

2020

## Strategies U.S. Coal Railroad Company Leaders Use to Remain Profitable

Jonathan Tomlin  
*Walden University*

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# Walden University

College of Management and Technology

This is to certify that the doctoral study by

Jonathan Tomlin

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Walden University  
2020

Abstract

Strategies U.S. Coal Railroad Company Leaders Use to Remain Profitable

by

Jonathan Tomlin

MBA, Herzing University 2015

BBA, Clayton State University, 2012

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

August 2020

## Abstract

Leaders of coal railroad companies in the United States have experienced significant losses in profitability. Loss of profitability is of concern to railroad company leaders because it can lead to business closure. Through the lens of the transformational leadership theory, the purpose of this qualitative multiple-case study was to explore strategies leaders of U.S. coal railroad companies use to remain profitable. Data were collected from semistructured interviews and company documents from 4 railroad leaders in the Southeastern United States who successfully implemented strategies to remain profitable. Yin's 5-step process was used to analyze the data. Three themes emerged: an equipment control strategy, an intermodal strategy, and a workforce strategy. A key recommendation is for railroad leaders to adopt sustainable strategies regarding equipment, intermodal diversification, and employee management to remain profitable and overcome the challenges associated with reductions in shipments of coal. The implications for positive social change include the potential for leaders of U.S. coal railroad companies to lower regional unemployment, improve economic stability, and provide improved living conditions in affected communities because of improved profitability in the railroad industry.

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## Dedication

I respectfully dedicate this study to the youths who march onward and upward toward the light. Never stop believing in your potential, because if a crazy kid from Augusta, GA can do it, anyone can! I also dedicate this study to my parents, Johnnie and Fletta Mae Tomlin. My dad, who instilled my consistent work ethic and charismatic personality. My mom, for teaching me to always be kind and compassionate to others while stressing the fact that every time I walk out the house, I represent not only myself but her as well. I hope your son exceeded your wildest dreams!

## Acknowledgments

The first acknowledgement goes to my angels Nia and Nya. Both of you make me go harder every day of my life. Before you all, I had no purpose in life. I hope I have made you proud. Thank you for continuing to put up with me all these years. We're on an Ultralight Beam!!! To my rockstar doctoral chairperson, Dr. Ronald Jones, thank you for taking me under your wing and guiding me through this process. I cannot even thank you enough for all you have done for me. I would like to thank all my committee members Dr. Jamiel Vadell and Dr. Ify Diala for their continued support during my study. I also would like to thank the Program Director, Dr. Susan Davis and finally, Dr. Julia East.

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## Section 1: Foundation of the Study

The railroad industry in the United States was a major source of economic growth and employment from the early 1900s until 2010 because of the profitability of transporting coal (Giles, 2011). Railroad companies are the primary means of transporting coal in the United States (U.S. Energy Information Administration [EIA], 2017a). But according to the EIA (2017a), coal consumption declined by 158 million tons from 2008-2015. Contributing factors to this decline are the declining cost of natural gas, regulations on of emissions to improve public health, and coal mining practices (EIA, 2017b). Further, fossil fuel production will decline drastically by 2035 with coal taking the biggest decline in energy generation falling from 41% to 32 % (EIA, 2017a). Growing concern exists that the coal industry will never be a driving force within the energy industry again (Schier, 2018). Thus, leaders of U.S. railroad companies need a strategy to remain profitable without being dependent on coal consumption.

### **Background of the Problem**

From 2008 to 2015, U.S. railroad companies suffered significant losses in terms of profitability because of the decline of coal consumption (Craig, 2016). From 2008 to 2016, coal shipments to U.S. power plants decreased by 35% (EIA, 2017b). The sudden decline in coal usage resulted from the closure of multiple coal-fired electricity generation plants and the introduction of gas fired alternative plants (Crooks, 2017). Ever since natural gas prices started to decline in 2008, the coal markets have not rebounded (Crooks, 2017).

The railroad industry seemed impervious to the effects of financial downturns or economic crises in the United States because of the strong profits resulting from transporting coal until the recession of 2008 (Sung, 2013). There is a need for further research on the effect of declining mined commodities such as coal on the railroad industry (Schweitzer, 2014). The general business problem that prompted this study was that leaders and managers of U.S. railroad companies lack plans and strategies to remain profitable without high consumption of coal. Leaders of U.S. railroad companies need strategies to remain profitable because of the declining shipments of coal.

### **Problem Statement**

Coal railroad companies in the United States experienced significant losses regarding profitability, electricity generation customers, and coal producers from 2008 to 2015 (Craig, 2016). The tonnage of coal shipments by railroad to U.S. electricity generating plants decreased 35% from 2008 to 2016 (EIA, 2017a). The general business problem was declining profitability in the U.S. coal railroad industry. The specific business problem was that some leaders of U.S. coal railroad companies lack strategies to remain profitable.

### **Purpose Statement**

The purpose of this qualitative multiple case study was to explore the strategies some leaders of U.S. coal railroad companies use to remain profitable. The targeted population was leaders of two U.S. coal railroad companies in the Southeastern United States who implemented successful strategies to remain profitable. The implications for social change include the potential to lower regional unemployment, improve economic

stability, and provide improved living conditions in affected communities because of improved profitability in the railroad industry.

### **Nature of Study**

The three research methods are qualitative, quantitative, and mixed (Felix Octavio, 2016). For qualitative research, researchers explore the deeper meaning of a phenomenon through open discourse, investigation, and discovery (McCusker & Gunaydin, 2015). I selected the qualitative method to discover and explore the fundamental meaning of a contemporary phenomenon through open discourse. In contrast, quantitative researchers use numerical measurable data to statistically test hypotheses and the significance of relationships or differences among variables (Molina-Azorin, 2016). Mixed method researchers use a qualitative element and quantitative element within their study (Bazeley, 2015). I did not test hypotheses among variables, which is part of a quantitative study or the quantitative portion of a mixed methods study. Therefore, a quantitative or mixed method approach was not appropriate for my study.

I considered the three qualitative research designs of phenomenology, ethnography, and case study. Case study research is an in-depth study of a situation or topic (Yin, 2018). Researchers conducting a case study investigate a phenomenon within a contextual, real world setting. A case study design was appropriate for this study because I explored a phenomenon within the bounded real world setting of the railroad industry. Conversely, researchers using the phenomenological design focus on the meaning of participants' lived experiences to collect data (Suorsa, 2015). The phenomenological design was not suitable because I did not focus on the meaning of the

lived experiences of participants. Additionally, researchers use the ethnographic design to explore and describe people in their own social economic environment and culture (Lewis, 2015). The ethnographic design was not appropriate for this study because I was not collecting data on the social economic or cultural environment of participants.

### **Research Question**

What strategies do some leaders of U.S. coal railroad companies use to remain profitable?

### **Interview Questions**

1. What strategies do you use to remain profitable?
2. What strategy did you find as most effective to remain profitable?
3. How do you measure the effectiveness of the strategies you implemented to remain profitable?
4. What key challenges did you face in implementing the strategies to remain profitable?
5. How did you overcome these challenges?
6. What other information can you provide about the strategies to remain profitable?

### **Conceptual Framework**

The transformational leadership theory, developed by Burns (1978), was the conceptual framework for this study. The constructs of transformational leadership theory are idealized influence, inspirational motivation, intellectual stimulation, and individualized attributes (Burns, 1978). Managers who adopt a transformational leadership mindset do not just think of day-to-day operations but consider a corporation's



strategic position for many years to come (Burns, 1978). Transformational theorists have noted that leaders and followers can lead each other to a higher level of morality and motivation (Bedi, Alpaslan, & Green, 2016). Transformational leaders create a model of integrity and fairness, motivating people to bypass self-interest, and inspiring people to reach towards stretch objectives previously thought impossible (Asencio, 2016).

There is a need for transformational leaders in the railroad industry because of the necessity to change strategies to increase revenue and profitability (Schweitzer, 2014). Without transformational leaders, the railroad industry could continue to struggle because many existing leaders refuse to plan (Schweitzer, 2014). Effective leaders in the railroad industry influence, motivate, and stimulate employees through implementation of successful strategies (White, 2014). Thus, the transformational leadership theory was an effective lens to explore strategies some leaders in the U.S. railroad industry use to remain profitable because transformational leaders tend to seek long-term solutions to improve profitability.

### **Operational Definitions**

*Association of American Railroads:* Professional alliance made of freight railroads and Amtrak dedicated to improving the professionalism, efficiency, safety, security, and technology of the system (Association of American Railroads, 2016).

*Class 1 railroad:* A railroad in the United States, Mexico, or Canada categorized as Class 1 because of the significant volume of annual operating revenue (Etheridge, 2016).

*Coal fired power plants:* Electricity generating power plants fueled by the consumption of coal (Crombie, 2014).

*Intermodalism:* The connection between truck and rail or between ship, truck, and rail (Etheridge, 2016).

*Positive train control:* A rail safety system mandated by the federal government to prevent head-on collisions, consisting of train dispatching control, trackside monitoring, and locomotive installed software (Mendoza, 2017).

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

#### **Assumptions**

Assumptions are expectations about a research topic the researcher presumes to be accurate and true but are unverifiable at the onset of the research (Chung & Shin, 2015). An assumption of this study was that railroad leaders answered all questions with honest, complete, and forthright responses. I also gained access to relevant company documents and assumed the company records were accurate and complete.

#### **Limitations**

Limitations in a study are weaknesses or deficiencies that potentially affect the results of the study in a negative manner (Middleton, 2016). The sample population restricted to leaders of two railroad companies in the Southeastern United States was a limitation of this study. Another limitation was the basis of the credibility of the interview data is the knowledge, opinions, and experiences of the leaders of two railroad companies, which does not reflect the views of the larger population of the leaders in the railroad industry. This research project was a limited scope case study; therefore, there is

limited, if any transferability of the findings by future researchers to other cases or settings.

### **Delimitations**

Delimitations of a study are the defined boundaries of the research (Chung & Shin, 2015). The geographic region of the Southwestern United States was a delimitation. Another delimitation was the sample population restricted to leaders of two railroad companies. The participant eligibility criteria of the leaders who implemented strategies to remain profitable restricted the scope of this study. Restricting the railroad companies to those that transport coal was a delimiting factor in this study.

### **Significance of the Study**

From the findings of this study, leaders of U.S. coal railroad companies might gain insight into effective strategies to remain profitable. Discovering strategies regarding diversification away from coal-only can allow railroad leaders to improve their business model as well as profitability. Leaders may also recognize value from this study to implement actions to create positive social change to benefit employees, families, and communities through increasing profitability.

### **Contributions to Business Practice**

Successful business leaders seek to gain and maintain a competitive advantage over their competitors through effective strategy implementation (Akbar, Sadegh, & Chehrazi, 2015). This research could be significant in terms of contributing to improved business practices because leaders within the U.S. coal railroad industry can recognize and use strategies implemented by business competitors to remain profitable. Business

leaders improve their prospects for increased profitability and viability when they implement benchmark strategies used by their industry competitors to gain a competitive advantage and improve the long-term growth potential of their companies (Narula & Verbeke, 2015). Leaders in the U.S. coal railroad can also gain insight into diversification strategies that business rivals used to reduce their dependency on coal shipments to remain profitable. Business leaders must recognize that a change in the marketplace oftentimes requires a revised business model and strategy to maintain or gain a competitive advantage (Akbar et al., 2015).

### **Implications for Social Change**

Positive social change occurs when profitable business leaders create new jobs, improve wages, and stabilize their ability to remain viable in the respective regional economy (Yang, Lee, & Cheng, 2016). A goal of this study is to contribute to positive social change because improved profitability in the railroad industry may lead to a lower the regional unemployment rate, improved economic stability, and improved living conditions in affected communities. Increased revenue and profitability within for-profit businesses typically creates a positive social chain reaction (Yang et al., 2016). Leaders in the U.S. railroad industry might use the findings of this study to stabilize profitability, reducing the need for future employee layoffs. Increased regional employment improves regional economic and community conditions (Yang et al., 2016).

### **A Review of Professional an Academic Literature**

The purpose of this qualitative case study was to explore strategies U.S. coal railroad leaders use to remain profitable. For this study, I reviewed literature on

transformational leadership theory, alternative leadership theories, coal production, and railroad innovation. When I conducted searches for literature, I accessed the following multiple-discipline databases: ProQuest Central, Academic Search Complete, Psychology and Behavioral Sciences Collection, Communication and Mass Media Complete Google Scholar, EBSCO databases, Academic Search Premier, Master FILE Premier, and Business Source Premier. Other sources included dissertations, federal government databases, government reports, books, peer-reviewed journal articles, management, and business and economic databases. The key words used to search for literature consisted of *coal, train technology, leadership theories, transformational leadership, transactional leadership, economic strategies, federal government, employee turnover, and job satisfaction.*

Peer-reviewed articles were the main source of all my reports. The sources used in this study are (a) 201 peer-viewed scholarly journal articles, (b) 12 dissertations, (c) three government reports, (d) 11 seminal books, (e) three scholarly conference paper, and (f) five trade journals. Of the 235 sources used, 85.5% were peer-reviewed and 201 had publication dates from 2015-2020 equating to 85.5% within 5 years of my expected graduation date. Ninety-six references are unique to the literature review.

### **Purpose of the Study**

The purpose of the qualitative multiple case study was to explore the strategies some leaders of U.S. coal railroad companies use to remain profitable. The targeted population was leaders of two U.S. coal railroad companies in the Southeastern United States who implemented successful strategies to remain profitable. Business leaders

improve their prospects for increased profitability and viability when they implement benchmark strategies used by their industry competitors to gain a competitive advantage and improve the long-term growth potential of their companies (Narula & Verbeke, 2015). This research could be significant in terms of contributing to improved business practices because leaders within the U.S. coal railroad industry might recognize and use proven strategies implemented by business competitors to remain profitable. Positive social change occurs when profitable business leaders create new jobs, improve wages, and stabilize their ability to remain viable in the respective regional economy (Yang et al., 2016). The implications for social change include the potential to lower regional unemployment, improve economic stability, and provide improved living conditions in affected communities because of improved profitability in the railroad industry.

