process of the creation and implementation of effective strategies (Esa et al., 2014). The use of project management methodologies facilitates planning, strategic monitor, and control of all activities to meet project objectives and requires the influential construction managers with experience in

leadership, communication, knowledge transfer, and planning techniques (Opoku, Ahmed, & Cruickshank, 2015). Construction managers with sound planning techniques, effective decision-making skills, and strategic leadership characteristics are valuable for alignment and execution of organizational goals (Opoku et al., 2015).

Jørgensen (2016) noted that project success with the use of a model of excellence includes the achievement of customer's expectations in the areas of time, budget, and quality. Consequently, the project-failure dimension characterizes a clear majority of projects not reaching time, budget, and functionality goals because of a lack of strategies that address collaboration with the client (Jørgensen, 2016). When developing plans, construction managers may fail to consider a need to adopt strategies that include conflicts and solutions as well as the collective learning and improvement derived from previous interactions in the McKinsey 7S framework (Floricel, Michela, & Piperca, 2016). In practical terms, managers need to confirm that current strategies include proper planning and the inclusion of efficient resource management to achieve optimal results against current complexity levels of the project (Floricel et al., 2016).

The inclusion of critical success factors is a differential factor for the selection of efficient strategies while using project management methodologies (Papke-Shields & Boyer-Wright, 2017). Construction managers are responsible for the identification of success factors such as selection of objectives, forecasting resources, executive support, and planning for a realistic construction schedule (Papke-Shields & Boyer-Wright, 2017; Warburton & Cioffi, 2016). In general, construction managers use strategic planning to increase project success through the addition of the elements of *intensity* and

participation (Papke-Shields & Boyer-Wright, 2017). Intensity describes the inclusion of formal documentation in the business plan, while participation includes characteristics of leadership, communication, and innovation to select different strategies for achieving the organizational goals (Papke-Shields & Boyer-Wright, 2017). The inclusion of these two aspects as part of managers' strategies for reaching business excellence reflects the effect that produces on-time, quality work while meeting business objectives (Papke-Shields & Boyer-Wright, 2017).

Communication Strategies in Project Management

Construction companies constantly review efficient communication strategies to avoid market loss, project delays, budget overruns, and quality problems (Galuppo, Gorli, Scaratti, & Kaneklin, 2014). The search for contents in the academic literature includes the use of effective communication as a key element of organizational strategies for reaching a higher level of performance while using the 7S framework (Pauwels & D'Aveni, 2016; Singh, 2013; Waterman et al., 1980). Communication strategies are essential in driving the executive business initiative to the operational level with understandable, executable, and objective characteristics for proper management (Galuppo et al., 2014). The effective and strategic communication includes concise planning for different stages of project development (Galuppo et al., 2014).

Construction managers who drive successful projects use effective communication strategies that include organizational goals, stakeholder expectations, cultural styles, key performance metrics, project changes, best practices, and knowledge sharing (Butt, Naaranoja, & Savolainen, 2016). The objective of planning for an effective

communication strategy is to avoid adding risk factors in the execution phase and communication routines that will positively affect the performance of the project (Butt et al., 2016). Typically, a poor communication effort from the manager can result in limited solution-seeking, limitations in adopting innovations, lack of modification tracking, and exclusion of essential stakeholders from critical communications during the development of the project (Butt et al., 2016). Construction projects are complex and may change because of factors of scope alignment, functionality, team management, and conflict between stakeholders, requiring a proactive and rapid implementation of an effective communication effort (Butt et al., 2016).

Effective communication is a critical element in the knowledge areas of the project management standards (PMI, 2014). Construction managers searching for effective methods to improve performance by using project management approaches need to include an effective communications style, for building relationships with human resources, team members, stakeholders, and virtual teams, and for cultural collaboration (Sarhadi, 2016). The lack of effective communication by a manager can hinder performance because of limiting trust between members of the team, ineffective leadership, poor support for communication within the organizational structure, and an absence of encouragement for presenting innovative solutions (Sarhadi, 2016). The project manager should consider incorporating and reviewing efficient communication strategies along with technical requirements for increasing team performance and reaching organizational objectives (Sarhadi, 2016).

Leadership Strategies in Project Management

Construction management leadership is necessary for implementing models of business excellence such as the McKinsey 7S (Matteson et al., 2016; Waterman et al., 1980). Strategic leadership can influence and align organizational objectives, changes, and commitment to culminate in a successful project (Caldwell, Floyd, Taylor, & Woodard, 2014). Construction managers can use leadership as a strategic tool for increasing commitment, trust, and relationship with the project team to promote decisive competitive advantage through the creation of organizational values (Caldwell et al., 2014). Crane, Palazzo, Spence, and Matten (2014) confirmed that leaders could substantially increase competitive advantage and the creation of shared values by strengthening strategic leadership with the inclusion of organizational culture, a model of excellence, and support from top management.

Allio (2015) argued that organizational strategies including effective management, clear alignment, sound decision-making, and effective implementation could support an innovative leadership style. Regardless of the planning for organizational strategies, managers lack leadership strategies for anticipation, learning, innovation, and to execute solutions for different challenging situations (Allio, 2015). Accordingly, strategic leadership from the project manager's perspective should incorporate implementing strategies that include internal development, product quality, revenue, innovation, and value creation (Allio, 2015). As the concept of leadership is influential in project success and strategic implementation, Aga, Noorderhaven, and Vallejo (2016) noted that transformational leadership is a critical success factor in

developing an effective team, which leads to reaching organizational goals. Aga et al. posited that project success includes benefits to the organization, customer satisfaction, benefits to personnel, and reaching project objectives of the budget, quality, and cost. From the perspective of strategic leadership of a project, construction managers need to develop their team through inspiration, influence, intellectual stimulation, and individualized consideration by using transformational leadership (Aga et al., 2016).

The construction industry implements strategies to deliver projects efficiently by selecting standards that require top management to support the efficient assignment of resources, communication, and practices of leadership to deliver business objectives (Hyväri, 2016). The construction industry is a competitive environment that requires a solid organizational strategy driven by senior management to improve performance, sustainability, and competitive advantage (Hyväri, 2016). Construction leaders evaluate strategic decisions by the performance review of those in a project management office that lead, execute, and communicate objectives while maintaining controls for the optimal achievement of the project requirements (Hyväri, 2016). The project management office through the strategic leadership of its managers drives financial strategies, customer, and sustainable initiatives (Hyväri, 2016).

Organizations use superior product quality, strong brand names, and the introduction of new products to address market demands, which together result in a substantial business differentiation (Semuel, Siagian, & Octavia, 2017). Effective leadership is a strong driver for project performance and market differentiation, judging by indicators such as internal and external growth, process improvement, communication,

and innovation (Semuel et al., 2017). Construction managers who lack a commitment to use strategic leadership as a performance tool will drive business objectives without the efficient use of innovation as a successful strategy (Semuel et al., 2017). Managers can use leadership to support strategies for increasing performance and innovation in the fields of the organizational structure, process improvement, and product innovation (Semuel et al., 2017).

Innovation Strategies for Project Management

The integration of innovation and leadership creates value and increases project success in organizations targeting project management standards using an excellence business model (Smith, Arnold, & Melroy, 2015). Strategies for improving leadership and innovation emphasize fostering creativity, decision-making, innovative solutions, and a keen vision of the market environment to solve challenging projects (Smith et al., 2015). Organization leaders looking to implement successful strategies need to promote managers who exhibit the characteristics of a leader and encourage innovation for significant application of solutions to business problems (Smith et al., 2015). Uvarova, Belyaeva, Kankhva, and Vlasenko (2016) agreed with the concept of implementing strategic innovation through selective leadership competencies of construction managers in the construction industry.

The construction industry requires the implementation of efficient project management strategies that can improve business results through constant review of leadership management, efficient use of resources, and innovative solutions for continuous market sustainability (Uvarova et al., 2016). Construction managers struggle

with quality requirements, construction schedule, financial goals, project delays, and customer satisfaction because of the challenging environment and a lack of leadership in promoting innovative solutions (Rivera & Kashiwagi, 2016; Warburton & Cioffi, 2016). Leadership without innovation creates a challenge and increase the risk to achieve long-term goals and business improvement (Rivera & Kashiwagi, 2016). Construction managers should incorporate innovation as a strategic tool in which collaboration, open communication, knowledge exchange, and constant improvement are the driving elements for project success (Rivera & Kashiwagi, 2016).

Ukko et al. (2016) argued that construction managers need to select efficient strategies suitable for using innovation capabilities to support organizational development plans. Successful organizations using project management approaches facilitates and implement strategies for using innovation capabilities as a business differentiator and are thereby increasing value (Ukko et al., 2016). For instance, Bunger et al. (2017) noted that implementing innovation at the project manager level requires full commitment from the organization's structure, strategy, and culture, replicating the interdependent variables of the McKinsey 7S framework (Waterman et al., 1980). Construction managers can proactively promote innovation capabilities and strategic leadership by reviewing previous performance, documentation, communications, and improvements, which can lead to completing a project successfully (Bunger et al., 2017; Ukko et al., 2016).

Construction Management Strategies

Construction organizations use a selection of efficient strategies and competencies to remain competitive and to create market differentiation. Nguyen and Chileshe (2015)

found that poor project management techniques, lack of experience, financial controls, misalignment of strategies, and obsolete organizational structures cause degradation in performance in the construction industry. The lack of specific strategies that include construction methods, team management, accurate tracking controls, innovative solutions, and inadequate leadership for getting support from top level management are essential failures attributable to the construction manager (Nguyen & Chileshe, 2015).

A construction manager uses project management methods from the planning stage to the effective closure of the project. Among the principal activities are the selection of subcontractors, review a financial plan, timeline management with milestones, quality assurance, risk mitigation, stakeholder management, procurement, and developing a solid leadership plan (Nguyen & Chileshe, 2015; PMI, 2014). Lukichev and Romanovich (2016) supported the concept of reviewing construction management experience and application of efficient project management strategies to identify flaws in handling complex projects. The construction manager should understand the strategy for business sustainability in the use of quality controls for meeting customer expectations, improving communications, and supporting organizational systems (Lukichev & Romanovich, 2016). Construction managers need to understand the benefits of using codependent strategies for successful performance in the construction business.

Successful construction organizations implement strategic maps that include knowledge management, internal process improvement, customer-requirement satisfaction, and financial sustainability (Khakbaz & Hajiheydari, 2015). The strategic maps follow the McKinsey 7S framework for reaching business excellence through the

interaction of defined strategies with different actionable sections of the organization, including the role of construction manager (Khakbaz & Hajiheydari, 2015). The Construction industry needs to formulate strategies that maximize sustainability by reducing resource waste, recycling materials or equipment, managing human resources, improving quality control, and implementing strategic leadership (Handayani, 2017). Finally, successful construction organizations are balancing the strengths of strategic planning with the opportunities of implementing innovation, value-based management, leadership, and business modeling through experienced managers for reaching competitive advantage and sustainability (Firk, Schrapp, & Wolff, 2016; Handayani, 2017).

Summary and Transition

Section 1 provided background information about the construction business in Panama, along with a description of the rationale behind the selection of research that addresses the lack of strategies to deliver projects efficiently by some construction managers. Driving the research is the overarching question of what strategies are construction managers using to deliver projects efficiently. The need for an in-depth understanding of the how, what, and why of the business problem and implications for future analysis support selecting a qualitative case-study design (Bigliardi et al., 2014; Yin, 2017). Section 1 included the interview questions, social and business effect significant to the study, operational definitions, and assumptions, limitations, and delimitations. Section 1 also included an exhaustive literature review on the topics of the

McKinsey 7S framework as well as project management strategies, evolving themes, and opposing theories.

In Section 2, I include an explanation of the role of the researcher, methods for selecting participants and specific population, and research methods. Section 2 includes data gathering and validation techniques and the critical content of the ethical research. Section 3 contains the findings of the study, recommendations, implications for social change, and conclusions.

Section 2: The Project

Section 2 includes a detailed review of the purpose statement, the role of the researcher, methodology and design of the study, and validation methods. The contents of the literature review revealed that current strategies to deliver projects efficiently emphasized resource management, communication, bidding techniques, innovation, and strategic leadership. An exploration of the strategies that construction managers use to deliver projects efficiently support the selection of a qualitative case study (Rolstadås et al., 2014; Yin, 2017). Qualitative data-gathering techniques are an efficient tool in the research of current strategies used by successful construction managers. Finally, Section 2 includes a description of the reliability, validation, ethical research, and qualitative analysis of the study.

Purpose Statement

The purpose of this qualitative single case study is to explore strategies construction managers use to deliver projects efficiently. The population was 10 experienced construction managers from a single company in Panama who have successfully implemented strategies to deliver projects. Data collection consisted of interviews, observations noted in a reflective journal, and a review of archived construction project management documents, such as project charters, project plans, and other records. The implication for positive social change included the potential to improve construction managers' strategies to deliver projects efficiently, which in turn, could increase job security and benefits to local communities.

Role of the Researcher

Yin (2017) noted that, in a qualitative study, the researcher is the primary data collector and employs different techniques for data collection and validation of the reliability of the study. In the data collection phase, my role was to understand the interview process as social interaction, identify data patterns, and mitigate researcher and participant bias. I was the primary data collector as well as manager of design analysis, communications, support, and the review of the ethical procedures used in the research.

My relationship with the research topic came from working for more than 25 years in the construction industry in Panama. As the project management director for an international construction organization, my responsibilities included the review of business strategies, resource management, performance evaluations, budgeting, and risk management. My current leadership position and previous experience supported a business interest in the research and implementation of strategies to deliver projects efficiently. I used bracketing of assumptions in my reflective journal—noting in a reflective journal personal views and assumptions regarding the research (Clark & Bower, 2016; Moustakas, 1994)—to mitigate possible researcher bias. The selection of a construction organization and managers, with whom I had no previous professional relationship, was the standard for this qualitative single case study.

Ethics compliance is a fundamental element of a qualitative method that requires safeguarding documentation, identities, and confidentiality to minimize the risk of any misuse of the data (Khan, 2014). A respectful relationship, professional tone during all interactions with participants, confidentiality, and being respectful of individual opinions

contribute to the high level of ethical behavior (Hammersley, 2014). Each of the steps of data collection, interviews, and analysis of the results of this study requires approval from an Institutional Review Board (IRB; Cook, Hoas, & Joyner, 2013). As a framework for the protection of human subject research, Walden University's IRB follows strict Belmont Report guidelines, which include respect for persons, the communication of an informed consent form, beneficence and assessment of risks, justice, and selection of subjects (Belmont Report, 1979; Nicolaides, 2016). My ethical and professional obligation was to obtain approval from the Walden University IRB before starting the data collection process and to carry out the study within the prescribed Belmont Report guidelines.

Qualitative researchers derive meaning and value from the experiences of individuals in their natural settings (Yin, 2017). Qualitative research is subject to threats to integrity, commercialization, and bias in perception of meanings (Lederman & Lederman, 2015). To mitigate the possible effect of bias on the study, I followed strict procedures for individual data collection, the full disclosure of any potential conflicts of interest, ethical behavior, avoidance of social exclusions, exclusion of incentives, and adherence to an interview protocol. Khan (2014) and Fusch et al. (2018) found that data validation through methodological triangulation and cross-checking serves as a tool to avoid viewing the data through the personal lens or perspective.

The rationale for following the interview protocol was to avoid bias and to support reliability during the qualitative research (Mitchell, 2015; Nicolaides, 2016). Mitchell supported an interview protocol that incorporates the skills of active listening,

focus on details, and content-checking as an effective method for collecting the experiences of participants. Kissi et al. (2015) selected semistructured interviews as a means for the review and application of project management strategies in the construction industry. Ferrada, Núñez, Neyem, Serpell, and Sepúlveda (2016) noted that the implementation of a case-study design with semistructured interviews provides explanatory details to explore the application of strategies and best practices used by construction managers in successful projects. As a result, I interviewed individuals by implementing a semistructured interview protocol to explore strategies that construction managers use to deliver projects efficiently. The semistructured interviews included eight open-ended questions (Appendix A), presented during 45-minute sessions, which allowed time for clarification from the participants.

Participants

The eligibility criterion to participate in this research was that construction managers had at least 10 years of experience in developing and implementing effective strategies for delivering projects. Yin (2017) noted that selecting participants with sufficient knowledge of the phenomenon ground the qualitative research. Marshall and Rossman (2016) suggested that participants with more than 5 years of experience related to a business problem have an objective appreciation of the specific phenomenon in the organization. The eligibility criteria in a qualitative design contribute to the collection of sound data, relevant experience, and analysis of the research problem (Dworkin, 2012; Rubin & Rubin, 2012; Setia, 2016). Another criterion was that participants must be

construction managers employed in a single construction organization in Panama with a government license issued by the Panamanian Society of Civil Engineers (SPIA).

I gained access using documentation that includes a letter of cooperation, the approval letter from the Walden IRB, a consent form, the interview protocol, and a description of the research. My plan included reviewing the selected construction organization webpage for contact information and identification of the general manager. I contacted the general manager of the construction organization to explain the research and selection criteria for the participants and to get approval to access participants. The general managers' support from the selected construction organization facilitated access to construction managers who have relevant experience and strategies. I used a consent form from Walden University during the data collection. Participants received the consent form at the start of the interview along with a verbal overview from the researcher to explain the contents of the interview process. The use of a prepared consent form, superior ethical standards, and IRB approval provides support and information to gain trust and approval to participate from prospective participants (Barnham, 2012; Ferrada et al., 2016; Yin, 2017).

I established a positive working relationship with the participants that includes supportive communication for the answer to questions about the research, total protection of confidential information, and complete trust based on professional behavior during the research. Initial contact with the participants is essential to establish a sense of trust, rapport, and professionalism, which leads to a more collaborative effort during the development of the research (Rubin & Rubin, 2012). The selection of a clean and quiet

environment may facilitate sound data collection during qualitative research (Alby & Fatigante, 2014; Yin, 2017). I asked the general manager office to select a clean and quiet interview room on the construction organization premises in which the participants felt comfortable and confident to share their experiences.

The objective of this research study was to understand the strategies that construction managers use to deliver projects efficiently. The selection criteria were in alignment with the research question as including only construction managers with relevant experience in delivering projects from a single construction organization. Setia (2016) supported the notion that researchers in search of higher detail in an environment should select criteria specific to the research. Yin (2017) supported the qualitative strategy of selecting participants with experience with the research to ensure the quality and reliability of the data.

Research Method and Design

Research Method

The qualitative method is an interactive process that allows the exploration of an idea through a series of data collection methods, frameworks, and controls (Cleary, Horsfall, & Hayter, 2014). The selection of qualitative method was in alignment with the intention to understand the *why* and *how* of the exploration of strategies to deliver projects efficiently. The qualitative method is the exploration of individual perceptions and interpretations of a phenomenon (Venkatesh, Brown, & Bala, 2013; Yin, 2017).

Researchers support the selection of a qualitative method by reviewing proper exploration methods of the phenomenon with the possible outcomes of the study

(Venkatesh et al., 2013). The focus of the qualitative method is to gain information from the experiences and perceptions of individuals in their natural setting, as part of a social, behavioral study (Neusar, 2014; Yin, 2017). Researchers use open-ended questions, observations, coding, and triangulation to better understand the context of the phenomenon (Karim Jallow et al., 2014; Yin, 2017). The selection of the qualitative method was appropriate because the purpose was to understand strategies construction managers use to deliver projects efficiently.

The quantitative method is the examination of the possible relationships or differences among variables by testing hypotheses (Heravi & Ilbeigi, 2012). Data validation in a quantitative method requires the use of inferential validity that includes correlations and statistics (Venkatesh et al., 2013). The quantitative method was not appropriate because the research question does not require validation of relationships between variables. Use of the mixed method requires independent validation for qualitative and quantitative component interactions that can result in an extension of the research in practical terms (Venkatesh et al., 2013; Yin, 2017). A mixed method was not appropriate because the objective of this study is to explore the experiences and perspective of construction managers which does not include a quantitative component.

Research Design

I selected a case study design in this study. The qualitative methodology includes case study, ethnographical, and phenomenological designs (Bigliardi et al., 2014; Yin, 2017). Yin argued that a case study is a research design that evaluates a specific phenomenon through exploration and interpretation from the lens of participants and

document reviews. Researchers conducting a case study collect data from a variety of sources to obtain multiple perspectives which are bounded by the characteristics of the phenomenon (Boblin, Ireland, Kirkpatrick, & Robertson, 2013). Aerts, Dooms, and Haezendonck (2017) noted the value of the selection of a case study design to understand efficient project management strategies in the construction business. I selected a case study design to explore strategies to deliver projects efficiently.