### **Leadership Theories**

Theories of leadership were first introduced in the mid-1800s, starting with the theory of the great man, which pertained to the thinking that man is the only species that could be a leader of great consequence (McCleskey, 2014). However, there has been no evidence that would give the great man theory any validity. Researchers have also ignored and disputed information pertaining to the notion that there are no leaders created, but they are born (Adams, Keloharju, & Knüpfer, 2018). There are natural leaders, and some become leaders after gaining necessary assets and skills (Hussain & Hassan, 2015).

Since the creation of leadership theories in the 19th century, leadership provides support in a myriad of areas that have confirmation and validation by educators,

researchers, and scholars, all of whom continue to use peer-reviewed research. There are many styles of leadership and at least eight known leadership theories (Singh, 2014). Characteristics of efficient and successful leadership come from theories and their characteristics; every theory has a personal perspective of a leader or leadership (Blomme, Kodden, & Beasley-Suffolk, 2015). For example, Blomme et al. (2015) argued that building an organization that has a successful legacy require (a) leaders, (b) followers, (c) and employees. Explaining and organizing trends that are complicated and leadership is the focus in theories of leadership (Bass & Bass, 2008; McCleskey, 2014).

Despite the many characteristics in leadership theories, there has been insufficient evidence on how to verify the skills pertaining to leadership effectiveness; therefore, scholars decided against listing criteria for effective leadership (O'Boyle, Murray, & Cummins, 2015). The inconsistencies of not verifying the skills resulted in consideration of other approaches and theories in the field. However, an effective leader is primarily a combination of skills and traits leaders build on to develop ethics, build integrity, and foresee the changes in the societal paradigm (Hussain & Hassan, 2015).

### **Transformational Leadership Theories and Constructs**

One of the most researched leadership theories among educators, scholars, and researchers is the transformational leadership theory (Swanwick, 2017). Company leaders use the transformational leadership theory to think beyond the day-to-day operations. House (1977) and Burns (1978) originated the initial research on constructs of the transformational leadership theory. Both House and Burns found common ground in the findings of their research of transformational leadership on the premise that leaders can

inspire followers and subordinates to feel they have the confidence to achieve great things. Transformational leadership theory consists of four main dimensions: individual consideration, intellectual stimulation, inspirational motivation, and idealized influence (Bass & Avolio, 1994; Griffith, Connelly, Thiel, & Johnson, 2015). Transformational leadership can be either explicit or implicit when measured by similar instruments that conveys a leader's most critical and essential behaviors.

Transformational leaders must always see a future and help in devising ways to excel in an organization and their careers (Swanwick, 2017). Transformational leaders rely on employees trusting their leader as a team member, mediator, and supervisor (Asencio & Mujkic, 2016). Having trust among all levels of an organization is vital if the company wants to increase profitability and efficiency (Arnold, Loughlin, & Walsh, 2017; Asencio & Mujkic, 2016). If leaders think of themselves as transformational, they will likely have to develop several levels of employees, such as cross level, individual, and team (Asencio & Mujkic, 2016). No matter the level or how many employees a leader has, leaders who use this theory transform employees into optimistic and idealistic workers. Transformational leaders also make sure that their goals involve their employees' longevity within a company and relaying the lofty expectations (Rajesh, Prikshat, Shum, & Suganthi, 2019). People who balance and orient their attention between shared vision and an employee's creative process are transformational leaders (Kouzes & Posner, 2016). Five main steps of successful transformational leadership exist: (a) enable other to act, (b) encourage the heart, (c) challenge the process, (d) model the way, and (e) inspire and shared vision (Kouzes & Posner, 2016). Transformational



leaders use these steps to develop innovative growth in followers by allowing them not to put themselves before others (Kouzes & Posner, 2016). Employees thus become challenged by transformational leaders with their values, vision, leaders' confidence, organization social environment, and self-efficacy (Northouse, 2016). Overall, the transformational leadership theory is a way for subordinates and leaders to be a well working unit, giving employees and leaders the motivation and job satisfaction to excel in an organization (Lawlor, Batchelor, & Abston, 2015).

Further, organizational leaders use a myriad of different leadership tactics to train and develop employees. One of the highly popular ways to accomplish, organize, and coordinate tasking is to utilize teams, which for some leaders could be challenging who are not seeking to motivate teams but individuals (Rao & Kareem Abdul, 2015).

Transformational leaders have a high impact on efficiency, trust, and team performance (Rao & Kareem Abdul, 2015). Some people believe organizational metrics change to focus on teams rather than focusing on individuals to stimulate values, objectives, and goals (Rao & Kareem Abdul, 2015). In an interpretation of leadership, Burns (1978) stated that the style or theory of leaders involved conducting transactions with subordinates or transforming subordinates no matter if the leaders are working well with teams or individuals.

Despite the applicability of the transformational leadership theory, it has weaknesses, limitations, problems, and shortcomings when used by political or management leadership and when leaders use the theory as a universal or contingency style (Andersen, 2015). There is a lack of data that transformational leaders tend to be

more efficient than transactional leaders (Andersen, 2015). Because transformational leadership theory's original model resulted in problems with the constructs of conformity, continuity, and consistency (Den Hartog et al., 1999), scholars and researchers have combined situational theory with leadership theory because the same situations happen for transformational leaders are the same for leaders in general, though the theory of transformational leadership is more beneficial for an organization and the employees (Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1999). Researchers use the situational approach to focus on followers who rely on certain situations (McCleskey, 2014), though the situational theory lacks sustainment at times (Northouse, 2016). However, a myriad of situational factors, first noticed by Tannenbaum and Schmidt (1958), resulted in the theory of contingency (Hussain & Hassan, 2015). These authors introduced three leadership traits that would lead to actions by leaders: (a) forces within the leaders and leaders' capabilities, (b) forces within the situations, and (c) forces within the followers (Fahmi, Prawira, Hudalah, & Firman, 2016). Transformational leaders who understand all the variables in most situations acknowledge the difficulties and reacts accordingly without discomfort or argument (Fahmi et al., 2016).

Even though the transformational leadership theory faces challenges of not being the preeminent leadership theory, there are still various supporters of the results and its history the transformational leaders provide (Berkovich, 2016). For example, Little, Gooty, Janaki, and Williams, (2016), in agreement with Berkovich (2016), commented that transformational leaders have higher, creativity levels, higher performance levels, and higher occurrences of citizenship behavior in an organization. Researchers use a

myriad of managerial or theoretical situations to support companies and transformational leaders who drives employee creativity (Mittal & Dhar, 2015). Burns (1978), Bass and Avolio (1994), Bass (1985), and House (1977) conferred on the myriad of benefits of the leadership theory that includes enhancing and empowering employee satisfaction.

**Idealized attributes.** Idealized attributes are important factors that highly influence employee satisfaction regarding qualities, characteristics, and traits. The personal characteristics of a leader will influence a high level of leadership, the cohesiveness of an organization, and team performance (Soane et al., 2015). There are certain characteristics that employees look for in a leader: (a) consistency, (b) flexibility, (c) communication, (d) empathy, (e) conviction, (f) honesty, and (g) direction (Bass & Bass, 2008). Employees more than likely base the judgement of their leaders on professional, individual, and personal traits, whereas leaders typically judge an employee based on personality (Stelmokiene & Endriulaitiene, 2015).

With traits that are adaptable characteristics, leaders can be seen as approachable and understanding of certain situations (Soane, Butler, & Stanton, 2015). Leaders who decide to become transformational leaders foster an elevated trust level with subordinates (Andersen, 2015; Men, 2014). For instance, transformational leaders should be competent and comfortable in their process to decide, which helps workers understand the need for commitments, change, and improvements (Martin, Naylor, Jefferson, David, & Cavazos, 2015). Effective leaders help employees by raising the awareness of how important it is to apply strategy and vision, rise above self-interest for the team and organization, and to achieve milestones (Soane et al., 2015). Transformational leaders can also lessen stress in

a company and instill trust by bringing employees together (Martin et al., 2015). Further, traits for transformational leaders will differ with each employee, and a leader must possess the skills to handle each employee's personality (Den Hartog et al., 1999). Transformational leaders try to create an environment that is engaging to their followers to spawn creativity (Den Hartog et al., 1999; Mozammel & Haan, 2016).

Additionally, leader member exchange (LMX) is an important tool a transformational leader uses to be an effective leader. An effective leader will appreciate the relationship between members and leaders, which is referred to as LMX (Zacher, Pearce, Rooney, & Mckenna, 2014). An increased LMX relationship means that members and leaders have a high level of respect, trust, obligation, and loyalty (Andersen, 2015). The level of LMX fluctuates because of the lack of information, trust, support, and resources (Zacher et al., 2014). Leaders who are qualified in this area can direct, educate, inspire, and support its members, which increases job satisfaction and performance (Zacher et al., 2014). Not having these traits could mean low productivity, dissatisfied members, and leadership failure (Andersen, 2015). Transformational leaders tend to more effective when they use the principles of LMX.

Further, being able to develop leaders is an important trait of a transformational leader. Certain leaders are born with distinctive, inherited traits, whereas learning other traits (Zheng & Muir, 2015). Regardless of how the development of a leadership characteristics occurs, leaders must adapt to changing trends (Day, Fleenor, Atwater, Sturm, & McKee, 2014). One way to avoid failures in leadership is to obtain feedback from employees regarding the thoughts and the quality of leadership displayed

(Stelmokiene & Endriulaitiene, 2015). High quality leaders acknowledge the roles that race and gender contribute as factors in compelling LMX qualities. The qualities of communication, organizational climate, interpersonal skills, and cultural competence are models for quality leadership in a diversified situation (Day et al., 2014).

Transformational leaders who show idealized attributes add to the empowerment of members of an organization and their reactions verify those attributes (Stelmokiene & Endriulaitiene, 2015). Transformational leaders with idealized attributes conform to idealize behaviors easily along with effective quality leadership and wisdom.

**Idealized behaviors.** Another important trait of a transformational leader is idealized behaviors. Divided behaviors of human beings were first described in the early 20th century from the concepts of movement and conduct (Armstrong, 2015). Human behaviors are different given the backgrounds of each culture, which makes behaviors similar (Den Hartog et al., 1999). The theory of transformational leadership of idealized behaviors is a change in a transformational point of view that breaks down into four different styles: (a) individual consideration, (b) intellectual situation, (c) idealized influence, and (d) inspirational motivation (Day et al., 2014). These four styles are the relationship between employees and leaders in organizations and groups within the constructs of transformational leadership theory attributes and behavior (Bass & Avolio, 1994). Most leaders are confident, charismatic, an inspiration, and compassionate to people who look for an identification with and feelings toward leaders (Den Hartog et al., 1999).

The behavior of transformational leaders is a characteristic, with trust being the most important, as people will look up to a leader for expertise, influence, empowerment, vision, and inspiration (Den Hartog et al., 1999). The use of different leadership behaviors leans on trust built between employees and leaders; without trust, there will be a decline of productivity and the overall relationship (Asencio, 2016). Thus, trust is the foundation for making sure the organization is effective (Asencio, 2016). Leaders are the main players in creating, sustaining, and building trust (Asencio, 2016; Swanwick, 2017). When there is no trust, there is no inclination of the leader's talent to provide leadership to employees (Asencio, 2016).

Most leaders turn into role models for individuals when idealized influence behaviors applied urge employees to accept challenging roles, partake in risk taking, and follow ethical principles (Jain & Duggal, 2016). Having an ethical sense is important when establishing trust as an effective leader. A leader's ethical behavior is a critical component in many theories of leadership, and the theory of transformational leadership serves as the moral theory for employees to copy (Bedi et al., 2016). Most leaders who impose ethical standards and integrity are more attractive and credible as leaders to employees (Bedi et al., 2016).

Certain types of behaviors are also ideal for transformational leaders who effectively communicate to sustain and achieve the objectives of the organization (Day et al., 2014). Transformational leaders have charismatic leadership qualities, which leads to having a positive influence on employees (Day et al., 2014; Naber & Moffett, 2017). The abilities of a leader are critical ingredients for selecting who may be a transformational

leader and who will display the behaviors of a transformational leader (Bedi et al., 2016). The behaviors of a leader's characteristics due to the typical patterns of behavior leaders show that there is a difference from the behavior of other leaders (McCleskey, 2014). These types of employees can relate with behaviors and attributes of a leader by learning an elevated level of respect, moral and ethical righteousness, fairness, and great trust (Diebig, Bowmann, & Rowold, 2016). A leader who transforms, exploits, and understands the demand and critical need of a follower; in addition, a transformative leader seeks out motives in followers, engages the entire person of the follower, and looks to satisfy their needs at a higher level (Burns, 1978).

**Intellectual stimulation.** With intellectual stimulation, leaders take risks, seek employees' ideas, and challenge assumptions promoting creativity in their employees (Asencio, 2016). Leader stimulation empowers employee decision making, encourages them not to relinquish their creativity, and to take ownership of their discernments while remaining optimistic and seeking a different approach (Asencio, 2016). Swanwick (2017), in agreement with Asencio (2016), stated certain risks are commonly associated with effective leadership. When stimulated intellectually by their transformational leader, employees will take part in the decision making, encourage trust and fairness, and stay focused and promptly react to information they receive (Hassan & Hassan, 2015). The trust of employees to make key decisions while being creative is important for employee satisfaction and motivation. Leaders and employees grow their relationship professionally and promote on job worth when both learn to trust one another (Stelmokiene & Endriulaitiene, 2015). Transformational leaders think of learning as a vital asset, views

issues as learning experiences, and looks upon employees as a new source of solutions and ideas (Hassan & Hassan, 2015).

Transformational leaders establish trust in an organization so employees feel empowered to make decisions. Transformational leaders allow employees to make use of the approach for entrepreneurship for ideas and solutions to take risks, compete, think outside the box, and take charge (Moriano, Molero, Topa, & Lévy Mangin, 2014). Most leaders allow their employees to use their creativity to discover solutions with unique and fresh ideas (Moriano et al., 2014). In addition, transformational leaders who allow their employees to have a platform to voice their issues provide intellectual stimulation, which improves job satisfaction (Asencio, 2016).