A case study design can be exploratory, explanatory, or descriptive depending on the perspective of the researcher (Laine, Korhonen, & Martinsuo, 2016; Sinkovics & Alfoldi, 2012; Yin, 2017). The case study design for this research was exploratory, as follows from a more in-depth analysis of the *what*, *why*, or *how* of a business problem requires ample data examination. The researcher can begin an exploratory case study with general interview questions and expand the study with further details obtained through other data collection methods (Laine et al., 2016; Yin, 2017). The content analysis of the exploratory case study will use multiple units of analysis that include documents, interviews, emerging themes, and observations (Vaismoradi, Turunen, & Bondas, 2013). Castilla-Polo and Ruiz-Rodriguez (2017) asserted that the value of selecting a unit of analysis is critical to the quality and significance of the final coding of a case study research. The selection of the exploratory single case design for this study fits the study requirements by aligning the research question with data elicited from the participants in a business environment.

Researchers use the ethnography design to study people and their behavior in a cultural setting (Mannay & Morgan, 2014). The ethnography design was not appropriate

as the proposed study does not involve exploring a group in a cultural-sharing setting. Researchers use the phenomenology design to explore a lived experience and meaning of a phenomenon through the interpretation and description from the participants perspective (Bevan, 2014; Moustakas, 1994; Whittemore, 2014). The phenomenology design was not appropriate for this proposed study since understanding in-depth lived experiences of the participants will not answer the central research question.

Data saturation occurs during the data collection process when the researcher verifies and compares that no new emerging themes result from the analysis (Fusch, & Ness, 2015; Marshall & Rossman, 2015). Researchers use multiple data sources to reach data saturation by a systematic comparison of the findings (Fusch, & Ness, 2015; Marshall & Rossman, 2015; Yin, 2017). The use of triangulation, saturation, and efficient data management provides the researcher substantial resources to support the implementation and validation of the case study design to explore a phenomenon (Cleary et al., 2014; Yin, 2017). Oesterreich and Teuteberg (2016) used techniques of data saturation and methodological triangulation during the exploration of efficient strategies in the construction business. I collected data until reaching a data saturation point by comparing emerging themes and responses from the participants.

Population and Sampling

The specific population for this research consisted of construction managers that meet the following criteria: (a) hold a license to manage construction projects in Panama legally, (b) work in the construction organization selected for the case study, (c) have experience in the application of strategies to deliver projects efficiently, and (d) bear a

senior management–level of responsibility during the development of the construction projects. Appropriate identification of the characteristics and fit of the participants provides researchers a critical component in supporting the findings and contributing to future generalizations of the topic (Cleary et al., 2014; Fusch, & Ness, 2015; Yin, 2017). Fusch and Ness noted that researchers should focus on selecting a sample size that may provide in-depth and quality data to reach data saturation. I selected a sample size of 10 construction managers for the research.

The criteria for selecting the participants included 10 construction managers who have rich and vast experience in the application of strategies to deliver projects efficiently. I reviewed the list that the single construction organization provided of eligible participants and selected construction managers that had experience in implementing strategies as requested in the letter of cooperation. I contacted eligible participants by email to explain the purpose of the research and included the consent form as documentation before the interview process. The participation criteria and size aligned with the qualitative case study design, as researchers focus their main interest on obtaining rich and in-depth information based on the quality of the participants rather than the size of a more extensive population (Cleary et al., 2014; Fusch, & Ness, 2015; Robinson, 2014). Selecting a purposive sampling typology for the case study ensures the participation criteria are in alignment with the context of the research and provides a nonprobabilistic collection method to support the reliability of the findings (Fusch, & Ness, 2015; Robinson, 2014; Yin, 2017). The purposive sample method provides the

benefit of the selection of criteria that contribute with individual experience and knowledge to the research (Setia, 2016).

Purposive sampling is appropriate for qualitative methods, as it incorporates a strategy for selecting participants from a specific set of characteristics that includes having experience with the research question (Cleary et al., 2014; Fusch, & Ness, 2015; Valerio et al., 2016). Valerio et al. noted that a purposive sample requires support from the employers of the participants and a constant review of the criteria for participation. I used purposive sampling to select participants that provided significant and reliable data of the research problem by screening the list provided by the single construction organization.

Data saturation is a specific characteristic of qualitative research, describing a point at which no additional information or themes emerge, and the resulting data is appropriate to replicate the study (Fusch, & Ness, 2015; Morse, 2015). Pearce et al. (2015) supported the concept of data saturation by including the use of adequate and appropriate data in alignment with the theoretical aspects of the research to construct a logical replication. Researchers choose to emphasize the scope of the interview as a method for collecting rich and thick data to reach a saturation point in the research (Fusch, & Ness, 2015; Morse, 2015; Pearce et al., 2015). Pekuri et al. (2015) selected a qualitative method for reviewing the business strategies that construction managers use to select projects that can lead to positive financial results. Pekuri et al. determined that they have reached data saturation when the initial interview elicited echoes of the same

concepts and characteristics from different participants. I verified data saturation through the constant review and comparison of the participant's answer and repetitive themes.

I reviewed the initial criteria for selecting participants and the semistructured interview to ensure complete alignment with the central research question. The selection of participants was inclusive, with no limitations of gender, nationality, social, or cultural characteristics. The construction organization approved the final selection of the participants and communications with the participants begun, initially in person, and subsequently with a favorable method such as a telephone call to schedule the interview. The interview lasted approximately 45 minutes. The construction organization approved and provided the location of the interview room which was a conference room that included comfortable chairs and well-lit surroundings to gain participant trust which led to rich contributions during the interview. The interviews included the review of the consent forms and selection criteria with the participant. I verified by email the selection of participants, the location of the interview room, and the interview process before the initial date to ensure the research reached saturation through in-depth and rich data collection.

Ethical Research

Researchers leading explorations of human behaviors and responses are required to follow strict standards from an IRB to preserve and protect the ethical integrity of the participants (Lederman & Lederman, 2015; Nicolaides, 2016). Obtaining the approval of the Walden University IRB will initiate the process of the selection, documentation of informed consent, and interview of the participants. Alby and Fatigante (2014) noted the

importance of protecting the ethical integrity of participants by safeguarding their confidentiality, avoiding exploitation, and ensuring freedom of participation in the research. The IRB standards specify that the researcher uses comprehensible documents and language that present a clear understanding of the extensions, limitations, and disclosures that could affect the participants (Check, Wolf, Dame, & Beskow, 2014).

Check et al. (2014) noted that standard IRB consent forms include disclosure information of the research, details of the researcher, confidentiality assurance, and procedures for exiting the experiment. Custers (2016) argued that the researcher facilitates and explain the different terms, possible consequences, and any misunderstanding of the consent form to the participant. Walden University provided an informed consent form, with IRB approval number 06-01-18-0568576, that includes information from the researcher, topic, background, procedures, voluntary nature of the study, risks, benefits, payment, privacy, and contact information. During the presentation of the informed consent to participants, in addition to disclosing the procedures of the interview, I ensured that the participant understands the business application and social value of the research.

My description of participant procedures for withdrawal from the study included explaining the communication method, safeguarding of any personal information, and assuring no misinterpretation or retaliation for exiting the research. I explained the withdrawal procedure to the participants during the review of the informed consent and kept statistics data of participants that wished to withdraw from the research. I removed and permanently deleted any collected information and personal data for any participants

that withdraw from the research. On the informed consent form, the participants received precise information that no payment, gift, or reimbursement results from participating in the research. At the end of the interview, I sent a personal thank you note to the participants.

The ethical protection of the participants and confidentiality are mandatory by IRB standards for ensuring a safe environment during the research of human subjects (Belmont Report, 1979; Cook et al., 2013; Nicolaides, 2016). The procedures for the ethical protection of the participants included the removal of any personal reference, identity protection, and strict adherence to the interview protocol to avoid any misunderstanding during the data collection. I followed the recommendation of Morse and Coulehan (2015) to assign codes to participants and the single organization as a method to support confidentiality during the research. I protected the confidentiality of the participants during the data collection by using a secure password protection system and encryption on the portable computer. The digital data and other documentation collected from the research will remain in a locked external hard drive inside a private storage facility. After the expiration of the 5-year period, I will take all data and its storage medium to a specialized recycling disposal facility that will fully erase the hard drive and shred any remaining documents.

Data Collection Instruments

Cleary et al. (2014) and Yin (2017) noted that the quality, richness, and depth of the data collected using a qualitative method resides in the researcher as the primary data collection instrument. Marshall and Rossman (2016) asserted that the researcher makes

critical decisions as the primary data collection instrument, to gather data that provides valuable information to the study. I was the primary data collection instrument in the exploration of strategies that construction managers use to deliver projects efficiently. My participation included face-to-face interviews, observations, and the review of documents.

As described by Yin (2017), case study researchers use two or more data collection instruments to ensure the quality of the research. Laine et al. (2016) posited that the semistructured interview is a data collection instrument that provides a standard guideline for the researcher to reduce bias and collect rich data. Ferrada et al. (2016) recommended the use of a semistructured interview as a data collection instrument to explore strategies for driving successful projects. I adopted the use of the semistructured interview protocol (see Appendix A) as noted by Ferrada et al. to collect data from 10 construction managers. During the interviews, I digitally recorded the audio and logged critical observations of the participants. Recording the interviews provides support for establishing parameters of reliability and reduction of bias during transcription and subsequent member-checking validation (Alby & Fatigante, 2014). I scheduled a member-checking session with the participants to verify the accuracy and interpretation of the data collected. Yin (2017) and Marshall and Rossman (2016) posited that case study researchers review official public documents from organizations as another data collection instrument. I was the first data collection instrument, and collected data from semistructured interviews, observations, and review of documents.