The satisfaction of an employee's job is just one element of an effective leader who is a visionary and who can mentally stimulate to devote selflessness to an organization and its future goals (Tziner, Ben-David, Oren, & Sharoni, 2014). The employing fairness approach and trust includes (a) distributive, (b) thoroughness, (c) interaction, (d) procedural, (e) multifariousness (Asencio & Mujkic, 2016). Trust, fairness, and integrity are stimulations of the intellectual type of their leader's perceptions (Asencio & Mujkic, 2016). The act of an employee's opportunity to serve others along with the fairness of following procedures creates a feeling of togetherness and lends itself to enabling great team performances (Liden et al., 2015). Arnold et al. (2017), in rebuttal to Liden et al. (2015), commented the casual approach to business sometimes proves to be concerning for some transformational leaders.



If employee's thoughts of transformational leaders come with commitment internally, there can be no room for unreliability, unfairness, doubt, and dissonance (Swanwick, 2017). Employees will stay loyal when they feel stimulated intellectually and their motivation level is high (Liden et al., 2015), Stimulation of an intellectual is a leadership behavior used to incite heavy emotions from followers because employees tend to identify themselves with a good leader (Hassan & Hassan, 2015). Intellectual abilities may increase the leaders reach to motivate employees and challenge their problem-solving skills (Para-González, Jiménez-Jiménez, & Martínez-Lorente, 2018). Transformational leaders who use idealized attributes model characteristics and intellectual capacity on behalf of their employees to promote motivational inspiration and reach attainable, yet challenging goals (Day et al., 2014).

**Inspirational motivation.** The ability to provide motivational inspiration is vital for an effective leader. Developmental processes and communication are the focus of inspirational motivation, which appeals to the visions of subordinates by applying images or symbols to fine tune their attempt on the correct modeling behaviors (Girma, 2016). Communicating reachable goals with a confidence that enhances the enthusiasm and optimistic outlook of employees in achieving winning goals are characteristics of transformational leaders (Girma, 2016). Transformation leaders also stimulate motivation in employees to raise the employees' inner levels of devotion by focusing on purposeful goals (Asencio, 2016). Enthusiasm by way of cognitive and emotional engagement is the most plausible effect of inspiration received by employees from leaders who references

their objectives and pushes them to reach them successfully (Asencio, 2016).

Motivational inspiration is the key to successful transformational leadership.

Emotions have acquired a notable amount of awareness in the field of leadership research and literature, particularly regarding follower engagement and transformational leaders (Goswami, Nair, Beehr, & Grossenbacher, 2016). The behaviors and emotions asserted by employees will vary, yet some behaviors or emotions can be infectious (Goswami et al., 2016). Bai, Lin, and Li (2016), in agreement with Goswami et al. (2016), stated the transformational leadership becomes infectious when a team can manage conflict and gain knowledge from each other. An employee's emotional state, negative or positive, may be a major factor in how the employee reacts to a transformational leader (Goswami et al., 2016). Being in a positive emotional state has the potential to boost cognitive actions and broaden the attention span to create a more personal relationship and solidify the social network (Mathew & Gupta, 2015). Transformational leaders who operate in an appealing manner and radiate idealized influence stimulate healthy emotions from their subordinates or employees, inclusive of respect and loyalty (McCleskey, 2014). Individuals possess a scope of social and intimate identities, and each identity mirrors an individual's self-esteem and self-worth, this serves as a pillar for emotional and cognitive motivation process (Prochazka, Gilova, & Vaculik, 2017). Organizational development includes cognitive behavioral changes that depend on trust, which employees and their transformational leaders are likely to share (Hassan & Hassan, 2015).

The inspirational motivation of transformational leaders mirrors an irresistible focus toward achieving goals and therefore relates to employees' job satisfaction (Moriano et al., 2014). The sense of determination employees garner from their transformation leader's inspirational motivation is job gratification that develops goals geared toward the energy of the entire organization (Hassan & Hassan, 2015). Idealized influence and inspirational motivation linked with transformational leaders' talent to articulate and create visions for employees (Martin, 2017). Employees are both inspired and energized by their transformational leaders' motivation, not by leading them in the correct direction, but by fulfilling the standard human requirements of recognition, control over their lives and abilities to achieve their goals, and self-esteem (Pandey, Davis, Pandey, & Peng, 2016). A positive attitude and working environment remain a requirement throughout the organization with management, colleagues, and the industry for inspirational moments to transpire (Pandey et al., 2016). To build and promote trust, transformational leaders' inspirational motivation toward their employees must include the individualized concerns of the minds, souls, and hearts of the employees (Hassan & Hassan, 2015).

**Individualized considerations.** Having consideration for an individual is for individuals within the theory of transformational leadership happens when leaders act as a mentor or coach, listen to employees concerns and looks out for the employee's individual needs (McCleskey, 2014). Some of the most pivotal traits of transformational leadership are detailed attention of others and understanding personal needs, feelings, dreams, wishes, and capabilities (Mittal & Dhar, 2015). Geier (2016), in agreement with

Mittal and Dhar (2015), commented a vital trait of a transformational leader is to be able to switch leadership styles for whatever the situation calls for.

Transformational leaders handle every employee individually and feel responsible for the wellbeing of each employee, which causes higher employee perceptions of fairness, happiness, motivation, and satisfaction (Zacher et al., 2014). Consideration for individuals plays a role in job satisfaction and affects job knowledge sharing, the behavior of organized citizenship, and organization identification (Bottomley, Mostafa, Gould, & León, 2016). There is an acknowledgement from leaders of the competencies and skills of each person that provides their employees the platform to give their opinion honestly, all while increasing the leader's perception from employees of being a great leader (McCleskey, 2014). Perception becomes reality to an employee if a leader displays the characteristics for an extended period.

An elevated level of fairness inside a company is a reason why employees likely remain at a company longer and return that fairness with good workplace commitments (Talwar, 2014). An elevated level of fairness as it pertains to fairness in a leader who has a transformational mindset, shows a willingness to the company, and this type of leadership lends itself to help employees and subordinates in making decisions and treat them not as a team but as individuals (Bedi et al., 2016). Confidence, risk taking, and fairness are elements of truth, which happens to be a behavior practiced by a leader that is transformational, that lifts employees' selflessness in the make of behavior of citizenship of an organization (Li, Zhao, & Begley, 2015). Creativity has a myriad of meanings the areas in which there common include elaboration, originality, flexibility, and using

fluency (Akbar et al., 2015). Creativity has become one of the pivotal factors by providing stabilization, by lifting the organizations survival, and having an environment that competitive (Akbar et al., 2015). Li et al. (2015), in agreement with Akbar et al. (2015), noted creativity is key to transformational leadership. Creativity for creating useful and new techniques can lead to the development of innovation and creating approaches, actions, and ideas that should lend itself to viable services and goods (Kim, Park, & Kim, 2019). Effective leaders recognize the need to possess the traits to facilitate creativity in an organization and a higher-level of consideration for an individual (Kim et al., 2019). Transformational leaders exhibit behaviors that allow subordinates, team members, and employees to excel in creativity (Zacher et al., 2014). Leaders who are transformational are fair, trustworthy, and help employees get their goals achieved (Talwar, 2014). Transformational leaders help employees set their selfless way to the side and remain focused, creative, and make decisions that are responsible that pushes a working environment that is positive (Asencio, 2016). Employees always require coaching, mentoring, citizenship, and transformational leaders who are effective gives traits and push change by using any of the constructs (Kim et al., 2019).

### **Transactional Leadership Theory**

Transactional leadership is an important leadership style for all frontline managers who run the day-to-day operations of a business. An organization's approach to leadership is circumstantial in mandating detailed responses from management. Bass and Bass (2008) noted a leadership style can exist along a spectrum that includes transactional, transformational, and laissez-faire leadership models depending on the

circumstances. Kark, Van Dijk, and Vashdi (2018) commented the transactional and transformational leadership styles are helpful for solving of operational issues among businesses. Transactional and transformational styles of leadership are helpful in promoting and influencing processes that influence a behavior of organizational citizenship from a positive stance (Atta & Khan, 2016). Bass and Bass (2008) stated transformational and transactional leaders rely on the creation of positive relationships with employees. A leader, who displays a transactional mindset, motivates employees through a process of punishment and rewards, micromanages employees, is always straightforward, and wants unrelenting obedience (Smith, 2017). Even though transactional style is useful, there is no one leadership style with meets every criterion for effective leadership.

The value of a transaction between an employee and manager is contingent on the weight each party places on the transaction. Achieving a mutual benefit between the subordinate and the leader is the main goal of transactional leaders (Gross, 2016). The concept of obtaining a favorable outcome using extrinsic rewards or transactions may be successful in fostering strong relationships between a leader and their subordinate. Ergo, the most popular strategy used by managers to retain employees is the transactional approach (Lee, Idris, & Tuckey, 2019). Bass and Bass (2008) argued one of three strategies occur when taking the transactional approach: (a) management by exception passive, (b) management by exception active, and (c) contingent reward. The impact of each of transactional occurrence can be vastly different; however, all three of the approaches remain transactional because of the design. Patience is necessary for leaders

to consider the context of a conversation before implementing a resolution to obtain a favorable outcome. Having the right mindset is especially true when combating operational issues, such as employee retention and turnover.

The issuing of rewards and punishments relies on a variety of criteria from a transactional leaders' perspective. Some of the managers reward employees based on achieving a goal. Bass and Bass (2008) argued effective managers use a contingent approach to motivate employees. Bass and Avolio (1994) noted other leaders use a passive method to manage workers, only intervening when necessary or when an issue arises. Some leaders use an active approach to manage their followers, in which the leader maintains a seamless, problem-free workflow by continuously monitoring progress (Bass & Avolio, 1994).

Managers should establish clear guidelines and expectations when evaluating performance regardless of which transactional approach used to influence workers' performance. By doing so, feelings of mistrust and disenchantment can be avoided when issues come about or during uncertain times. Leaders who have a transactional mindset forge loyalty by putting together financial benefits and rewards to raise expectations (Schlechter, Syce, & Bussin, 2016). Within the business industry, there is a significant pay gap between executives and front-line employees, which shows a need to close the pay gap (Gross, 2016). Workers who obtain benefits and good pay packages show a higher satisfaction rate to their jobs. The initial motivation of a worker can rely on the workers desire to meet the baseline needs (Maslow, 1954). The correct rewards that give off intrinsic value, such as the raising of the compensation for an employee, is a helpful

strategy for increasing the level of job satisfaction and motivation but could have an adverse effect on employee turnover.

Railroad leaders must find different ways to motivate and reward employees. The style a transactional leader displays is vital for employee motivation, which also correlates with organizational growth and performance (Gross, 2016). Chen and Fulmer (2018) proposed no leaders should use processes that only include benefits and compensation to keep workers, as employee commitment may sway to the reward and not the company. Qui, Haobin, Hung, and York (2015) argued the creation of relationships that help an adequate bond with a work group creates positive commitment and influences performance. A real display of leadership support can be a cost effective and a more efficient strategy as opposed to an approach that is transactional to avoid higher turnover rates (Karatepe & Kilic, 2015). Effective leaders create relationships that are meaningful by understanding the motivational switches that each employee must influence certain outcomes. A true leader must understand each situation is up for assessment because a leader's transactional decisions effect the organization.

The style of leadership a manager emulates is contingent on the situation an organization must face. Kim, Kang, and Park (2017) commented leaders in some businesses that are in crisis situations are not likely to use the style of transformational leadership because transactional leadership is more reliable. Leaders who have a transactional approach are always evaluating a subordinate against the characteristics of punishment and rewards that could be equal to a control mechanism (Love & Roper, 2015). The straightforward approach a leader with a transactional mindset uses can be



demotivating and daunting to some employees (Arzi & Farahbod, 2014). Even though there are failures to the model of transactional leadership, when a crisis arises, leaders want fast results and display an affinity toward the transactional leadership style as opposed to the transformational leadership style (Deichmann & Stam, 2015; Geier, 2016). Rodrigues and Ferreira (2015) noted the style of transformational leadership holds more weight than the method of transactional leadership in creating change that is positive within a business. The style of transactional leadership can be helpful in getting through organizational difficulties during times of unrest as most transactional leaders offer benefits to drive employee performance and ideation. The major challenge leaders employing the transactional leadership style face is sustaining and determining the kind of extrinsic qualities that will spawn high performance and a long commitment towards a company. Creating attainable goals is imperative in creating motivation within a company. Ahmad, Abdul-Rahman, and Soon (2015) argued a leader who displays a transactional mindset encouraged subordinates to satisfy and set attainable targets using a variety of different motivators. In addition, Burns (1978) stated the creating ambitious goals is a characteristic of a leader with a transformational mindset but relies on creating motivations from different perspectives. Martin (2015) stated the right mixing of transactional and transformational styles as a good approach when dealing with organizational issues. Helpful motivators to get employees to get jobs done in a timely manner are compensatory packages. Leaders who have a transactional mindset tend to motivate subordinates through the exchange process (Arzi & Farahbod, 2014).

Transactional leaders use the process of exchange as a method to motivate followers (Arzi & Farahbod, 2014). Compensatory packages are an effective motivator as well. Transactional leaders could foster relationships by connecting financial rewards and benefits to implicit or explicit requirements (Schlechter et al., 2016). Setting realistic and obtainable goals could be helpful in providing motivation. Ahmad et al. (2015) argued transactional leaders encourage employees to determine and achieve ambitious goals using a variety of extrinsic motivation. Burns (1978) stated setting these goals are characteristic of a transformational leader but can stifle the creativity from an intrinsic point of view.

### **Transformational Versus Transactional Leadership Styles**

In the late 1970s, Burns introduced transformational leadership style and in 1985, Bass developed and created the Multifactor Leadership Questionnaire to comprehend transformational leadership styles. An organization's best defense is transformational leadership in the 21st century along with 29 offense strategies (Rajesh et al., 2019; Northouse, 2016). A demonstration of transformational leadership style is a leader's behavior displayed as the four I's: intellectual stimulation, idealized influence, individual consideration, and inspirational motivation (McCleskey, 2014).

Productive and satisfied employees and extreme change is the result of transformational leadership behavior (Asencio & Mujkic, 2016). Employees' fulfillment and satisfaction developed in a positive way act as a commitment to an organization and a job position (Zhang, Ren, & Li, 2019). Progressive leaders use and act upon the transformational leadership style to elevate associates' awareness of what is right and

required and increase their motivation toward their social environments and organization (Spector & Wilson, 2018). Transformational leadership style is unique, different, and proactive and acts to optimize growth (Burnes, Hughes, & By, 2016). Surpassing performance as transformational leaders conclude that development encompasses and encourages maturity. While convincing employees to reach for higher self-development and achievement, transformational leaders will experience growth enough to understand the core values and encourages attitude adjustments (Northouse, 2016). Employees armed with the competencies as high achievers and are self-developing are at a high level, which leads to building the total brand of a company (Mittal & Dhar, 2015).

The serious effects of current and past studies of transformational leaders visible in employees' job satisfaction are of great complement to the manager's leadership (McCleskey, 2014). The primary focus of transformational leaders is growing organizations and implementing the same behaviors to promote motivation and encourage employees, a healthy social environment, and a solid organizational culture (Schopman, Kalshoven, & Boon, 2017). The use of these skillsets helps to decrease burnout and stress and raise job satisfaction (Schopman et al., 2017). Transformational leaders are energetic leaders who personify intellectual stimulation, idealized influences, inspirational motivation, and are considerate to the employee individuality (Northouse, 2016).

Transactional style, which occurred at the same time as transformational style, which Bass (1985) insisted, created a foundational relationship between leaders and followers. These relationship styles helped leaders to surpass specific expectations in

terms of leadership (Dartey-Baah & Ampofo, 2015). There are three components of transactional leadership styles recognized by Burns: contingent reward, passive and active management, and award management (Jain & Duggal, 2016). In exchange for praise or rewards, followers under transactional leaders adhere to their leaders' requests (McCleskey, 2014). The leaders who implement a transactional style recognize and reward followers and performance after completion of tasks and roles, yielding a positive performance outcome (Deichmann & Stam, 2015).

Negotiators who prioritize rewards over employees' satisfaction are transactional leaders. Prioritization used for the good of the organization when finalizing decisions, while concurrently convincing the same employees as a tradeoff provides priceless support (McCleskey, 2014). Interpersonal transactions are included in the activities of transactional leaders and the task of offering punishments and rewards is not to sway subordinates but to yield the expected results (Dartey-Baah & Ampofo, 2015).

Transaction style impedes organizational and developmental empowerment and reduces employees' commitment to the organization and job satisfaction (Jain & Duggal, 2016). Subordinates influenced by transactional leaders through the targets set tend to achieve the existing tasks and mission. Leaders offer contingency rewards or promise rewards, establishing an obligation from the employees by using leadership influence (Deichmann & Stam, 2015).

### **Railroad Industry**

The railroad industry has been active since the early 19th century, using technological advances from the British Empire (Aldrich, 2009). Only a small number of

American companies utilized railroads in the 19th century to carry bulky and heavy products to refineries locally placed (Aldrich, 2009). After going through early difficulties relating to growth, the industry increased its influence in the transportation industry with the creation of the Ohio and Baltimore railroad in 1826 (Mook, 2006). The era during the U.S. Civil War is the period in which the transportation industry lobbied to the American government to finance longer rail lines to reach across the United States (Milloy, 2012). Most of the larger transportation companies formed in the beginning of the railroad boom remained profitable. The United States connected all railways fully by 1869, but railroads went through difficult following the perils of the U.S. Civil War.

Following the U.S. Civil War, employment was scarce, and the railroad industry was expanding, creating an affordable workforce needed for industry growth (D'Amico, 2006). This affordable workforce faced low wages, dangerous working situations, and abrasive management (Garcia, 2013). Labor unions formed to help workers obtain better working conditions (Logan, 2019). The industry continued to ignore improving the work environment until government involvement, and employee strikes forces railroad owners to improve the work environment (Brotherhood of Locomotive Engineers and Trainmen, 2016). The railroad owners started to understand having a safer work environment correlated with higher profits and leaders began to invest heavily on improving the work processes in the industry (Logan, 2019). Eventually every railroad company started standardizing the processes to become more prosperous. The railroad industry improved immensely since the introduction of the first rail line in 1810;

however, rail owners' focus on safety, profits, and productivity remained inefficient as to how regulations and rules were enforced (Logan, 2019).

Leaders of railroad companies implemented technological advancements to computerize and automate processes to reduce cost, improve safety, and increase profitability (Kiron & Schrage, 2019). As of 2018, safety testing, discipline, and rule observance was at an all-time high for the railroad industry (Kiron & Schrage, 2019). The key results of industry changes led to a reduction in incidents and accidents (Pandolfi, 2010). Railroad procedures of testing surmised the frequency of increased testing led to accidental rule violations (Coplen & Center, 1999). An increased emphasis on the compliance of rules, correlating with certain goals of productivity has created a culture that rewards violations of operating processes by incentivizing increased productivity through midlevel managers (Coplen & Center, 1999).

### **Railroad Profitability**

Profitability of U.S. coal railroad companies has been in decline since the recession of 2008 (Rodseth, 2017). Before the recession, coal was a predominate commodity transported by railroad companies, resulting in economic stability in the rail and coal industries (Rodseth, 2017). Since 2008, there has been a 37% reduction in coal production according to the (EIA, 2017b). Since the 2008 recession, the energy sector has tried to substitute coal production for cleaner energy solutions, such as hydro and natural gas, because the production of the fossil fuel causes major harm to the health of the public (EIA, 2017a). In addition, a vast number of coal-fired powered power plants have become inefficient and outdated (EIA, 2017a). The average price for electricity produced

by a coal-fired power plants is \$20 higher per megawatt higher than the output from natural gas-fired electricity generation plants (Climate Nexus, 2019). More than half of the U.S. coalmines producing coal in 2008 closed by 2016 (EIA, 2017a). The number is a drastic drop from 1435 mines to just 671 mines in 2017 (EIA, 2019). The drop in the number of mines has left railroad company leaders struggling to replace the profits the industry enjoyed from the booming coal markets. To remain profitable during the reduction in coal consumption by electricity providers, railroad companies started cutting high paying jobs and consolidated other positions in the organization (Mayo & Sappington, 2016).

Leaders in the railroad industry experienced other challenges because of the economic downturn, such as reduced professional development and management trainee programs (Burton & Sims, 2016). The frontline workers felt the brunt of the coal reduction because of hiring freezes, layoffs, and furloughs (Burton & Sims, 2016). Railroad leaders took measures in order to survive the need for cleaner energy and the reduction of coal production (Rodseth, 2017). Once the railroad industry reduced costs as much as possible, the railroad leaders started seeking alternative ways to remain profitable (Rodseth, 2017). A strategy the railroad leaders undertook to increase profitability was by investing in intermodal opportunities (Rodseth, 2017).

The most significant competitor to the railroad industry was the trucking industry because the railroad was limited regarding accessing all business locations (Smith, 2018). Rail lines could only take a product so far until the product had to use other forms of transportation to arrive at the destination (D'Amico, 2006). The trucking industry was

always plagued with the weight of the product; a problem that is seldom existent when the product is shipped by rail (D'Amico, 2006). Railroad leaders finally decided to become an ally of the trucking industry instead of remaining a fierce competitor (David & Rizzo, 2009). The intermodal process works by having truck trailers load on to rail cars and then transporting all that weight to a further destination where other trucks would be waiting to take the product to its destination (David & Rizzo, 2009). Intermodal is also taking shipping containers from ships and stacking the containers on rail cars. Being able to work with trucking and shipping companies along with major parcel companies, such as United Parcel Service, has been a plus from a profitability standpoint for the industry. During the peak season, Norfolk Southern intermodal shipments increased by 11% in 2018 (Transport Topics, 2018). The intermodal process is beneficial to the trucking industry because the companies can move more product without high fuel cost or paying drivers a premium to haul product over long distances. Intermodal is a plus for shipping companies because the companies can only take the freight to the port (Transport Topics, 2018). Taking on the intermodal venture has been a plus for the industry in terms of improving the economic scope of the rail line. To cut cost and increase efficiency, railroads have added extra freight cars to the trains (Graefe, Armstrong, Jones, & Cuzán, 2014).

The length of trains is a way the U.S. railroads have remained somewhat profitable. The average length of a train is about six thousand feet even though it is possible that the length can go up to four times that size (Schmalensee & Wilson, 2016). The length of trains remains unregulated in the United States (Cole, 2014). The Congress



of the United States opened investigations as to whether having longer trains is a safety violation (Cole, 2014). Longer trains tend to have more derailings than shorter trains because long trains are not able to start and stop with the same speed. The rail companies use longer trains for increased profitability through using fuel more economically and transporting more goods. Evidence exists regarding a correlation between longer trains and safety (Johnson, 2017). Since 2012, accident and incidents have been at a steady incline for the major U.S. rail freight companies (Johnson, 2017).

One of the other advantages the rail business has over the trucking business is the restrictions on drivers (Schmalensee & Wilson, 2016). A driver must impute their down time electronically as opposed to manually in the past. The electronic updates make driving illegally difficult for drivers; the driver cannot manipulate the time spend on the road as they could when reporting was manual (Burton & Sims, 2016). The U.S. railroad companies do not have similar restrictions because trains do not have to interact with traffic as do truck drivers (Burton & Sims, 2016). The rising cost of diesel fuel has improved the competitiveness of railroad companies; rail remains a valuable option for logistics provides to transport freight (Testa, 2014). Since the recession of 2008, railroad leaders have found alternative ways to remain viable, yet they continue to struggle to remain profitable (Testa, 2014). The alternative ways railroad leaders in the industry stayed profitable still does not compare to the profits coal transportation afforded the industry from 1950-2007 (Testa, 2014).

### **Transition**

In Section 1, I presented the problem and purpose statements, the nature of the study, the central research question, and the justification for using the qualitative method, multiple case study design. I explained the significance of the study, which included the potential contributions to business practices and the implications for social change. I discussed the assumptions, limitations, and delimitations. I reviewed the existing body of literature regarding transformational leadership theory, alternative leadership theories, and the railroad industry. In Section 2, I restate the purpose of this study, explain my role as the researchers, discuss the eligibility and selection process for participants, and explain the data collection instruments and techniques. I explain the plan to ensure the adherence to ethical research standards, the data analysis procedures, and the means to ensure dependable, credible findings. In Section 3, I will present the findings of the research, provide applications to professional practice, and discuss the implications for social change. I will include my reflections as the research and end the study with a concluding statement.

## Section 2: The Project

In Section 2, I will discuss my role as the researcher and primary data collector, the eligibility criteria for participants, and the sampling method. I will also justify the use of the qualitative method and case study design, the sample size, and the data collection methods. Additionally, I will explain the adherence to ethical research standards, the data collection techniques, how I planned to organize the data, and the procedures to ensure dependability, credibility, and confirmability of the findings.

### **Purpose Statement**

The purpose of this qualitative multiple case study was to explore the strategies some leaders of U.S. coal railroad companies used to remain profitable. The targeted population was leaders of two U.S. coal railroad companies in the Southeastern United States who implemented successful strategies to remain profitable. The implications for social change include the potential to lower regional unemployment, improve economic stability, and provide improved living condition in affected communities because of improved profitability in the railroad industry.

### **Role of the Researcher**

A researcher conducting a qualitative method study is the primary data collection instrument (Yin, 2018), thus, I was the primary data primary data collection instrument. As the researcher, I was responsible for identifying eligible participants, collecting data, objectively analyzing the data, and reporting the results. I used semistructured interviews to collect rich data from the participants through open dialogue. Researchers use semistructured interviews to prompt the participants to expound further on a

predetermined topic, to collect valuable data, and add credibility to the findings (Johnson & Rasulovala, 2017). A semistructured interview allows participants the freedom to express their views on a topic (Yin, 2018). Qualitative researchers conducting a case study also collect secondary data from company documents and public records (Nelson & Cohn, 2015). Case study researchers should collect data from multiple sources to engage in methodological triangulation (Johnson et al., 2017). Therefore, I reviewed company documents and public records of the railroad companies, such as financial statements, strategy statements, and implementation policies, and engaged in methodological triangulation to crosscheck the validity of the interview data. By reviewing the data from company documents, I sought to find trends or variations in profitability over a span of time. I analyzed the data collected from interviews and documents to answer the research question of this study.

It is important to avoid recruiting participants with whom a personal or professional relationship exists (Phillips, 2016). To mitigate bias, I did not recruit participants whom I have a past or existing personal or professional relationship. Researchers should also be familiar with the topic under study as well as the geographic location of the study (Noble & Smith, 2015). I was the intermodal operational manager for a Class 1 railroad located in the Southeastern United States from 2015-2018. My time as a manager in railroad industry is a key factor in my choosing to explore the strategies leaders in the industry use to remain profitable in the wake of reductions in coal shipments.

Further, it is important for researchers collecting data through interviews with people to adhere to principles outlined in The Belmont Report regarding the ethical treatment of human subjects (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research [NCPHSBBR], 1979). The three key principles of The Belmont Report are respect for persons, beneficence, and justice (NCPHSBBR, 1979), which I abided by. Researchers must also protect the confidentiality of the participants, strive to conduct research in which the benefits outweigh the risks, and respect the rights of the participants (Hull & Wilson, 2017). A key goal of a researcher should be to maximize the potential benefits of conducting the study while minimizing the potential risks (Boucher et al., 2017). I used code names for the participants within this study to maintain their confidentiality and respect their right to privacy. I also sought to maximize the benefits while minimizing the risks to the participants. I used the informed consent form to convey the potential benefits and risks to the participants. I obtained informed consent from the participants prior to collecting data and after I obtain institutional review board (IRB) approval from Walden University.

In addition to adhering to ethical principles, researchers need to be objective and should strive to mitigate personal biases during data collection and data analysis (Marshall & Rossman, 2016). Researcher bias can be detrimental to a study's outcome (Bril-Barniv, Moran, Naaman, Roe, & Karnieli-Miller, 2017). A researcher's preconceived notions, biases, and lack of objectivity could result in untrustworthy findings (Omidoyin, Opeke, & Osagbemi, 2016). I mitigated bias through avoiding recruiting people as participants with whom I hold a personal or professional relationship.