The qualitative researcher addresses the importance of reliability and validity of the results using methodological triangulation, member checking, and an interview protocol (Marshall & Rossman, 2016; Yin, 2017). The use of methodological triangulation enhances the reliability and validity of the data collection instruments by the verification of multiple sources of data that might include interviews, observations, and review of documents (Marshall & Rossman, 2016). Member checking is the validation of the responses of the participants through a feedback session with the participants to check for the accuracy of researcher interpretation and understanding of the results from the semistructured interview (Connelly, 2016; Moral, 2015). I reviewed the audio recordings from the semistructured interview and captured interpretations to discuss with participants during the member checking session. I used member checking to support the reliability and the validity of the semistructured interview by reviewing the accuracy and interpretation of the collected data with participants in a follow-up session. Lincoln and Guba (1985) posited that the use of a journal to record reflections and to follow an interview protocol is essential in building trustworthiness in qualitative research. The use of an interview protocol in qualitative research enhances the reliability and validity of the data collection instruments as it provides standards to improve the quality of findings and reduction of bias (Connelly, 2016; Lincoln & Guba, 1985).

For my study, I enhanced the reliability and validity of the data collection instruments by using multiple data sources such as semistructured interviews, observations, and public documents to facilitate methodological triangulation. I selected member checking to verify the soundness of the data and as evidence of saturation by

reviewing the interpretation of the results in which no new data emerges from the analysis. I maintained a journal as suggested by Lincoln and Guba (1985) that includes bracketing of assumptions to avoid bias and detailed observations to support methodological triangulation.

Data Collection Technique

The adoption of a semistructured interview, observations, and review of documents as data collection instruments assisted me in the exploration of the research question: What strategies are construction managers using to deliver projects efficiently? A qualitative research study supports the selection of a conceptual framework relevant to the exploration of the phenomenon and includes techniques for in-depth and rich data collection (Marshall & Rossman, 2016; Morse, 2015; Yin, 2017). Anney (2014) found that the use of an interview and a review of documents are critical data collection techniques. The use of semistructured interviews allows probing and selection of relevant questions that could lead to the collection of rich and thick data during the qualitative exploration (Denzin & Lincoln, 2013; Yin, 2017).

The design of the semistructured interview protocol included an introductory telephone script to reduce bias, questions related to the business problem, and a guideline for the review of information from the perspective of the participant (see Appendix A). The design of the interview protocol requires selecting data collection instruments that support the research question (Alby & Fatigante, 2014; Kasim & Al-Gahuri, 2015). As the primary data collector for the research, I obtained the IRB approval and confirmed the public contact information for the construction company that appears on the internet. I

reviewed the public contact information from the internet and contacted by telephone the general management office of the selected construction company for an appointment to explain and obtain the approval for the research by signing the letter of cooperation. The letter of cooperation is a request to gain access for the eligible participants, archived project management documents, and support for conducting the semistructured interviews in a quiet and comfortable location in the construction company. The archived construction project management documents included project charters, project plans, and other records. I presented to the general management office the scope of the research, participant's criteria, meeting room requirements, and a schedule that did not interfere with the business operation. The location for the meeting room was in the construction company, and the participant selected a convenient schedule for the interview. Alby and Fatigante (2014) suggested an interview room with comfortable and quiet settings to support the quality and confidentiality of the data collected. I reviewed the requirements of the meeting room to include ample lighting, comfortable seats, and quiet location as requested in the letter of cooperation before beginning the interview.

Alby and Fatigante (2014) described the process of the interview as a method for using conversational skills to understand the participant´s experiences while avoiding disclosing any opinion or subjective bias. I proceeded with a face-to-face interview to obtain rich information and wrote observations in my reflective journal to support methodological triangulation during the data analysis. The first step in the face-to-face interview was to review and answer any question that the participant might have about the scope of the research and to sign the consent form. The participants were given 15

minutes before beginning the interview process to understand, review, and sign the consent form. The participants received a digital copy of the signed consent form by email within two business days after the interview. I informed the participant of the level of confidentiality of the responses and the need to use an audio recording device. Reda, Johnson, Papka, and Leigh (2016) noted a qualitative researcher might use a variety of sources including video, annotations, and audio recordings to collect rich data. The use of an audio recording device provides accurate data for transcription and coding during the data analysis process (Reda et al., 2016). I selected a Zoom professional audio recording device and an iPhone 7S cellular phone as a back up to record the interview. I maintained a reflective journal with notes from the interview about opinions, emerging ideas, bracketing of assumptions, and the opportunity to expand on the topic with follow-up questions. The audio files of the interview resided in a digital format in the cloud for easy access and on the hard drive with a security code to protect the participants' confidentiality.

Member checking is the validation of the accuracy and interpretation of the responses of the participants by the researcher through a feedback session (Connelly, 2016; Moral, 2015). My member checking procedure included the transcription of the audio recordings, the analysis of the transcriptions to summarize my interpretation of the findings during the interview, an email to the participants with a summary of the interpretations, and asking the participants to attend a member checking session. I gave the participants two business days to review the email with the summary of my interpretation and to confirm their participation in a 30-minute member checking session

within the next five business days. During the member checking session, the participants reviewed and validated my interpretation of their responses. All of the participants attended the member checking session. I expressed my gratitude to the participants of my study in a separate email.

The advantages of the use of semistructured interviews with open ended questions as a data collection technique is the opportunity to gain data that describe the experience of the participants and the selection of a standard procedure to avoid bias (Houghton et al., 2015; Lester & O'Reilly, 2015; Marshall & Rossman, 2016). The transcription of a semistructured interview is another advantage as a data collection instrument that supports member checking and validation of useful responses from the participants (Marshall & Rossman, 2016; Robinson, 2014; Rubin & Rubin, 2012). Marshall and Rossman argued that a disadvantage of the use of a semistructured interview is a large amount of data that generates which require a solid plan for organization and analysis. I noticed that having digital files in different formats such as word, pdf, and mp3 was a disadvantage during the data collection process. Another disadvantage during the research process was the time needed to transcribe and summarize the interpretation of the responses from the participants. Other disadvantages for researchers who select semistructured interviews and document review as data collection instruments are potential commercialization of the results, influential bias, participant mistrust in the interview, time availability to review significant number of documents, and ineffective use of computer-assisted qualitative data analysis software (CAQDAS) (Flick, 2017; Houghton et al., 2015; Marshall & Rossman, 2016).

The use of member checking as a validation technique in a qualitative research study supports credibility allowing confirmation of the data during the interview process (Birt et al., 2016; Connelly, 2016). The value of member checking is the ability to verify the accuracy of the researcher's interpretation of the participant's point of view (Harvey, 2015; Marshall & Rossman, 2016; Robinson, 2014). I used member checking to validate the accuracy of the data from the interview by sending a synthesis of the analysis first and then meeting with the participants to confirm that the meanings of their experiences were correct.

Data Organization Technique

Case study researchers use different techniques to collect and organize substantial amounts of thick and rich data from multiple sources (Fusch & Ness, 2015; Yin, 2017). Researchers use a CAQDAS tool for efficient analysis and organization of different data sources during the qualitative analysis (Furukawa, 2016; Yin, 2017). Houghton et al. (2015) and Furukawa noted that the use of CAQDAS benefits the organization, analysis, and tracking of new data during the development of a case study research. I selected the NVivo software platform as the CAQDAS for the research.

I used a journal to compare and reflect on findings, observations, and new topics that emerge during the development of the case study, as suggested by Lincoln and Guba (1985). I coded the nomenclature for the participant, the date of the interview, and common themes for analysis. I adopted an initial coding of the letter P, for the participant, and the numbers 01 through 10, to protect individual identities. Marshall and Rossman (2016) noted that selecting a coding-system strategy for the research can

support the confidentiality of the participants, tracking of the evidence, and efficient data analysis. I uploaded the codes, potential themes, audio recordings, and documents to the NVivo software for analysis. I will place documents, data, and the reflective journal in a secure location and will only destroy them after a 5-year period of storage.

Data Analysis

Qualitative researchers collect data from multiple sources and apply analytical techniques to provide credibility and richness to the findings (Denzin & Lincoln, 2013; Yin, 2017). I used methodological triangulation to enhance the reliability of the study results. A methodological triangulation was used to install academic rigor and ensure confirmability to strengthen the study outcome. Triangulation is a method that compares data from multiple sources to increase credibility and validation to the data analysis (Connelly, 2016; Denzin & Lincoln, 2013; Fusch, & Ness, 2015). Denzin and Lincoln argued that researchers adapt triangulation to different uses including data triangulation for correlating people, time, and space; investigator triangulation for exploring different researchers observing the same data; theoretical triangulation, which requires the analysis of different theories; and methodological triangulation that includes multiple data collection methods and analysis. I selected the methodological triangulation to verify responses from the interviews, company documents, observations, and comparison of notes from the reflective journal.

Researchers can review existing documents to identify, align, and verify emerging themes (Denzin & Lincoln, 2013; Fusch, & Ness, 2015; Yin, 2017). I used the letter of cooperation to gain access to archived company documents including project charters,

project plans, and other records. Teh and Corbitt (2015) noted the use of multiple types of information available including financial evaluations, existing company records, and others to evaluate the efficiency of the McKinsey 7S framework. I selected several types of information including project charters, project plans, and public records to review the use of the McKinsey 7S framework to deliver projects efficiently. Singh (2013) and Yin (2017) supported the review of existing documentation to support, reject, or extend knowledge during methodological triangulation. Joslin and Müller (2016) argued that the selection of methodological triangulation, as a critical element for data validation and analysis, provides a solid strategy to support credibility in the exploration of project management strategies. I identified relevant themes to the research by reviewing archived company documents during the data analysis including project charters, project plans, and other records. I sent a letter of cooperation to the single construction organization to access archived company documents. The general manager of the single construction organization approved the letter of cooperation and provided access to archived company documents. The contents of the reviewed documents described information for needed staff experience, equipment, detailed budget, a proposed timeline for implementation, and legal compliance (see Table 5). I reviewed the archived company documents to obtain a different perspective to support methodological triangulation during the data analysis. I organized and used common themes emerging from the document review to support methodological triangulation and validation of the findings.

The logical and sequential process data analysis of a case study requires the initial review of theoretical background, collection of distinct perspectives of the phenomenon,

alignment of the contents of the data collection process with the research question, identification and organization of themes, and methodological triangulation of data sources for validation (Denzin & Lincoln, 2013; Joslin & Müller, 2016; Yin, 2017). Yin noted the use of a five-step process for data analysis that includes compiling, disassembling, reassembling, interpretation, and conclusion. I used Yin's five-step process to support the data analysis of the research.