I also avoided inserting my personal opinions or worldview into the interview and data analysis process by accepting and reporting all data regardless of my personal agreement or disagreement. Further, researchers use member checking to ensure the basis of the interpreted data is the participants' perspective, not the researcher's subjective, biased interpretation (Fusch & Ness, 2015). I engaged the participants in member checking to allow them the opportunity to validate my interpretation of their interview responses. I transcribed the interviews, interpreted the participants' responses, developed a 2-page summary, met again with the participants, and asked them to verify the accuracy of my interpretation.

Finally, researchers use interview protocol to ensure a consistent process before, during, and after each interview (Lewis, 2015). The use of an interview protocol improves the interview process for the participants, reduces the potential for researcher bias, and provides a structured process for conducting the interviews (Peters & Halcomb, 2015). Thus, I used an interview protocol to ensure a consistent interview process (see Appendix).

### **Participants**

Researchers conducting a qualitative study using semistructured interviews should select participants with specific knowledge and experience regarding the phenomenon under study and who meet specific eligibility criteria (Moser & Korstens, 2017; Yin, 2018). The eligibility criteria for participation in a study must align with the purpose for conducting the study and be inclusive of participants who possess the knowledge and expertise needed to answer the central research question (Fraser, Fahlman, Arscott, &

Guillot, 2018). The overarching research question for this study was as follows: What strategies do some leaders of U.S. coal railroad companies use to remain profitable? The eligibility criteria for participation in this study was (a) a leader of a U.S. railroad company, (b) located in the Southeastern United States, and (c) who has implemented a strategy to remain profitable. I interviewed leaders who possess the knowledge, experience, and expertise needed to answer the research question. Leaders in the railroad industry are operations managers, directors, and executives (Association of American Railroads, 2016). I chose frontline leaders because they are the decision makers for the railroad companies. Participants in this study represented two railroad companies in the Southeastern United States.

There are multiple ways to recruit participants. Researchers collecting data from public companies can gain access to potential participants' contact information from an Internet search, the companies' website, or the companies' published annual report (Kaiser, Thomas, & Bowers, 2017). Public directories and trade magazines are also sources for researchers to locate the names, addresses, e-mail addresses, and telephone numbers of potential participants (Miller, 2017). Further, researchers can gain the contact information of potential participants through networking with industry leaders at conventions, seminars, and conferences (Kaiser et al., 2017). I gained access the participants by conducting an Internet search of publicly available information regarding the names, e-mail addresses, and telephone numbers of leaders of two U.S. railroad companies in the Southeastern United States. I also searched publicly available directories, trade magazines, and the companies' websites. I e-mailed prospective

participants an invitation to participate along with an attached informed consent form to seek their participation, convey the purpose of this research study, and provide information about the commitment required to participate. I followed up the e-mailed invitation with a telephone call to answer any questions the leaders might have prior to deciding about participating in this study.

After recruiting participants, building a working relationship with participants is important for a qualitative researcher (Tourangeau, 2017). The researcher should develop a good working relationship with participants by clearly conveying the purpose the study, the potential benefits and risks of participating, and engaging in transparent and frequent communication with the participants (Breitkopf et al., 2015). A key element of a good working relationship is a high level of trust between the researcher and the participants (Bradshaw, Atkinson, & Doody, 2017). I built a working relationship with participants by making personal contacts by e-mail and telephone. I treated the participants with respect, maintained their confidentiality, and informed them of the purpose of the study, the potential benefits and risks, and their right to withdraw from participation at any time without recourse. To build a high level of trust, I also conveyed to the participants that I would adhere to ethical research standards, not subject them to undue harm, and respect their time and willingness to participate.

By selecting an interview setting in which the participants' identity remains uncompromised, the researcher improves the opportunity to collect useful data as well as continues to build a strong working relationship with the participant (Culbert, Ristic, Ovington, Saliba, & Wilkinson, 2017). The interview settings should be a mutually



agreed upon place where the participant feel comfortable answering interview questions (Bromley, Mikesell, Jones, & Khodyakov, 2015). In collaboration with each participant, I identified an interview setting, such as the private conference room in a public library, which was conducive for a comfortable, confidential environment to conduct the interview. The researcher's ability to gain access to participants and create a working relationship might diminish if the interview setting is not a place in which the participants' right to privacy and confidentiality remains intact (Culbert et al., 2017). To promote trust, confidentiality, and respect for the participants, I ensured that the interview setting was appropriate for protecting the participants' identity.

## **Research Method and Design**

### **Research Method**

Three methods of research exist: qualitative, quantitative, and mixed methods (Flick, 2015). In qualitative research, the researcher explores a phenomenon by seeking out, evaluating, and trying to understand the perspective of participants through open dialog regarding a phenomenon (McCusker & Gunaydin, 2015). The qualitative researcher uses insights and analysis drawn from the data collected from participants' responses to open-ended questions and data collected from secondary sources as opposed to using an objective measurement of numeric, quantifiable data (Suddaby, Bruton, & Si, 2015). I used the qualitative method to conduct this study because I sought to explore a phenomenon through open dialogue with participants to gain insight into the strategies leaders used to remain profitable in the U.S. coal railroad industry. Qualitative research can help better understand the effect of the decline of coal consumption on the U.S.

railroad industry (Crooks, 2017). I sought rich data from the participants and their company documents to answer the central research question of this study, which fit with the use of the qualitative method (Morse, 2015). Thus, I deemed the qualitative method the appropriate choice to fulfill the purpose of this study.

In contrast to qualitative research, in quantitative research, researchers use statistical data to analyze and conclude on a perceived hypothesis (Goertzen, 2017). A researcher conducting a quantitative method study collects numeric data through closed-ended questioning of participants or archived, numeric data (Sánchez-Gómez, Pinto-Llorente, & García-Peñalvo, 2017). The researcher subjects the numeric data to statistical testing to ascertain the significance of the relationships among predictor and criteria variables (Goertzen, 2017). The researcher seeking a full exploration of a real-world business problem needs more information than quantifiable data (Gerring, 2017). I rejected the use the quantitative method because I was exploring the strategies leaders use to remain profitable through open dialog with participants and a review of company documents. Collecting numeric data or quantifying the participants' responses would not have resulted in appropriate data to answer the research question of this study.

Further, mixed-method researchers combine qualitative and quantitative methods to collect data because a single research method would not result in ample data to fulfill the purpose of their study (Alvesson & Sköldberg, 2017). Researchers conducting a mixed-method study collect data from participants through open-ended questions and collect numeric data for the statistical testing of hypotheses among variables (Stockman, 2015). Researchers conduct mixed-methods research when a summation of elements

from qualitative and quantitative disciplines is necessary to provide full exploration and examination of a phenomenon (Palinkas et al., 2015). The mixed method was not suitable for this study because I sought to explore the strategies railroad leaders use to remain profitable, which is a qualitative principle. Combining the quantitative method with a qualitative method to collect numeric data would result in added value for this study; therefore, I rejected the mixed method.

### **Research Design**

The research design is contingent on the researcher's objective of the study and the nature of the research (Flick, 2015). Researchers conducting a qualitative method study have a variety of designs to select from, such as a narrative inquiry, grounded theory, phenomenological, and ethnographic design (Lewis, 2015). I considered the case study, ethnographic, and phenomenological design for this study. After careful deliberation and analysis of the designs, I deemed the multiple case study design appropriate for conducting this research.

Researchers using the ethnographic design analyze group activities or the cultural aspects of a group of people to describe behaviors and interactions (Eisenhart, 2017). Ethnographic researchers immerse themselves in the culture of the organization or group of people to gain an understanding of the phenomenon under study (Hill O'Connor & Baker, 2017). Researchers conducting an ethnographic study must participate in studied group's activities for an extended period to gain a true sense of the group's culture (Higginbottom et al., 2016). I did not plan to collect data regarding the culture of a group of people or within an organization; therefore, I rejected the ethnographic design.

A phenomenological research approach is used to explore the meaning of the lived experiences of the participants regarding a phenomenon (Jayawardena-Willis, Pio, & McGhee, 2019). The focus of the phenomenological researcher is the individual experiences that each participant lived out and how they reacted in respect to the phenomenon under study (Anasiz & Püsküllüoğlu, 2018). To produce credible findings and gain a full understanding of a phenomenon, the researcher must conduct in-depth interviews with numerous participants in a variety of settings over an extended period (Adams & van Manen, 2017). Collecting data from participants to learn the meaning of their lived experiences would not have resulted in sufficient data to answer the research question for this study. Thus, I deemed the phenomenological design as inappropriate for this study.

In case study research, the researcher explores an activity, event, or singular experience by investigating evolving and societal disciplines (Yin, 2018). Case studies have three ideal distinctions that researchers should consider: (a) fundamental research questions using *how* and *why* questions, (b) the concentration of the study on a specific case in a bounded setting, and (c) the researcher has little or no control over the case events or participants' actions and behaviors (Yin, 2018). Case study researchers explore business problems within the boundaries of specific industries or companies (Dudovsky, 2016). Data collection for a case study must consist of at least two sources of evidence (Akinlar & Dogan, 2017). I used the case study design because I was exploring a real-world business problem within the bounded contextual setting of the railroad industry. I

used semistructured interviews and a review of company documents as data collection methods.

A researcher conducting a case study can use a single case or multiple case design (Yin, 2018). Researchers conducting a multiple case study must collect data from at least two organizations (Akinlar & Dogan, 2017). In a multiple case study approach, researchers collect data from multiple participants affiliated with more than one company (Yin, 2018). Researchers use the multiple case study design to engage in cross-case analysis, gain a diversity of data from multiple perspectives, and improve the trustworthiness of the findings (Dudovsky, 2016; Yin, 2018). I used the multiple case study design to collect data from two U.S. coal railroad companies in the Southeastern United States. I engaged in cross-case analysis to improve the credibility of the findings.

### **Data Saturation**

Data saturation occurs when additional data collection efforts results in no new information (Fusch & Ness, 2015). When researchers achieve data saturation, they have exhausted the means to gain additional information (Netland, 2016). Yin (2018) noted data saturation is not contingent on sample size, yet qualitative researchers conducting a multiple case study must collect data from participants until the information becomes repetitive. Reaching data saturation is a means for researchers to improve the dependability and credibility of the data and the findings (Marshall & Rossman, 2016). I collected data through semistructured interviews with leaders of U.S. coal railroad companies and reviewing their company documents until all data became repetitive and ample information existed to replicate the study.

## **Population and Sampling**

The requirements for population and sampling are critical to ensure participants are worthy for the topic of discussion (Gonzalez, 2017). The researcher selects a subgroup of a total population through a sampling method (Robinson, 2017). When using the purposeful sampling method, the researcher selects participants who fit specific criteria set forth to result in the interviewing of participants who possess the knowledge needed by the researcher to fulfill the purpose of the study and answer the research question (Penn, 2016; Robinson, 2017). Using purposeful sampling is a means for researchers to identify participants who can provide meaningful data through their superior knowledge of the topic during interviews (Etikan, Musa, & Alkassim, 2016; Gentles, Charles, Ploeg, & McKibbin, 2015). I used the purposeful sampling method because the participants in this study must meet specific eligibility criteria. The targeted population for this study was leaders of railroad companies in the Southeastern United States. I identified and purposefully selected participants based on the following criteria: (a) a leader of a U.S. railroad company (b) located in the Southeastern United States, and (c) who implemented strategies to remain profitable.

When using sample size planning, the key for the researcher should approximate an ideal number of participants for a chosen study (Hagaman & Wutich, 2017). If a study does not have enough participants, the researcher runs the risk of insufficient information; too many participants might result in superficial or redundant information (Malterud, Siersma, & Guassora, 2015). Researchers should use previous studies similar in method, design, and scope as the basis for their sample size (Hagaman & Wutich,

2017). Smith (2017) conducted a qualitative case study regarding strategies to remain profitable during retail gentrification using a sample size of seven participants. Zafari (2017) conducted a qualitative case study regarding strategies to remain profitable in the oil and gas service companies using a sample size of five participants. Robinson (2017) conducted a qualitative case study regarding strategies African American small business use to remain profitable with a sample size of four participants. The sample size recommended for a case study is two to six participants (Yin, 2018). My study was similar in method, design, and topic to Smith, Zafari, and Robinson; therefore, I purposefully select four leaders of railroad companies in the Southeastern United States.

The participants chosen for this study were critical to my understanding of the strategies they used in the railroad business to remain profitable. The number of participants in a qualitative case study is far less important regarding data saturation than choosing the best participants with the prerequisite knowledge needed by the researcher to answer the central research question (Emmel, 2015). To enhance my ability to reach data saturation, I purposefully selected qualified participants who met the stated eligibility criteria for participation in this study. When no new data and or themes emerge, the researcher has attained data saturation (Palinkas et al., 2015). Data saturation occurs when the researcher collects all the data relevant to case under study and further data collection efforts results in redundant information (Fusch & Ness, 2015). If no evidence of data saturation exists after completing the initially planned interviews, the researcher should identify additional eligible participants and continue data collection until no new themes or patterns emerge. (Muzvondiwa, 2017). Researchers should collect

data until sufficient information exists to replicate the study (McCusker & Gunaydin, 2015). To ensure data saturation, I interviewed U.S. railroad leaders with experience in creating strategies to remain profitable until no new information emerged. I reviewed company documents, such as financial records, business plans, public information available on the companies' websites, and other publicly available documents.

The interviews took place convenient to the participants. I suggested the conference room of a local public library as the interview setting to facilitate the participants' confidentiality as well as provide a quiet, distraction free location. McCusker and Gunaydin (2015) noted the interview location, time, and date depend on the participant. Researchers should choose an interview setting free of distractions, comfortable for the participants, and a place that results in the maintaining of the participants' right to privacy and confidentiality (Dawson, Hartwig, Brimbal, & Denisenkov, 2017). Bowman (2015) stated the researcher should defer to the wishes of the participants regarding the interview setting yet should ensure that the location is private and safe for both the participant and the researcher.