The data analysis for the exploration of strategies that construction managers use to deliver projects efficiently begun by compiling data from different sources including the McKinsey 7S conceptual framework, semistructured interviews, company documents, and observations during the interview. I reviewed current references to the McKinsey 7S framework to understand, select and compile possible themes that are related to the research topic. I compiled and grouped the findings from the member checking process and the review of company documents with similar themes. Yin (2017) and Karim Jallow et al. (2014) suggested the coding themes that emerge during the data collection to facilitate categorization and review of large volumes of data. My second step, as suggested by Yin, was disassembling the collected data. I started by reviewing the research question alignment with the findings from the semistructured interview, observations from the interview, and relevant topics from the literature review to fragment the data in similar topics. I reassembled the data by following Yin's suggestion to code potential themes and arrange them in an excel sheet. I created hierarchical themes based on the hard and soft elements of the McKinsey 7S framework. The use of constant

comparisons and review of different perspectives minimize potential bias during the reassembly of the collected data (Yin, 2017).

Yin (2017) noted that the process of reassembly is a constant interaction between compiling, disassembling, and interpretation. My fourth step was the interpretation of the data by connecting emerging themes with the literature review and the research question. The qualitative researcher should add value, completeness, empirical accuracy, fairness, and credibility as the primary attributes for a grounded interpretation during the data analysis (Yin, 2017). I selected the Nvivo software to compile, disassemble, reassembly, and interpretation of the data to support the findings during the manual analysis. The final step was concluding the data analysis. I concluded the data analysis by connecting the interpretation of the findings with the McKinsey 7S framework and the overarching research question.

Case study researchers collect substantial amounts of relevant data from multiple sources and subsequently require efficient methodological analysis (Yin, 2017). Researchers use CAQDAS as a critical data analysis tool and process raw data by the application of codes that lead to the generation of themes and contextual knowledge for the research (Singh, 2015; Yin, 2017). NVivo and Atlas.ti are among the CAQDAS that qualitative researchers use to process and analyze data (Furukawa, 2016; Kaipia & Turkulainen, 2017; Noori & Weber, 2016). Noori and Weber noted that the Atlas.ti CAQDAS operates and compiles data by the creation of units, mapping, and relationship analysis in a primary document. I did not use the Atlas.ti CAQDAS because the study will not use mapping and the complexity of loading different file formats. The NVivo

CAQDAS use an automatic interface to accept data from different digital sources such as pdf, word files, and mp3 audio files to create automatic codes and themes (Furukawa, 2016; Singh, 2015). I used the NVivo 12 because the software facilitates the classification, coding, and creation of themes.

The primary input for the NVivo 12 was the transcripts, notes from the interviews, member checking data, and predetermined themes from the conceptual framework. The benefit of using NVivo 12 is to support a single point of analysis by the creation of a database from different data sources (Singh, 2015). Furukawa (2016) supported the selection of NVivo as the CAQDAS for exploring successful project management strategies. Singh suggested the use of NVivo to compare and contrast different themes that drive efficiency by using the McKinsey 7S framework in business organizations.

The McKinsey 7S framework was the conceptual framework for this research, and the data analysis through NVivo 12 facilitated the identification of themes to the findings. Naipinit et al. (2014) and Singh (2013) selected the McKinsey 7S conceptual framework and the identifications of themes from an interview protocol to understand construction managers strategies. Teh and Corbitt (2015) noted the use of a semistructured interview to collect data and compilation of different themes in alignment with the McKinsey 7S framework supports the review of efficient and sustainable strategies in construction management. The correlation of emerging themes in a case study consist of the review of the conceptual framework, documents, and data from the interview protocol as relevant sources in focus with the business research (Birt, Scott,

Cavers, Campbell, & Walter, 2016; Fusch, & Ness, 2015; Yin, 2017). I reviewed the correlation of themes with the conceptual framework for the application of the McKinsey 7S in similar business cases and the results of the qualitative data analysis from the NVivo software.

Reliability and Validity

Reliability

Qualitative researchers use the concept of rigor to validate the meanings of the findings and reduction of bias (Denzin & Lincoln, 2013; Houghton et al., 2013). Houghton et al. argued that the concept of rigor in a qualitative method includes the elements of reliability and validity to form a complete framework to support the findings of the research. The purpose of the concept of reliability is to provide a reliable strategy for the validation of the meanings of the research that results from reflection and analysis of multiple sources (Houghton et al., 2013). The concept of reliability includes the use of dependability as a method for the application of correct guidelines for data collection, interpretation, and validation of the analysis (Hagood & Skinner, 2015; Morse, 2015b).

Dependability provides trustworthiness and rigor with the use of effective data collection, analysis processes, and evidence for the consistent application of the findings (Denzin & Lincoln, 2013; Hagood & Skinner, 2015; Phillips & de Wet, 2017). Hagood and Skinner noted that qualitative researchers use the concept of dependability by the application of member checking for the validations of the results. I followed the semistructured interview protocol, theme analysis, and member checking as elements of the methodological triangulation to establish reliability and dependability. Phillips and de

Wet (2017) noted that the use of a reflective journal that includes preliminary coding after member checking supports dependability during a qualitative research study. I used a journal to record reflections and coding to create an audit trail of the data analysis, which is useful for the dependability of the research. Morse (2015b) and Phillips and de Wet noted that the use of member checking and transcript review assure the dependability of the interpretation of the findings. I selected member checking and methodological triangulation to ensure the dependability of the exploration of strategies that construction managers use to deliver projects efficiently.

Validity

The current dimensions of the generation of trustworthiness in qualitative research include dependability, credibility, transferability, and confirmability (Hagood & Skinner, 2015; Houghton et al., 2013; Lincoln & Guba, 1985). Yin (2017) argued that the concept of validity develops from the analysis of factors that affect the accuracy of the findings. The dimension of credibility includes the collection of rich data by an interview protocol, review of the current literature, and methodological triangulation to establish the validity of the research (Kihn, & Ihantola, 2015; Lincoln & Guba, 1985). Researchers establish credibility by the collection of evidence from the sample selection process, member checking, transcript, and triangulation (Kihn & Ihantola, 2015; Lincoln & Guba, 1985; Phillips & de Wet, 2017). Noble and Smith (2015) asserted the use personal notes for the reduction of bias during the data collection, keep records such as consent forms, interview protocol guidelines, and data sources for trail audit, and rich descriptions. I established credibility for this research using an interview protocol, member checking, a

reflective journal with notes for the reduction of bias, accurate transcription of the interviews, audit trails, and methodological triangulation.

The dimension of transferability refers to the extent to which the findings of the research transfer to a similar study (Lincoln & Guba, 1985; Houghton et al., 2013). Transferability establishes the integration of rich descriptions and comparative analysis for external validation to support the transfer of knowledge to other studies (Denzin & Lincoln, 2013; Morse, 2015b). The application of rigor in the dimension of transferability enables the verification of the application and interpretation of the findings in settings that can be beneficial to researchers who may decide to continue with the exploration (Burchett, Mayhew, Lavis, & Dobrow, 2013; Marshall & Rossman, 2015). I collected rich data, evidenced the analysis of the findings, detailed descriptions of the processes, and provided a clear explanation of the findings for readers and future researchers to establish the transferability of the study.

The dimension of confirmability refers to the extent to which the findings are independent of influential bias and remains neutral from the perspective of the participants (Lincoln & Guba, 1985; Phillips & de Wet, 2017). Hagood and Skinner (2015) noted that researchers establish confirmability by the inclusion of details, critiques, and representation of the findings that reflect active comments from the participants. Denzin and Lincoln (2013) argued that confirmability describes differences and correlations between the responses from the participants. Consequently, I established confirmability by strict scrutiny of data collection methods, an audit trail, and confirmation of the responses from participants to address any differences or correlations.

Data analysis in a qualitative method requires a constant review of the contents coming from different sources of evidence and the emerge of new concepts (Burda, van den Akker, van der Horst, Lemmens, & Knottnerus, 2016; Joslin & Müller, 2016). Data saturation occurs in the data analysis process in which no new concepts or emergent themes result from the data analysis (Fusch & Ness, 2015; Marshall & Rossman, 2015). Researchers establish data saturation by the collection of relevant data to the topic of the research and objective interpretation of the responses of the participants (Rosenthal, 2016; Twining, Heller, Nussbaum, & Tsai, 2017). Marshall and Rossman asserted that the constant comparison of coded data with new responses from the participants is an effective method to establish data saturation. I reached data saturation using methodological triangulation, member checking, interpretation of emergent topics aligned with the business question, and Nvivo software to compare emerging themes.

Summary and Transition

In Section 2, I restated the purpose statement and developed different sections that provided information regarding the role of the researcher, criteria for participant selection, research method, and design. I validated the use of a qualitative case study design for exploring strategies construction managers use to deliver projects efficiently. Section 2 described the specific population and interview settings, strategies to obtain IRB approval, informed consent, and protection of participant confidentiality. My role as the primary data collector for the research included the review of the data collection instruments, organization, and data analysis. The final elements of Section 2 included techniques to establish the validity and reliability of the research. The use of member

checking, a reflective journal, CAQDAS, methodological triangulation, and data saturation increased trustworthiness in the interpretation of the findings.

Section 3 of this research includes a summary of the findings in the research on strategies construction managers uses to deliver projects efficiently. The presentation of the findings describes the alignment of the McKinsey 7S conceptual framework with emergent themes collected through the use of a semistructured interview protocol. The discussion of the application to professional practice and implications for social change includes the positive changes that emerge from the research. Finally, recommendations, reflections on the research, and my conclusions completed the development of Section 3.

Section 3: Application to Professional Practice and Implications for Change

The purpose of this qualitative single case study was to explore strategies construction managers use to deliver projects efficiently. The data came from the interviews of 10 experienced construction managers, observations, and a review of documents from a single construction organization in Panama. The data analysis and methodological triangulation consisted of using multiple sources of data, including the literature review and the application of the McKinsey 7S framework. Singh (2013) suggested the application of the McKinsey 7S framework to improve project management performance through constant interactions between the seven elements, including (a) structure, (b) systems, (c) strategies, (d) skills, (e) styles, (f) staff, and (g) superordinate goals.