### **Ethical Research**

Ethical researchers obtain informed consent from participants prior to collecting data (Aguila, Weidmer, Illingworth, & Martinez, 2016). The informed consent form should contain clear language about the purpose the study, the potential benefits and risks of participating, the expected commitment of participants, and the participants' rights regarding withdrawal (Haines, 2017). Obtaining informed consent from participants is an integral duty of a researcher (Yin, 2018). The researcher establishes trust and



transparency by conveying to the potential participants the essence of the study along with the risks and benefits using the informed consent process (Dikko, 2016). Prior to conducting interviews, I obtained informed consent from the participants. I used an informed consent form that contains clear language about the purpose of the study, the expected commitment by the participants, the potential risks, the potential benefits of participating in the study, and the participants' right to withdraw. I emailed each potential participant an invitation to participate (see Appendix B) and attach the informed consent form. The participants could provide informed consent by replying *I consent* to the email or print, sign, scan, and return a copy of the informed consent form to me.

Participants have the right to withdraw from a research study without recourse (Ngozwana, 2018). Ethical researchers must clearly convey the participants' right to withdraw from a study before, during, or after the interviews or other data collection methods (Dikko, 2016). To abide by The Belmont Report, researchers must allow participants to withdraw without stigma (NCPHSBBR, 1979). I conveyed to the participants through the informed consent form as well as in my opening statement of the interview that they have the right to withdraw from this research study. They could notify me of the intent to withdraw in person, by telephone, through email, or by sending a letter through the U.S. Postal Service.

Researchers should avoid incentivizing participants to coerce their participation in a study (Zutlevics, 2016). Offering participants significant incentives to secure their agreement to participate typically lowers the dependability of the data and the trustworthiness of the findings (Ambuehl, Niederle, & Roth, 2015). I did not offer any

incentives to participants to gain their agreement to participate. I will provide the participants with a 1-2 page executive summary of the findings of this research study.

Researchers should abide by the tenets of The Belmont Report regarding the right to privacy, beneficence, and justice to maintain ethical standards (NCPHSBBR, 1979). Haines (2017) noted researchers should maintain the confidentiality of participants, conduct research that maximizes the benefits while minimizing the risks, and clearly convey to the participants that their participation is voluntary. I abided by the principles set forth in The Belmont Report while conducting this research study. I maintained the confidentiality of the participants and their companies, and ensured they understand that their participation is voluntary.

Yin (2018) noted researchers should develop and use a system to securely store all research records (Yin, 2018). Researchers must protect the integrity and confidentiality of the data by maintaining a secure database (Hull & Wilson, 2017). I stored all electronic research records on my password protected desktop computer during data organization and analysis. After completing the study, I will transfer the electronic research records to an external hard drive. I will secure the external hard drive and all paper records in a locked file cabinet in my home office for 5 years, of which I will be the only person with access to the records. After 5 years, I will electronically delete the records on the external hard drive and mechanically shred the paper records.

Marshall and Rossman (2016) noted the need for researchers to use pseudonyms for the participants' names to protect their confidentiality. I used the alphanumeric codes of P1, P2, P3, and P4 to identify the participants in the published study while maintaining

their right to privacy. Researchers should obtain IRB approval from the governing institution prior to collecting data (Haines, 2017). I obtained approval from Walden University IRB prior to contacting potential participants and collecting data from company records. The Walden IRB approval number is 01-15-20-0628927.

### **Data Collection Instruments**

A researcher conducting a qualitative method study is the primary data collection instrument (Yin, 2018). I was the primary data primary data collection instrument for this research study. When conducting qualitative research, researchers use observations, interviews, and a review of archived documents as data collection instruments (Chong, Kwong, Thadani, Wong, & Wong, 2015; Yin, 2018). I used semistructured, face-to-face interviews and a review of company documents as data collection instruments. The data collection instrument predominately used by qualitative researchers is the interview (Brooks & Normore, 2015; Padgett, Gossett, Mayer, Chien, & Turner, 2017).

Researchers use semistructured interviews to encourage participants to speak freely and openly when responding to questions while reserving the opportunity to ask follow-up questions as needed for further elaboration and clarity (Brozovic, Buytaert, Mijic, O’Keeffe, & Sinha, 2015). With semistructured interviews, the researcher can gain rich, insightful data and record a detailed description of the participants’ perspective (Davis, Domino, Lee, Sloan, & Weathers, 2017; Park & Park, 2016). I used face-to-face, semistructured interviews to collect rich data from the participants through open dialog. I asked participants open-ended questions and use follow-up questions as needed to gain

additional clarity. I adhered to an interview protocol to maintain a consistent interview process (see Appendix A).

Yin (2018) noted researchers conducting a qualitative case study must collect data from multiple sources of evidence. Although the qualitative researcher is the primary data collection instrument, multiple sources of evidence are vital to the reliability and credibility of the findings (Tran, 2016). Archived records, public databases, company records, and company websites are excellent sources of data for qualitative researcher to use during methodological triangulation to validate interview data (Spencer, Basualdo-Delmonico, Walsh, & Drew, 2017). I reviewed company documents, such as financial records, strategic policy statements, public filings with the Securities and Exchange Commission, and Marketline reports, as a data collection instrument. A review of relevant documents is a means for researchers to verify the participants' responses during the interviews (Merriam & Tisdell, 2015). I used the document data to engage in methodological triangulation and validate the interview data.

Researchers use member checking to ensure the basis of the interpreted data is the participants' perspective, not the researcher's subjective, biased interpretation (Fusch & Ness, 2015). Member checking is a way a researcher improves the dependability of the data, enhance the credibility of the findings, and reach data saturation (Marshall & Rossman, 2016). I engaged the participants in member checking to allow them the opportunity to validate my interpretation of their interview responses. I transcribed the interviews, interpreted the participants' responses, developed a 2-page summary, met again with the participants, and asked them to verify the accuracy of my interpretation.

Hadi and José Closs (2016) commented the qualitative researcher's objective should be to collect dependable, credible data through trustworthy data collection instruments. I collected dependable data using semistructured interviews, member checking, and a review of company documents. I objectively analyzed the data and presented the findings from the participants' perspective.

### **Data Collection Technique**

When conducting qualitative case study research, researchers use data collection techniques, such as conducting interviews, observing behavior, and reviewing official company records and publicly available documents (Amade-Escot & Bennour, 2016; Chong et al., 2015). Researchers create a rapport with participants by using face-to-face, semistructured interviews (Yin, 2018). Collecting data through personal interviews is an excellent technique for qualitative researchers to collect rich, thick data (Padgett et al., 2017). I used semistructured, face-to-face interviews as a data collection technique. I obtained approval from Walden University IRB prior to contacting potential participants. I emailed the potential participants an invitation to participate (see Appendix B) and attach an informed consent form. The participants could provide informed consent by replying *I consent* to the email, or if they preferred, print, sign, scan, and return a copy to me. The interviews with the four leaders of U.S. coal railroad companies lasted 45-60 minutes.

When conducting face-to-face interviews, the interview protocol is a guide for the researcher (Le Roux, 2017). I abided by an interview protocol to ensure I treated each participant the same (see Appendix A). Prior to beginning the interviews, I restated the

purpose of the study to the participants, remind them that they have the right to withdraw at any time, and ensure they are comfortable with proceeding forward with the interview. I reminded the participants that I would protect their identities by using code names within the published study, such as P1, P2, P3, P4, and P5. The semistructured interview technique is a means for researchers to encourage participants to speak freely and openly when answering the open-ended questions (Brozovic et al., 2015). I asked each participant the same interview questions in the same order. A researcher can gain rich, insightful data from participants using semistructured interviews (Davis et al., 2017). I used face-to-face, semistructured interviews to collect rich data from the participants through open dialog. I asked participants open-ended questions and used follow-up questions as needed to gain additional clarity.

When considering semistructured interviews, the researcher should recognize that advantages and disadvantages exist. The opportunity to collect of rich, high quality data during the interview phase is a major advantage (Yazan, 2015). The use of face-to-face interviews is a means to create a higher level of communication between the researcher and the participant (Yazan, 2015). The researcher could take reflective notes regarding the nonverbal communication conveyed by the participants during a face-to-face interview (McIntosh & Morse, 2015). Another advantage of a researcher using semistructured interviews as a data collection technique is to improve the comfort level of the participants to freely express their perspective (Nicholas, Raufdeen, & Reza, 2016). Disadvantage of using interviews are the potential for the researcher to steer the participant to specific answer to a question, the insertion of researcher bias, and the

propensity of the researcher to take subjective notes that do not reflect the participants' viewpoint (McIntosh & Morse, 2015). Other disadvantages can be the cost of travel, geographical concerns, cultural differences between the researcher and the participants that might cause confusion, and pressure on participants to answer the questions (McIntosh & Morse, 2015). I reviewed the advantages and disadvantages of conducting semistructured, face-to-face interviews, and determined that the data collection technique was appropriate for this study.

Yin (2018) noted qualitative case study researchers need more than one data collection technique. Researchers conducting a multiple case study can collect secondary data from archived records, public databases, company records, and company websites to use during methodological triangulation to validate interview data (Spencer et al., 2017). A data collection technique, I used a review of company documents, such as financial records, strategic policy statements, public filings with the Securities and Exchange Commission, and Marketline reports. Researchers can use the data collected from company documents to verify the information collected from participants during the interviews (Merriam & Tisdell, 2015). I used the document data to engage in methodological triangulation and validate the interview data.

Reviewing company documents is a viable data collection method, yet the technique has advantages and disadvantages (Sherif, 2018). A key advantage of reviewing company documents is the data remains applicable to the participants' specific organizations (Morse, 2015). A researcher can collect valuable data from company records to crosscheck the data collected from the participants (Fusch & Ness, 2015; Yin,

2018). Disadvantages of reviewing company documents are the records might be subjective based on the source, the information might not be accurate or validated, and access to specific records might remain restricted by company policy or the wishes of the company leader (Sherif, 2018).

Some researchers use a pilot study to test data collection and analysis procedures in preparation for conducting a larger study (Hazzi & Maldaon, 2015). Researchers conducting a limited scope case study using proven data collection techniques do not need to conduct a pilot study (Ingham-Broomfield, 2015). I did not conduct a small-scale pilot study because I was conducting a limited scope case study using the proven data collection techniques of semistructured interviews and document reviews.

Researchers use member checking to provide the participants an opportunity to validate the researcher's interpretation of their interview responses (Birt, Campbell, Cavers, Scott, & Walter, 2016; Kozleski, 2017). Participants review the researcher's interpretation to ensure an accurate capturing of their intent and perspective occurred (Fusch & Ness, 2015; Thomas, 2016). After completing the interviews, I transcribed the audio recordings, created a short 2-page summary of the interview transcript based on my interpretation, met once again with the participants in a 30-minute meeting, and asked them to verify the accuracy of my interpretation. Member checking has become a useful process researcher use to strengthen the trustworthiness of the data and reach data saturation (Duan, Wang, & Yu, 2016; Lo Iacono, Symonds, & Brown, 2016). In addition, I asked the participants if they have any further information to offer in an effort to ensure I reach data saturation.



### **Data Organization Technique**

A researcher provides management and order to data by organizing documents, interview transcripts, memos, and field notes (Woods, Paulus, Atkins, & Macklin, 2016). Data organization is a vital duty of the researcher in preparation for data analysis (Yin, 2018). The researcher should separate, arrange, and categorize data to prepare for analysis and interpretation (Castleberry & Nolen, 2018). Researchers should ensure a simple system of retrieval is in place to organize data in preparation for analysis (Won Gyoung, 2017). After conducting the interviews and reviewing company documents, I organized the data using Microsoft Word and Excel, created a dedicated file for each participant using a coded file name, and stored the files on the hard drive of my password protected desktop computer.

Oliveira, Bitencourt, dos Santos, and Teixeira (2015) noted NVivo qualitative data analysis software is an effective means to organize data. I used NVivo 12 software to organize data in preparation for data analysis. I used the process of rolling coding, which means: (a) searching out units of meaning by using the categories on the word table that each theoretical proposition relates to, (b) create codes in NVivo 12 based on the responses of the participants, and (c) by using color, organizing the codes to arrive at the key themes emerging from the analyzed data. During the initial phases of data organization, the researcher should assign labels to the code clusters to prepare for formal data analysis (Woods et al., 2016). Organizing the coded data is the prerequisite process of data analysis (Castleberry & Nolen, 2018). I assigned labels to the clusters of

organized codes in NVivo 12, created an Excel spreadsheet for the code clusters, and used color-coding to facilitate easy identification and retrieval.

Researchers conducting qualitative research should maintain a reflective journal to document and organize the research process (Bahmani, 2016). Reflective journaling is a means for researchers to mitigate bias, organize their contemplative thoughts, and maintain a record of the research procedures (Taylor & Thomas-Gregory, 2015). I used reflective journaling as a data organization technique. I documented each research procedure, created an entry for each participant's interview and member checking session, and recorded my reflective notes.

The researcher should create a formal, secure database to store all research records (Yin, 2018). Protecting the confidentiality of the data and all research records is a paramount duty of a researcher (Hull & Wilson, 2017). Marshall and Rossman (2016) noted the need for researchers to use pseudonyms for the participants' names to protect their confidentiality. I used the alphanumeric codes of P1, P2, P3, and P4 to identify the participants in the final study while maintaining their right to privacy. I stored all electronic research records on my password protected desktop computer during data organization and analysis. After completing the study, I transferred the electronic research records to an external hard drive. I will secure the external hard drive and all paper records in a locked file cabinet in my home office for 5 years, of which I will be the only person with access to the records. After 5 years, I will electronically delete the records on the external hard drive and mechanically shred the paper records.

## **Data Analysis**

Data analysis is the procedure in which researchers arrange, assess, and interpret all the collected data (Yin, 2018). Objective analysis of data is a paramount duty of an ethical, qualitative researcher (Hull & Wilson, 2017). Researchers can use a five-phase process to analyze qualitative data, which includes compiling, disassembling, reassembling, interpreting, and concluding (Yin, 2018). I used Yin's (2018) five-step process to analyze the data collected for this qualitative, multiple case study.

The four types of triangulation researchers might use during data analysis are methodological triangulation, triangulation of data sources, triangulation of perspective to the same data set, and triangulation among different evaluators (Yin, 2018).

Methodological triangulation is a process a researcher uses to crosscheck one set of data with a second set of data to improve the dependability and credibility of the findings (Fusch & Ness, 2015). Researchers use methodological triangulation to increase the trustworthiness of the findings by confirming the validity of interview data with data collected from secondary sources (Kihn & Ihantola, 2015). I used methodological triangulation during data analysis to validate the interview data with data collected from company documents. By using multiple data collection techniques, I improved the dependability of the data.

### **Compiling Data**

The researcher begins the data analysis process by compiling all the data (Yin, 2018). In this phase, the researcher places all the collected data in an organized database (Sengupta & Sahay, 2018). The compiled data should include interview transcripts,

results from member checking, data collected from company records, and reflective notes taken by the researcher (Yin, 2018). I compiled the data collected from the participants during semistructured interviews and member checking sessions, and data collected from company documents into an organized database to begin data analysis. The researcher should verify that data collection is complete during the compilation phase (Bengtsson, 2016). Compiling the data using NVivo software is a means for researchers to verify the completeness of the data and to begin deconstructing the data (Allen, 2018). To ensure the compilation of the data was complete, I conducted checks on the raw data using NVivo 12 software. Quick and Hall (2015) noted researchers should ensure the confidentiality of the data during the compilation stage. While compiling the data, I used the code names of P1, P2, P3, and P4 for the participants, and ensured all data remained secured on my password protected desktop computer.

### **Disassembling Data**

The disassembling stage occurs when the researcher organizes the data in segments to facilitate the coding process (Cornelissen, 2016). During disassembly, the researcher breaks the data down into manageable, labeled fragments (Yin, 2018). Researchers code the data to systematically organize the structure of the data fragments (Kozleski, 2017). The use of NVivo software is a means for researchers to disassemble data and reduce human error (Woods et al., 2016). I used Microsoft Excel to organize the coded labels of data fragments. I disassembled the interview data and document data using NVivo 12 plus software to begin grouping the clusters of fragments in preparation for data reassembly.

### **Reassembling Data**

In the reassembling stage, researchers generate clusters and codes to group data (Yin, 2018). The two approaches to selecting clusters and codes are inductive and deductive (Hennink, Kaiser, & Marconi, 2017). For inductive themes, researchers use open coding to generate themes from data, while the basis of deductive themes is the existing literature and theories (Hennink et al., 2017). Researchers reassemble data by creating groups from the labeled and coded information (Bengtsson, 2016). I reassembled the data by creating categorized groups from the coded data to begin the interpretation phase.

### **Interpreting Data**

During the interpretation phase, the researcher forms relevant themes or narratives from the categorized groups of data (Yin, 2018). Being able to derive explanations about how or why events happened, or how courses of action occurred is the researcher's aim for interpreting the data (Corner, Singh, & Pavlovich, 2017). During the interpretation stage, the researcher seeks to expose the themes and patterns emerging from the participants' perspective (Graneheim, Lindgren, & Lundman, 2017). Methodological triangulation and member checking are means for researchers to mitigate biases and improve objectivity during the interpretation of data (Fusch & Ness, 2015). I objectively interpreted the data to develop a narrative that was a result of the exposed themes and patterns that emerged from the participants' perspective. I used methodological triangulation during the interpreting phase to improve the credibility of the findings.

### **Concluding Data**

In the last phase, the researcher makes conclusions based on the analysis of findings from the interpreting stage (Yin, 2018). The researcher uses the conclusion phase to capture a larger significance of the study and raise the analysis of the data to a higher conceptual level (Yin, 2018). Researchers should conclude data analysis by presenting the relevant and representative themes emerging from the collected data and avoid inserting their opinion or worldview (Clark & Vealé, 2018). During the conclusion phase of data analysis, researchers should expose the link between the findings and existing relevant theories (Colorafi & Evans, 2016). I concluded the data by presenting the themes and subthemes that emerged from the data without inserting my preconceived notions, opinions, or biases. I linked the findings to the transformational leadership theory as well as existing literature. The key themes presented as the findings answered the overarching research question of this study.

### **Software Plan**

Researchers analyzing qualitative data improve the objectivity and accuracy of the analysis by using a computer software program such as NVivo (Niedbalski & Ślęzak, 2016). I used NVivo 12 plus software during the analysis of the data to enhance the accuracy and objectivity of the interpreted data. NVivo software is an excellent tool for researchers to identify data for mind-mapping, coding, and key themes (Emmel, 2015). Researchers use NVivo software to uncover emergent themes while minimizing human error (Woods et al., 2016). I used NVivo 12 plus software for coding, theme analysis, and

the minimization of human error. I used Microsoft Word and Excel to organize and house data on my password protected desktop computer.

### **Key Themes**

The goal of the qualitative researcher is to uncover emergent key themes resulting from data analysis (Theron, 2015). Researchers conducting a multiple case study improve the credibility of the findings by using cross case analysis and arriving at a key theme that emerges from the compilation of data (Yin, 2018). The use of computer software, such as NVivo, is an effective means for researchers to detect themes and patterns emerging from the data (Kaefer, Roper, & Sinha, 2015). I used NVivo 12 plus software to detect emergent themes and subthemes from the data. I used cross case analysis to improve the trustworthiness of the findings. In Section 3, I presented the findings, explained how the findings of this study align with the transformational leadership theory, and used the findings to confirm or contest the findings presented by other researchers in scholarly publications dating from 2017-2019.

### **Reliability and Validity**

Reliability in qualitative research is the quality, dependability, and trustworthiness of the findings of the study (Haradhan, 2017). Qualitative researchers seek credibility and confirmability of the findings whereas quantitative researchers seek a high degree of external validity by collecting data using a valid, proven instrument (Haradhan, 2017; Patton, 2015). The goal of the qualitative researcher is to collect dependable data and present credible findings resulting from a rigorous, trustworthy research process (Hadi & José Closs, 2016). I collected dependable data through semistructured interviews and a

review of company documents, and present credible, confirmable findings drawn from an objective analysis of the data.

### **Dependability**

Dependability in qualitative research is the truth-value and consistency of the data (Hadi & José Closs, 2016). When a researcher collects consistent, dependable data, a future researcher could replicate the study and arrive at similar conclusions (Merriam & Tisdell, 2015). Researchers improve the dependability of the data by engaging the participants in member checking, using methodological triangulation to validate the data sets, and reaching data saturation (Fusch & Ness, 2015; Yin, 2018). Trustworthy, dependable data emanates from the participants' perspective, not the researcher's subjective interpretation (Morse, 2015). Dependability of interview data improves when the researcher adheres to a strict interview protocol (Lewis, 2015). In this study, I sought dependable trustworthy data. I engaged the participants in member checking to allow them the opportunity to verify my interpretation of their interview responses. I used methodological triangulation during data analysis to validate the interview data with document data. I adhered to a strict interview protocol to ensure a consistent interview process (see Appendix A). I reached data saturation by continuing data collection efforts until no new themes or patterns emerge to ensure the dependability of the data.

### **Credibility**

Credibility is the degree that the findings presented are an accurate representation of the participants' perspective (Yin, 2018). To present credible findings, a qualitative researcher must avoid subjective, biased interpretation of the data, and allow the findings



to flow from the participants (Cypress, 2017). Member checking, methodological triangulation, and reaching data saturation are means for researchers to improve the credibility of the findings (Carminati, 2018; Fusch & Ness, 2015). Researchers improve the credibility of the findings by allowing the participants to validate the interpreted data in a follow-up meeting to the initial interview (Birt et al., 2016). I ensured the credibility of the findings by engaging the participants in member checking, objectively analyzing the data, using methodological triangulation to verify the interview data with document data, and reaching data saturation. I presented the findings from the participants' perspective and avoid inserting my personal worldview.

### **Confirmability**

Confirmability in qualitative research is the degree to which the researcher ensures the findings of the study are verifiable by users of the research, and not a product of the researcher's opinion or biases (Noble & Smith, 2015). To improve confirmability, researchers must guard against inserting their personal worldview or subjective biases into the findings of a study (Carminati, 2018). Reflective journaling is a means for researchers to improve confirmability and mitigate biases (Cypress, 2017). Collecting dependable, credible data from the participants' perspective is a good strategy to improve confirmability (Yin, 2018). Researchers use member checking to mitigate biases (Fusch & Ness, 2015). I strived for confirmable findings by mitigating personal biases, presenting the findings from the perspective of the participants, and reaching data saturation. I collected dependable, trustworthy data through semistructured interviews and a review of company documents until no new themes or patterns emerge. I

maintained a reflective journal to document the research procedures, engage the participants in member checking, and use methodological triangulation during data analysis to crosscheck the interview data with document data to improve the confirmability of the findings.

### **Transferability**

Researchers conducting qualitative, case study research seek to improve the prospects of transferability of the findings to other cases and settings, yet transferring the findings is up to future researchers (Doloreux, Shearmur, & Guillaume, 2015). Meticulous documentation of the research phases, collecting dependable, credible data, and reaching data saturation are means for researchers to improve the opportunity for future researchers to transfer the findings to another case (Korstjens & Moser, 2018). The findings presented in a qualitative study are not generalizable to a larger population, yet qualitative researchers strive for trustworthy findings that readers and future researchers might apply to their specific situations and cases (Carminati, 2018). Researchers using the qualitative method provide explanations of descriptive data to help readers externally apply the findings to other settings (Yin, 2018). I strived to collect dependable data and present credible, trustworthy findings to improve the prospects of transferability of the findings by future researchers to other settings and cases. I documented the research steps, engaged the participants in member checking, collected data from relevant company documents, engaged in methodological triangulation, and reached data saturation to improve the opportunity for future researchers to apply these findings to their case under study.

### **Data Saturation**

In qualitative research, the achievement of data saturation is significant (Morse, 2015). Data saturation occurs when no new themes, information, or patterns emerge from additional data collection efforts (Fusch & Ness, 2015). Although data saturation is not contingent on sample size, qualitative researchers conducting a multiple case study must collect data from participants until the information becomes repetitive (Yin, 2018). I reached data saturation by continuing to interview participants until no new information, themes, or patterns emerge. Researchers should collect data until sufficient information exists to replicate the study (McCusker & Gunaydin, 2015). Reaching data saturation is a means for researchers to bolster the dependability and credibility of the data and the findings and improve the prospects of future researchers transferring the findings to another setting (Marshall & Rossman, 2016). I collected data through semistructured interviews with leaders of U.S. coal railroad companies and reviewing their company documents until all data became repetitive and ample information existed to replicate the study.

### **Transition and Summary**

Section 1 of this study contained the background of the study, the research question, nature of study, the purpose statement, the problem statement, and the conceptual framework. I explained the operational definitions and discussed delimitations, limitations, and assumptions of the study. I conducted a review of the existing literature on leadership theories and the railroad industry. In Section 2, I discussed the participants of the study, the role of the researcher, data collection, ethical

procedures, research methodology and design, and analysis. I explained the procedures to ensure trustworthy, dependable, credible findings. In Section 3, I will present the findings to the research, the applications for professional practice, recommendations for action, the implications for social change, recommendations for further study, my reflections, and a strong concluding statement.

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

#### **Introduction**

The purpose of this qualitative multiple case study was to identify strategies that U.S. coal railroad company leaders use to remain profitable. The information for this study came from in-depth, semistructured interviews of four U.S. coal railroad leaders from two different railroad companies in the Southeastern United States and a review of company documents. Every interview started with the interviewee's name, industry expertise, and experience creating strategies for the railroad to remain profitable. I asked each participant six interview questions (see Appendix). The code names for the interviewees in this study are P1, P2, P3, and P4. I used the company documents to validate the interview data to engage in methodological triangulation. I reached data saturation by collecting data until no new themes or patterns emerged. The three major themes regarding the strategies that U.S. coal railroad leaders use to remain profitable were (a) equipment control strategy, (b) intermodal strategy, and (b) workforce strategy.

#### **Presentation of the Findings**

The overarching research question of this study was "What strategies do U.S. coal railroad company leaders use to remain profitable?" After I received approval from the Walden University IRB, I interviewed four railroad leaders from two U.S. coal railroad companies based within the Southeastern United States. In this section of the study, I discuss participants' responses along with emerging themes, data analysis, and conclusions used to answer the overarching question to the study. I compiled the data utilizing multiple sources to validate the study through the answers of the interviewees,

member checking, and company documents relevant to the study. I used methodological triangulation during the analysis of data to identify themes and patterns. Researchers use the data driven approach during data analysis (Anney, 2014; Bloomberg & Volpe, 2012; Yin, 2018). During the interpretation phase, I used a data-driven approach explore strategies U.S. coal railroad company leaders use to remain profitable. During the steps of data analysis, I studied all the data available to me. I transcribed all the interviews into Microsoft Word. For coding and sorting multiple themes into codes, I used the NVivo software. I used several examples from the interview and document data to provide evidence of each theme during the presentation of the findings.

The analyzed interviews, the analysis of the research, and all documents reviewed resulted in three themes: (a) equipment control strategies, (b) intermodal strategies, and (b) workforce strategies. Participants' companies used these strategies 100%. The participants shared their strategies and experiences for the U.S. coal railroad industry to remain profitable after the economic downturn in 2008. The participants believed that their companies remaining profitable by investing more into intermodal opportunities, leasing instead of buying equipment and inventory, and employee furloughs and layoffs.

### **Theme 1: Equipment Control Strategy**

The equipment control strategy was the most frequent theme that emerged from the analyzed data. All participants noted the importance of controlling the use of and cost of equipment to remain profitable. Through leasing equipment, co-owning inventory, and extending the life cycle of the equipment by replenishing parts instead of buying new inventory, leaders implemented the equipment control strategy. This finding confirmed

previous research noting that railroad managers must understand the importance of inventory and equipment control management (Ethridge, 2016). Table 1 depicts the subthemes of the equipment control strategy used by the participants' companies.