I identified four themes: (a) project experience, (b) communication, (c) collaboration, and (d) resource management (see Table 3). The results confirmed the emergence of direction and consistency as two subthemes from the main communication theme. The subtheme of leadership emerged from the data analysis and interpretation of the collaboration theme. The findings of the research demonstrated the emergent themes related to the conceptual framework and the business problem of strategies to deliver projects efficiently. I concluded the research with a discussion of the application to professional practice, implications for social change, recommendations, reflections, and conclusions.

Table 3

Major Themes and Subthemes Frequency

Major theme/subtheme	Frequency of responses
Theme 1: Project experience	49
Theme 2: Communication	45
Direction	17
Consistency	12
Theme 3: Collaboration	35
Leadership	26
Theme 4: Resource management	28

Presentation of the Findings

The overarching research question was: What strategies are construction managers using to deliver projects efficiently? To answer the question, I conducted a semistructured interview (see Appendix A) with 10 construction managers from a single construction organization in Panama. I identified four main themes and two subthemes as a result of the collection and the analysis of the data. The main themes were project experience, communication, collaboration, and resource management. Direction and consistency were the subthemes for the main theme of communication, and leadership was the subtheme of collaboration. I supported manual data analysis by coding potential themes in a spreadsheet and used Nvivo 12 for organization and comparison of the findings. The discussion of the findings were based on the review of the conceptual framework and led to ways of confirming, disconfirming, or extending knowledge from the literature review.

The participants were 10 construction managers from a single construction organization in Panama. Morse and Coulehan (2015) noted the use of codes to protect the

confidentiality of the participants, companies, and other documents during research. I coded the participants from P01 to P10, the company was C01, and documents from D01 to D04. The coding and experience data for the participants appear in Table 4. Marshall and Rossman (2016) noted that participants with more than 5 years of experience related to a business problem have an objective appreciation, which benefits the analysis of qualitative research. All the participants accepted the interview invitation and participated in the member checking session to verify the meaning of their answers about the research.

Table 4

Coding and Experience data of Construction Managers

Coding	Position	Years in construction
P01	Senior Construction Manager	37
P02	Lead Construction Manager	22
P03	Senior Architect Designer	26
P04	Construction Manager	13
P05	Construction Manager	15
P06	Lead Inspector for Construction Projects	10
P07	Senior Construction Manager	41
P08	Senior Construction Manager	25
P09	Senior Construction Manager	35
P10	Construction Manager	15

I kept a reflective journal with observations and notes from the interview including bracketing of assumptions, and emerging themes. Lincoln and Guba (1985) argued that using a reflective journal with observations and bracketing of assumptions to mitigate bias and support methodological triangulation. My observations noted in the reflective journal included the interest of the participants in the questions from the

interview, reactions to a follow-up question, and any discomfort presented during the interview. I compared my personal biases wrote in the bracketing of assumptions with the notes taken during the interview to mitigate bias.

Four documents were obtained from the single construction company; D01, D02, D03, and D04. Three documents from the Government of Panama included D01, D02, and D03. One document was obtained from an annual publication of best projects of the year by the Panamanian Construction Chamber and is available to all of its members. The coding and description of the reviewed documents appear in Table 5.

Table 5

Coding and Description of Documents Reviewed

Coding	Description
D01	Project 1: Budget, timeline, and resource management
D02	Project 2: Budget, timeline, and resource management
D03	Project 3: Budget, timeline, and resource management
D04	Project strategies for annual best project of the year 2016

Theme 1: Project Experience

The construction managers discussed, during the interview, their perspective in strategies to deliver projects efficiently. The member checking procedure and manual data analysis confirmed critical evidence to support the importance of project experience to deliver a project efficiently. Hyväri (2016) noted the importance of project experience regarding strategic leadership to drive competitive business in the construction industry. Construction managers with experience in leading and executing construction projects successfully, work at a different level to create project strategies (Hyväri, 2016). The

theme of project experience relates to the main research question because several participants (P01, P02, P03, P07, and P08) shared their experiences of selecting a leader in accordance to their experience level in construction projects as an efficient strategy.

Waterman et al. (1980) argued that skills as a soft element of the McKinsey 7S framework, are attributes developed through experiences or training. Windapo (2016) noted that organizations in the construction industry are selecting leaders with technical skills and expertise by business requirements. Similar to the body of literature and the conceptual framework, participants explained the importance of selecting and working with construction managers that have a vast experience in the construction industry. P09 stated, “Every time that we would bid in a new construction project, we go around the table in the executive meeting and review our current management team and see if we have the required experience in our company.” Similarly, P05 stated, “Being part of the inspection team provides a unique opportunity to gain experience from different projects which could help you to land a leading role in a larger project. One of the bosses (Senior Managers) is always asking around for opinions, and he is always watching your performance, especially what are you doing to solve the project”. Construction managers have stated that experience is a strategic element supporting the final performance of a construction project. P04 stated:

> Yeah, I think some of the best projects I have seen in our portfolio are projects where there's a very disciplined approach and it's a very consistent experienced team. So, when I say consistent team there's not a lot of turnovers. It is a very focused group where people understand what their goal is, how their role interacts

> with others within it, how their previous experience will impact the project and within a group environment. That group interacts very consistently and collaboratively with our customer group to define the specifications of the project up front.

Identifying needed skills and experience for critical construction projects are strategies in accordance with the business orientation of the organization (Windapo, 2016). Waterman et al. (1980), and Hannan (2015) argued that organizations implementing the McKinsey 7S framework should select project leaders based on their skills element and expertise level by the project requirements. Participants agreed that project experience is fundamental to achieve positive and efficient results. P07 stated:

> When it comes to execution there's very coordinated discussions and updates through the project lifecycle where our previous experience comes and add value to our customer. Issues are issues or conflict and as they arise and are resolved and ultimately our customers are enormously happy with this project. At the end, our team is gaining new experiences through the whole process.

Theme 1 project experience relates to the central research question by aligning the importance of using the skill element of the McKinsey 7S framework as a strategy to deliver projects efficiently. All the participants confirmed through the analysis of their narratives the importance of selecting leaders and team members with skills and project experience that might influence the final execution of the construction project. Although selecting leaders and team members with the required experience for a project is a critical decision, P01 described operational markets as the main business driver for the

construction organization. The description of the selection of construction managers with the necessary skills and project experience to drive efficient projects by the participants were consistent with articles from the literature review. Construction managers with strategic skills, leadership, and project experience might provide efficient solutions in handling complex projects (Lukichev & Romanovich, 2016; Opoku et al., 2015; Shiri et al., 2015).

Theme 2: Communication

All the participants emphasized the importance of communication as a strategy to deliver projects efficiently. The communication theme and the subthemes of direction and consistency related to the main research question by confirming that the construction managers use communication as a strategy to keep critical and operational information flowing across the construction organization. The system element of the McKinsey 7S framework includes communication as a component responsible for the transmission of business objectives and processes of the organization (Teh & Corbitt, 2015; Waterman et al., 1980). Successful construction managers implement communication strategies to support solid customer relationships, notify organizational changes, performance expectations, and fluent project information in different levels of the organization (Khakbaz & Hajiheydari, 2015; Lukichev & Romanovich, 2016; Olkiewicz, 2018).

Based on the interviews and discussions with participating construction managers, I found that communication strategies include the use of a planning session to review the meaningful direction and consistency of the message and the frequency of the reports needed. P07 and P09 described the importance of using communication strategies and

noted they should include the major stakeholders of the project and the project objectives in simple terms according to the level of the recipients. P07 stated:

> I think that the path we are on is not a good path meaning that now we just need to correct the course. I think we did a very good job to communicate with the first level key stakeholders and now need to have additional conversations, but that conversation must be direct, clear, and should include any concerns from the previous one meaning we are having a smooth and steady conversation.

According to P08, to communicate successfully, construction managers need to verify that all members of the project understand the importance of the project shared values, roles, and timeline for implementation. The participants confirmed successful construction projects require communication strategies that are consistent regarding the directional level, and the importance to provide a detailed plan to cover the different needs of the organization.

Muszyńska (2018) noted that mature and successful organizations select communication strategies that adapt to market challenges, internal change management, and information exchange from previous projects. All participants were consistent with the published literature because they support the use of communication as an effective strategy to align the project goals and to mitigate any confusion during project execution. P01 agreed with P03 that having concise communication strategies is critical to project success because the opportunity to review the direction of the message will allow customizing the message for the selected receiver. P01 provided the example of document D04 as its contents explain the method for creating a communication plan to

integrate a local community and the required customization to explain in simple terms the scope of the project. A successful communication strategy should include the different functional level of the stakeholders, specific content according to the level of the stakeholders, and a distribution timeline that support the stakeholder's' requirement (Mišanková & Kočišová, 2014; Muszyńska, 2018; Olkiewicz 2018).

Direction. All ten participants emphasized the importance to use a direct communication path to ensure the alignment of responsibility and expectations in the construction organization. Implementing a clear path of direction in communication strategies allows organization using the McKinsey 7S framework to increase performance (Sheehan, & Powers, 2018; Waterman et al., 1980; Yap, Abdul-Rahman, & Chen, 2017). Several participants (P01, P03, P07, P08, and P09) remarked the importance of having a clear direction for communicating strategies. P02 agreed with P10 that communicating important changes in the scope of a construction project or organizational changes must come from the executive level and then socialized through the operational levels of the construction organization. P08 stated:

> One of the things that I always talk about when I develop the strategy is the number one constant direction in our message. First and foremost, the senior management team. If they are not on board, then nothing is getting done right. So, you have the senior management team. Then you have the board of directors which includes London, the corporate world and then below that you have us the construction managers. When I say, constant direction is the most important because you might communicate differently with those different groups, but one

rule is that the message will flow from our top to the bottom of our group.

The concept of clear direction presented should outline the importance of reviewing the communication strategies in construction organizations to increase performance and adaption to changes (see Yap et al., 2017). The McKinsey 7S framework includes the concept of direction in the communication effort as part of the system and style elements (Sheehan, & Powers, 2018; Waterman et al., 1980). The direction of the communication supports the style elements by identifying the leadership style of organization (Sheehan, & Powers, 2018). Similar to the body of literature, P01, P03, and P07 remarked that to have a clear response to changes, project controls, or even union problems the communication must come directly from the top of the organization. P06 shared a similar perspective adding the necessity to have a communication channel that includes both direction and clarity in the messages. The subtheme of direction is in alignment with the main research question as relates to efficient communication strategies to maintain a clear path of communication between the different levels of the organization.

Consistency. Communication strategies should include consistency during the creation of different messages across functional levels to increase project performance and reduce the risk of possible misinterpretation of critical instructions (Limwichitr et al., 2015; Olkiewicz, 2018; Singh, 2013). Consistency in the communication strategies for project management refers to maintaining a minimum level of variation during the information exchange in the organization (Aldairi, Khan, & Munive-Hernandez, 2017; Muszyńska, 2018; PMI, 2014). P04 and P06 indicated that in their previous organization

they were used to learning about changes in the project through lateral communication. P04 remarked, “Communication in company C01 is very strict as they do not want any confusion that can cause trouble, especially with subcontractors or union members.” P07 stated that communication was informal or through the messages on the cellular phone. The executive team and human resources management team is working on standards and constant messaging in communicating strategies in the organization (P07).

Managing construction projects involve communicating at different organizational levels and specific to customer’s requirements but must be clear and consistent (P03). Waterman et al. (1980) argued that communication is an essential component of the skill element and relates to the consistency in delivering information that can improve business performance.

Using communication strategies that have a clear direction can help increase performance in the construction organization by aligning business objectives and responsibilities with specific functional levels in the organization (Yap, Abdul-Rahman, & Chen, 2017). One common communication strategy is to review the content of the message by different members of upper management, human resources, and the construction manager lead (P01). P08 noted:

> I think having a consistent communication is something I work at a lot. So once again the way you talk can be different, but the message has to be considered equal on all levels. In our construction business, we need to be consistent and efficient in communicating our objectives.”

The conceptual framework and the literature review supported the subtheme of

consistency as communication strategies can increase the efficient delivery of projects in the construction industry.

Theme 3: Collaboration

The collaboration theme and the leadership subtheme relate to the main research question by confirming that successful construction managers implemented an interactive network of key stakeholders in different functional levels of the organization. The dominant concept of the McKinsey 7S framework is to improve business performance through constant collaboration and interaction between the different elements of the framework (Singh, 2013; Waterman et al., 1980). All participants noted that creating a collaborative environment with an objective leadership can improve the delivery of projects efficiently. The superordinate goals and style elements of the McKinsey 7S framework include collaborative efforts and leadership styles as concepts for increasing business performance in the organization (Shaqrah, 2018; Waterman et al., 1980).

Bianchi et al. (2017) and Shaqrah (2018) noted that collaboration relates to the superordinate goals or shared values by defining the level of collaboration and effective bridge between the organizational goals and the level of commitment by the project managers of the organization. All participants remarked that collaboration is a necessity in company C01 as functional departments are supporting the construction projects in different locations and different resources but with the same business objective. P07 noted that company C01 use the word collaboration as an organizational driver to create awareness of the resources needed between functional staff and construction managers. From a different perspective, P06 shared that during her first week at company C01 the

intention was to spend time with all the functional managers to build her support network.

P01 and P08 discussed the application of *paying in advance* as a new collaboration initiative in company C01. P08 stated:

> Paying in advance is basically like what can you do for a colleague now. It is something that you are giving to them without them asking you. And you are kind of putting money in the bank. Then one day when you have to ask them for a favor you have money in the bank that you can collect back.

P01 remarked that *paying in advance* has a high level of acceptance and supports creating functional relationships to overcome challenging situations in projects. Functional relationships include working with peers to secure resources for a project or support on-time payment for subcontractors.

Shaqrah (2018) argued that organizations implement strategies to support business goals through effective collaboration and communication across all functional levels. P07 explained that paying in advance is building a bridge before you need to use it. Building a bridge requires developing strategic relationships by showing genuine interest between peers in different departments of the construction organization. P05 added that a key to building a successful strategic relationship, between functional levels, is to provide an excellent customer service. P03 and P10 were consistent with published literature that common collaboration between different construction and functional managers support reaching the year's end objectives. Shaqrah (2018) and Singh (2013) argued that companies implementing the McKinsey 7S framework support a

collaborative environment and communication of common objectives to increase organizational performance.

Leadership. All the participants emphasized the importance of using leadership skills as a strategy to deliver projects efficiently. Leadership regarding the McKinsey 7S framework is an ability in the skills element, to influence individuals and to build effective communication lines to reach business objectives (Alshaher, 2013; Singh, 2013; Waterman et al., 1980). Ravanfar (2015) argued that successful organizations implement the skills element of the McKinsey 7S framework by adopting leadership skills through the organizational structure. According to P01, P07, and P09 to lead complex projects requires the ability to influence construction teams and assuring the importance of their role in achieving business objectives. P04 added that success in achieving business objectives relates to positive interactions with direct reports and communication skills.

The leadership subtheme relates to the main research question by confirming that implementing leadership skills is a strategy that construction managers select to deliver projects efficiently. The contents of document D04 described company C01as recipient for the best construction organization in Panama for 2016 by implementing a winning culture that includes leadership, communication, and business ethics as differential elements. The findings were consistent with the literature review. Krog and Govender (2015) noted that construction organizations implement leadership and effective communication programs to increase business performance leading to the efficient delivery of projects. P08 described that leadership includes motivating team members by reinforcing the concept that they are essential to the success of the project. P05

mentioned:

> When we won the award, it was thanks to our leadership movement inside the organization and efficient execution. Now we have to mature as a construction organization and find a leadership style that will help us to create a business difference.

P10 emphasized the need for the organization to continue with the movement of paying in advance and defining a leadership style that will adapt to the new business trends of innovation and efficiency.

Based on the interviews and discussions with participating construction managers, I found that leadership strategies are a current initiative in the long-range plan of company C01. P02 stated that "part of my servant leadership skills come from my educational background and company C01 is evaluating the creation of a training leadership program for construction managers lead." P07 understood the importance of selecting and improving leadership skills for the organization. He continued, saying that "his leadership style tends to focus on the stick instead of the carrot, but he does speak softly to make his point across the members of his team." Construction managers include leadership skills as strategies to increase performance, collaboration, and innovation (Allio, 2015; Semuel et al., 2017; Senaratne, & Samaraweera, 2015). The findings of my research were consistent with the published literature and confirm the application of leadership skills as a strategy to deliver projects efficiently.

Theme 4: Resource Management

The construction managers discussed the importance of reviewing and planning

for resources during the execution of construction projects. The evidence gathered during the data analysis suggested that construction managers review and follow processes to secure and plan for efficient resource management. Construction managers review and implement efficient resource management plans including staffing, required skills, equipment availability, and financial support (Oyewobi et al., 2015; Pekuri et al., 2015). The content of the strategy and the staff elements of the McKinsey 7S refers to the efficient management of available resources and selection of critical staff for the success of the business organization (Opoku et al., 2015; Waterman et al., 1980).

Construction managers from company C01 noted the requirement of completing a resource management plan as part of the documentation for large government projects (P01, P07, P08, & P09). P04 added:

> The senior management communicates by email to each construction manager informing the intention to bid in a government project. Then, we must start filling the required information that includes equipment availability, the names of our team members, cash flow, and other details. That will go in the final documentation as a valid resource plan for the bidding process.

P05 noted that complex construction projects require efficient planning to secure needed resources including equipment, staff, materials, and funds. Efficient planning mitigates the risk of assuming resources availability and includes the development of a timeline for requirements (P05). The revision of available resources and creation of a resource management plan lead to the efficient implementation of projects in the construction industry (Opoku et al., 2015; Pekuri et al., 2015; Singh, 2013).

The contents of documents D01, D02, and D03 described specific requirements including staff experience, equipment inventory, detailed budget, a proposed timeline for implementation, and legal compliance. Document D03 listed additional certification requirements to support the required expertise of the construction managers from company C01. The staff element of the McKinsey 7S framework includes selecting the needed human resources in alignment with the level of expertise for achieving a successful execution of a business project (Senichev, 2013; Waterman et al., 1980). Several participants (P02, P06, and P10) explained that Company C01 maintains a construction managers database with certifications and educational levels categories to update the resource management plan. P07 added that one common mistake from junior members is to assume the availability of needed resources. Construction managers from company C01 review the current availability of resources and implement a documentation plan to prevent business interruptions resulting from organizational changes. The documentation plan includes resources, budget, inspection, and a timeline to complete the project.

The responses from all participants as well as company documents D01, D02, and D03 confirmed the findings of implementing a resource management plan as part of the strategies to deliver projects efficiently. The findings were consistent with the literature review in the application of a resource management plan that includes staff sizing, experience level requirements, equipment, and budget activities as a successful strategy for project management (see Khakbaz & Hajiheydari, 2015; Opoku et al., 2015; Singh, 2013). The main themes that emerged from the data analysis and methodological

triangulation relate to the application of the McKinsey 7S framework to the strategies to deliver projects efficiently in the construction industry.

Applications to Professional Practice

The findings of this study could be valuable to business organizations exploring strategies to deliver projects efficiently. Construction managers implement the project management method including processes of planning, communication, resource management, and execution, to improve business productivity (Matteson et al., 2016; Senaratne & Samaraweera, 2015). Business leaders in the construction industry could find useful the findings of my study because of the potential adoption of the McKinsey 7s framework as a robust business model. The findings of my study revealed four main themes: (a) project experience, (b) communication, (c) collaboration, and (d) resource management. Construction managers using the project management method could apply the main themes in a structured approach to increase business success.

Waterman et al., (1980) argued that the superordinate goals element in the McKinsey 7S framework is the critical link to a continuous and interactive collaboration between the elements of the model. The findings of this study relate to the McKinsey 7S framework because executing complex construction projects requires constant interaction between different organizational levels and focusing on the business objectives (see Allen et al., 2014; Waterman et al., 1980). The construction managers' role in selecting a successful strategy should include proper analysis to understand the different resources needed and the process to achieve the selected objectives of the company. All 10

participants remarked that the communication of objectives is an essential successful element to the efficient delivery of projects.

The findings of this study supported that executing successful projects requires the implementation of a leadership program. The planning and implementation of a leadership program requires the review of current leadership skills of the staff and the necessary leadership style supporting the business objectives (Ravanfar, 2015; Shaqrah, 2018; Singh, 2013). The construction managers remarked on the importance of selecting a mature leadership program across different management levels in company C01. Project managers and business leaders could apply the findings of this study relevant to the review and implementation of a leadership program that adapts to the business objectives of the organization.

The adoption of a formal project management method in the construction industry is a concept of detailed plans, actions, quality controls, and processes leading to develop successful projects (Bigliardi et al., 2014; Nguyen, & Chileshe, 2015). The findings of this study apply to the construction industry by suggesting the application of the McKinsey 7S framework as a business excellence model including the application of the project management method. The project management method includes starting, planning, executing, controlling, and closing a project (Esa et al., 2014; PMI, 2014). The findings of my study could benefit construction managers by identifying the adoption of strategies to deliver projects successfully.

Implications for Social Change

The study findings could contribute to positive social changes by identifying the benefits to construction managers in implementing successful strategies to deliver projects efficiently. The implications of developing construction projects are expressed regarding internal and external resistance to change from stakeholders including communities, project staff, union leaders, and suppliers (Chell et al., 2014; Sigler, 2014). Construction managers review and implement communication plans describing the potential social benefits to local communities (Chang-Lin & Yu-Ping, 2016). All participants expressed the importance of communicating the impact, resources utilization, and local staffing plans of the project to local communities.

The study findings point to initiatives to implement collaboration and clear communication that could be useful when building a relationship with communities. As P01 and P08 noted, construction managers could build a stable relationship with team members, community leaders, and union leaders by implementing the *paying in advance* principle of company C01. Construction managers are the first point of contact between the construction organization and the local community leading to the importance of creating a communication plan that reinforces the positive social outcome of the project (Allio, 2015; Bianchi et al., 2017). The implications of implementing a communication plan that describes the positive social outcomes of a construction project, including sourcing local staff and resources, could result in support from the community leaders by understanding the benefits of the project.

The findings of this study could benefit construction managers in a positive social way by reinforcing the concept of selecting a leadership style that is in alignment with the organization. All the participants noted the importance of using leadership skills by the required style of the organization. The McKinsey 7S framework includes the style element as a concept to reach organizational excellence by adopting cultural and leadership characteristics to the business objectives (Waterman et al., 1980). The positive social change to construction managers implementing the McKinsey 7S framework could include training and career development leading to sustained employability which benefits their communities and families.

Recommendations for Action

The purpose of this qualitative single case study was to explore the strategies that construction managers implement to deliver projects efficiently. Construction managers have a significant role in creating and implementing strategies to deliver projects efficiently. The opportunity for construction managers in creating and tailoring strategies will result in using previous experience to increase project performance. I recommend that construction managers use the findings of this study to review the benefits of implementing strategies including project experience, communication, collaboration, and resource management. Construction managers should promote leadership training and communication standards to increase performance in the execution of projects.

Construction industry leaders could implement the findings of this study as a baseline for creating a business improvement plan in their organizations that includes the McKinsey 7S framework. My goal is to present the findings to members of the SPIA and

the Panamanian construction chamber. I will provide an executive summary to the executive management group of company C01 and the local chapter of the PMI in Panama. Students and researchers will find the approved study by Walden University in the ProQuest/UMI dissertation database.

Recommendations for Further Research

I selected a purposeful sample of construction managers of a single construction organization in Panama and selected public documents for the data analysis of successful strategies to deliver projects efficiently. Limitations are validation factors that affect and restrict the scope of the research (Connelly, 2013). Future researchers could conduct a construction management study that includes architects and field operators in the construction industry to compare the selection of strategies to deliver projects efficiently. A limitation of the study was the selection of a single construction organization located in Panama. I recommend conducting further research that expands to other regions beyond the boundaries of this study to improve business performance. Future research could explore with a qualitative, multiple case study design to extend knowledge from a diversity of sources in the construction industry. I recommend using the Zoom professional audio recording device and the iPhone 7s cellular phone as two digital recorders to capture the audio during the interview process.

Future researches could consider conducting a quantitative examination to understand the relationship between elements of the McKinsey 7S framework. The results from the quantitative research could provide specific elements of the McKinsey 7S that could be useful to different industries. The project management method includes

the implementation of a quality plan to control variations of customers' requirements during the developing of the project (Gaspar, Popescu, Dragomir, & Unguras, 2018). Future research could explore the relationship between quality control and the elements of the McKinsey 7S framework. I would recommend that researchers explore the hypercompetition model (see Pauwels & D'Aveni, 2016) to compare the performance levels of disruption and innovation in the construction industry.

Reflections

The reflections of my experience in the doctor in business administration (DBA) program includes challenges, biases, and gaining knowledge as an independent learner. I enrolled in the DBA program as a personal interest in gaining expertise in project management. My first challenge was the adaptation to academic writing and searching for recent and significant references to support my critical thinking. The second challenge was to accept and reflect on different evaluations from the doctoral study committee. Conducting the research study improved my academic writing and reception to feedback.

I noted my personal biases including performance drivers and distractors in a reflective journal to conduct the data collection in an unbiased manner. My assessment of participant meanings through member checking required the evaluation of new strategies beyond my previous experience in the construction industry. During the interview, the participants shared experiences and suggestions in the construction industry and the meaning of selecting essential strategies to improve business performance. The findings of the study extended my knowledge by releasing preconceived biases and integrating new concepts for improving strategies in the construction industry.

My reflection as an independent learner includes critical thinking and the utilization of recent evidence to support and gain knowledge. The embracing of critical thinking as an independent learner has allowed me to improve my problem-solving skills. The findings of this study and the reflections as an independent learner will allow me to improve as a project management professional by understanding the strategies to deliver projects efficiently in the construction industry.

Conclusion

Oyewobi et al. (2015) noted that construction organizations are at risk as construction managers fail to execute projects efficiently. Through the selection of a single case study, I explored strategies that construction managers use to deliver projects efficiently. Ten construction managers participated in this study and provided their perspective on strategies in the construction industry. The selected strategies result from the main themes of project experience, communication, collaboration, and resource management. The findings of this study support the use of directional and consistent communication as an effective strategy.

Study findings were consistent with the literature review and support the implementation of the McKinsey 7S framework to achieve business excellence. The soft elements of the McKinsey 7S were predominantly in the findings of this study. The style, skills, staff, and superordinate goals were influential during the data analysis. I conclude that the adoption of the McKinsey 7S framework and the project management method in the construction industry ensures the improvement of strategies to deliver projects efficiently.

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Appendix A: Interview Protocol

Interview Protocol	
Phases of the interview	**Script**
Introduce the interview and set the stage	Good morning/afternoon and thank you in advance for attending this interview. My name is Luis Crespo and I am a graduate student at Walden University pursuing a doctorate in business administration. The purpose of this interview is to explore and gain an understanding of strategies that construction managers use to deliver projects efficiently. This interview will last between 30 and 45 minutes, and the audio will be recorded for validating the complete understanding of your responses. Before this interview begins, I want you to understand that you can stop this interview at any time or skip any question that you do not wish to answer. Do you have any questions or information that you would like to discuss before we begin the interview? Thank you, and I will start the interview, noting the time and date to the audio recorder.
Semistructured interview	**Interview questions**
• Watch for non-verbal queues • Paraphrase as needed • Ask follow-up probing questions to get more in-depth	1. What is your participation in the creation of strategies to deliver projects efficiently? 2. What strategies do you use to deliver projects efficiently? 3. How do you identify strategies that worked best to deliver projects efficiently? 4. Please describe how did you improve previous strategies to deliver projects efficiently? 5. What elements are part of your strategies to deliver projects efficiently? 6. How does the organization communicate strategies that will deliver projects efficiently? 7. What difficulties do you experience when applying new strategies to construction

	projects? 8. What additional information would you like to share about the strategies required to deliver projects efficiently?
Wrap up interview thanking participant	Thank you for your time and for sharing your experience during this interview. Would you like to add any other information? Do you have any concerns about the interview process?
Schedule follow-up member checking interview	If you do not have any concerns or discomfort regarding the past interview, I would like to make an appointment to review the preliminary analysis of your interview. The review is called member checking and is a key step in confirming my understanding of what you meant during the interview. Please choose a date and time during the next week for the appointment. Thank you for your participation and please contact me at my cellular or email if you have any questions before the next appointment.
Follow–up Member-Checking Interview	
Introduce follow-up interview and set the stage	Thank you for your cooperation and effort to continue with the second part of the interview. During this 30-minute interview, I will review the questions from the previous interview and a synthesis of the analysis. The process is called member checking and provides validity to the data analysis of my research. I will ask you if you would like to add or make any corrections to my synthesis. Do you have any questions before we begin? Thanks.
Share a copy of the succinct synthesis for each individual question	Please review this document, which includes the previous questions and a succinct synthesis for each response.
Bring in probing questions related to other information that you may have found—note the information must be	1. What is your participation in the creation of strategies to deliver projects efficiently? 1.1 Succinct synthesis response

related so that you are probing and adhering to the IRB approval. Walk through each question, read the interpretation and ask: Did I miss anything? Or, What would you like to add?	1.2 Did I miss any information, or would you like to add any other information? 2. What strategies do you use to deliver projects efficiently? 2.1 Succinct synthesis response 2.2 Did I miss any information, or would you like to add any other information? 3. How do you identify strategies that worked best to deliver projects efficiently? 3.1 Succinct synthesis response 3.2 Did I miss any information, or would you like to add any other information? 4. Please describe how did you improve previous strategies to deliver projects efficiently 4.1 Succinct synthesis response 4.2 Did I miss any information, or would you like to add any other information? 5. What elements are part of your strategies to deliver projects efficiently? 5.1 Succinct synthesis response 5.2 Did I miss any information, or would you like to add any other information? 6. How does the organization communicate strategies that will deliver projects efficiently? 6.1 Succinct synthesis response 6.2 Did I miss any information, or would you like to add any other information?

	7. What difficulties do you experience when applying new strategies to construction projects? 7.1 Succinct synthesis response 7.2 Did I miss any information, or would you like to add any other information?
	8. What additional information would you like to share about the strategies required for effective project management? 8.1 Succinct synthesis response 8.2 Did I miss any information, or would you like to add any other information?
	Thank you for your sharing your knowledge and valuable experience during this process. As part of the interview process, I will send you a final transcript of the interview. Please send me an email if you would like to receive a digital copy of the study once it is completed. Thank you for your participation in this research titled Project Manager Strategies to Improve the Delivery of Construction Projects