Table 1

*Subthemes of Equipment Control Strategy*

Subtheme	Percentage of Use by Participants' Companies
DC to AC Conversions	100
Railroad Equipment Agreements	100
Equipment Consolidations	100

All the participants noted that equipment control was one of the key strategies on how U.S. railroad companies remained profitable. P4 stated, "Before the 2008 recession, coal profits allowed the companies to manage the inventory frivolously." When a railcar was damaged or reached the lifecycle of 5 years, most companies would dispose of the railcar by selling the car for scrap metal. P3 stated, "Railcars were disposable items before 2008."

After the reduction of coal, the participants noticed that there was no new influx of new railcars. P2 stated, "The typical railcar costs between \$100,000 to \$150,000 depending on the quality of the car." P1 stated, "Before 2008, every company owned and operated their own railcars. At any given time, most railroad companies could have over 10,000 cars on hand." P1 also stated, "Other than coal, railcars and chassis were the biggest commodities within the company." Available railcars and chassis are a railroad companies the most valuable resource. P2 stated, "Due to the control of inventory, railroad companies were able to down thousands of railcars and chassis. They were able to do this by consolidating trains." P3 stated, "Their average train goes about from 5,000

to 6,000 ft. After the coal markets started to dwindle, train sizes started to increase to 10,000 to 15,000.” P2 and P3 noted that by increasing train size, railroad companies can limit the amount of locomotive that companies must utilize to pull these cars. Being able to use less locomotives resulted in the railroad companies reducing costs on fuel and manpower, which improved their profitability.

I used the annual reports of Company 1 and 2 to validate the data of the interviews. The report confirmed that there was an increased number of train conversions from direct current (DC) to alternating current (AC) occurred to reduce cost and improve efficiency. I reviewed the SEC 10K of Company 1 and 2, finding information on the reduced cost of inventory and equipment control leading to increased profitability. The SEC 10K reports also indicated the decline in the number of locomotives, confirming a shift to consolidate equipment.

Further, being able to control inventory is the number one strategy that helped P4’s railroad company stay profitable during the turbulent times of coal production. P3 stated, “Longer train were used more during the summer months because the temperature allowed for the air brakes to work faster than cold air in the winter time. The longer length of trains can also be a major safety hazard in terms of production.” P1 stated,

There are pros and cons to train length with one of the cons being longer trains have a higher risk of derailment. If a derailment happens, depending on the severity of the incident, it could cost the railroad company thousands of dollars in increased manpower, lost or damaged inventory, and broken or damaged equipment.



Another tactic used under this strategy was increasing the lifecycle of the companies' equipment. Increasing the lifecycle happens primarily with all the locomotives in the industry, as P4 stated, "All railroad companies entered an agreement to use any companies' equipment within the railroad network." The railroad network agreement meant that Company 1 could be pulling a train with a Company 2 locomotive. The agreements provided added measures that helped the railroad industry remain profitable. For example, P3 stated, "Being able to limit the number of locomotives and railcars within a fleet will directly improve the profitability within a company." P3 also stated, "The average locomotive goes from \$500,000 to \$2 million dollars and if the locomotive is electric the cost could rise upwards to \$6 million dollars. P1 stated, "The companies started to put locomotives into storage to increase the lifecycle of the equipment."

To control equipment even more, railroad companies started to convert DC locomotives to AC. This engine change allowed railroad companies to increase horsepower meaning railroad companies could get trains to destinations even faster than companies had been able to previously. Being able to get a train to a destination faster allows the companies to decrease cost and improve profitability on two different fronts. On the first front, faster trains allow for more trains to run in and out of a destination. P2 stated, "Increasing train station departures from 10 to 13 will have an increased effect on the profitability of a company." The second front of faster trains allows railroad companies to get trains into the station quicker to get workers done with work. Faster trains allowed companies the opportunity to cut workforce cost. Being able to change locomotives from DC to AC also improves fuel cost. P4 stated that AC does not burn as

much fuel as opposed to DC to also helps to keep down cost and increase profitability for the railroad industry. All the participants agreed that changing engine types afforded their companies the opportunity to remain profitable during the reduction of coal.

I reviewed the company annual reports of Company 1 and 2 to confirm that operation of more trains in multiple locations occurred. This finding confirmed the research of Dablain (2017) in that railroad companies spent billions of dollars improving the infrastructure from 2008-2016 to improve efficiency, reduce cost, and improve profitability. I used the annual report from P4's company verify that investments in conversions from DC to AC occurred along with investments in infrastructure to improve efficiency. The annual report also indicated a decline in inventory and equipment costs, resulting in increased profitability. I reviewed the SEC 10K reports from Company 1 and 2, which indicated an increase in profit coupled with a decrease in equipment costs.

The findings for this theme align with the transformational leadership theory. Managers who adopt a transformational leadership mindset do not just think of day-to-day operations but consider a corporation's strategic position for many years to come (Burns, 1978). The railroad leaders who participated in this study implemented an equipment control strategy to take a long-term approach to remaining profitable. Similarly, Burns (1978) noted that effective transformational leaders use a long-term approach for organizational success, whereas a transactional leader might focus more on short-term goals. The participants in this study understood the need to make long-term investments in infrastructure along with implementing strategies to reduce equipment and inventory costs to improve their long-term success. Transformational leaders use

individualized considerations by listening to suggestions by managers and employees to improve the organization (Geier, 2016). All participants noted that used the input from their managers and employees within their strategy to control equipment and inventory costs.

## **Theme 2: Intermodal Strategy**

Since the major coal reduction of 2008, the intermodal industry has become a major factor in the profitability of the railroad industry. The participants used the help of multiple logistics companies to create a market large enough to make the intermodal strategy viable. In addition, all four of the participants were deeply involved in the strategy shift to divert more resources to intermodal business and less to the coal markets. This key finding confirmed previous researchers' findings. For instance, Catherine (2015) noted that companies must understand that intermodal is the future of logistics in the railroad industry. Table 2 depicts the subthemes of the intermodal strategy used by interviewees to remain profitable by increasing automation and establishing agreements within different industries.

Table 2

### *Subthemes of Intermodal Strategy*

Subtheme	Percentage of Use by Participants' Companies
Long-term Parcel Agreements	100
RMG Crane Installation	100
Chassis Lease Agreements	100

Many quotations from participants help illustrate this theme. P4 stated, "When the recession happened, multiple industries were trying to figure out innovative ways to remain profitable. This made the marriage of rail and companies the likes of FedEx and

UPS vital to the profitability of both industries.” Parcel companies during the recession wanted to lessen the cost of rising fuel costs along with having to pay tractor trailer drivers a premium to deliver parcel across the country. The rail industry at the time were looking for a profitable substitute to replace the massive profits that coal production afforded the industry. P3 stated, “Merging the industries at that time was a no brainer for leaders.”

P2 added, “When the intermodal business picked up, the railroad industry was not prepared for the immense volume of product the parcel companies dropped off to rail stations.” The increase in volume transformed standard railroad terminals into hubs for the parcel companies to deliver their trailers to put onto the rail cars. P1 stated, “We understood early on when the business picked up that we did not have nearly enough chassis to handle the volume of business coming in.” From the annual report of P1’s company, I learned that the average truck chassis can cost between \$10,000 to 15,000 dollars to purchase. P2 stated, “Railroad companies went into an agreement to be able to use any railroad company’s chassis.” The agreement happened in the same model that any railroad company can use any railroad company railcar or locomotive. P1 stated, “The cost to repair broken chassis became too big of an expenditure for the industry. Therefore, companies started to lease chassis buy paying the chassis company per diem so they could switch out older chassis and newer ones could be fixed at no cost.” With the chassis procedures in place, the next step was to retrofit each terminal with the equipment to handle the influx of intermodal business.

I used the annual reports of Company 1 and 2 to validate the data of the interviews. The annual reports confirmed that there was an increase in the amount of business with parcel companies. I reviewed the SEC 10K of Company 1 and 2, finding information on the increased use of intermodal delivery, resulting in increased profitability. The SEC 10K reports also indicated that the intermodal agreements with parcel companies was a key method of increasing business revenue. I used the annual report from the company of P3 to show the steadily increasing shift in assets to the intermodal business since 2009. The annual report also indicated an increase in the purchases of rail mounted gantry cranes (RMGs), which has led to faster loading and shorter departure times. This finding confirmed previous research noting that an intermodal strategy became increasingly beneficial to the railroad industry after the reduction of coal production (Uddin, 2019).

All participants acknowledged that the companies began retrofitting all terminals with RMGs and automated RMGs. These cranes operate throughout the railroad network, loading trailers and chassis from railcars on to bobtail trucks and taking trailers of bobtail trucks and loading them onto railcars. P3 stated, "The average nonautomated RMGs can cost between \$200,000 to \$500,000 thousand dollars and the fully automated rail gantry cranes cost in the millions." P1 stated, "Before the recession, minimal terminals had RMGs and none had automated gantry cranes. All interviewees stated they all have RMGs at each terminal and each interviewee stated that they have at least one fully automated gantry crane within their network. P3 stated, "Automation has helped their company slash workforce costs immensely." P4 stated, "It will not be long before there is

a fully automated terminal in the network. There is just too much upside to automation within the intermodal industry. Saving cost on manpower, minimizing safety risks, and a faster work rate.” This finding confirmed research indicating that train companies who want to be successful and competitive must divert more resources to intermodal business (Etheridge, 2016).

The intermodal strategy aligns with the transformational leadership theory because leaders saw and understood the need for innovation to remain profitable by not only implementing diverting more resources into the intermodal framework but also trying to improve the processes within intermodal network. Transformational leaders use intellectual stimulation to challenge their teams to find long-term solutions to industry and company problems (Burns, 1978). Transformational leadership in the railroad industry resulted in new strategies to change the business model from coal only to using an intermodal strategy to increase business traffic as well as revenue (Schweitzer, 2014). The railroad leaders who participated in this study understood the need for transformation in the industry to remain profitable.

### **Theme 3: Workforce Strategy**

All participants in this study agreed that developing strategies to remain profitable regarding the work force were the most difficult to decide because each decision had a social impact on themselves, the company, and their employees. All participants acknowledged that during times of financial uncertainty, one of the first items that companies look at on balance sheet is the cost of labor. All participants also agreed that managing the workforce using an effective strategy was a necessary step to remain

profitable following the reduction of coal shipments. Table 3 shows the subthemes of the railroad industry workforce strategy interviewees used to remained profitable through employee retention cross training and management trainee programs.

Table 3

*Subthemes of Workforce Strategy*

Subthemes	Percentage of Use by Participants' Companies
Employee Retention	100
Cross Training	100
New Manager Program	100

P2 stated, “One of the first things that our company initiated was to offer early retirement to those that qualified and voluntary leave status until the company could figure out the next steps it would take during the financial downturn.” P1 noted that companies generally try to get employees to leave voluntarily during periods of instability so that the company can keep as many people working and employed. P2 stated, “Most leaders in the company thought that the reduction of coal would not last that long, so at first they had no long-term solutions to handle the large workforce it employed.” P3, stated “Once voluntary leave did not help the situation, the company started to enact furloughs for front-line employees like rail men, train engineers, and conductors.”

Furloughs happen as a direct result of a company having too many employees and not enough work to go around for the workforce. P4 commented that being able to furlough workers was a better alternative than doing full layoffs. When a company does a layoff, there are no more employee benefits as opposed to furloughs with employees being able to keep full benefits like health and pension. P4 stated,

When furloughs came down it didn't go over well with employees as anyone could expect. A leader's job is to assure employees that everything would be ok and that everyone would be coming back to work in the very near future.

As noted by P1, furloughs are always a precautionary step for companies to stay solvent during challenging financial times.

P1 stated, "As a leader, it is increasingly difficult to keep staff during the furlough period because many employees find other jobs during the furlough period and the employees that find other jobs do not want to risk leaving an already established job to come back to uncertain times." This what makes furloughs such a difficult decision for companies because they risk losing a lot of long tenured people. P4 stated,

We lost over 20% of our front-line workers during the furlough period. It was difficult for us because we had to hire a lot of novice employees to the workforce and that took a lot of resources to be able to train them up.

All participants in this study stated that cross training their employees was another tactic they used when deciding how to remain profitable with the workforce that was available after furloughs, voluntary leave, and early retirement. P3 stated, "The first thing we thought about after furloughs was to make sure that the train engineers and the conductor could be interchangeable." All train engineers start out as conductors, but some engineers had not performed the conductor job in many years and had not had the training necessary to perform the job. Generally, the engineer operates the train and the conductor does all the work outside of the train like train hookups and disconnections along with understanding how long the train is for track purposes. P1 noted, "Making an



initial pivot in workforce thinking helped ease the burden of having to operate with far less staff that leadership was accustomed to having on hand to work at any time.” Being able to just cross train front line workers would not work unless cross training of the managers took place. P2 acknowledged that the company has different divisions, such as intermodal and transportation, with each division having operations managers that managed the front-line workers and vendors. When the reduction of coal shipments occurred, leadership used a workforce strategy to cross train transportation and intermodal managers. The participants used cross training to improve the effectiveness of their workforce and operate with fewer employees. This finding confirmed the research of Girma (2016) who noted that cross training employees is a key strategy to improve workforce productivity despite employee furloughs and layoff. Upon reviewing the SEC 10K reports from Company 1 and 2, I was able to confirm the interview data regarding a decrease in employees, a decrease in workforce costs, and an increase in revenue because of the workforce strategy coupled with the intermodal strategy.

Leaders in Company 1 and 2 also changed how they trained their front-line managers. This shift in training occurred to improve workforce effectiveness. P4 stated, “Normally, a management trainee would be chosen over thousands to participate in an interactive and robust training that would take the trainee all of the country visiting every segment of the company in the span of nine months.” The training can be very taxing on someone who maybe in their first real job or has never been away from home before. P4 also stated, “No expense is spared during this all-inclusive training. The trainee would bounce from city to city having lavish dinners with managers from that city all on the

company's dime. After coal started to decline, the program changed to only a six-month program with certain travel restrictions." P2 stated, "Most of the trainees before the recession consisted of employees fresh out of college. After the recession, the program became more stringent focusing on the participants having not just degrees but graduate degrees with some type of experience dealing with the industry in some form." This finding confirmed the research of Maverick (2018) in that railroad leaders used a workforce and training strategy to reorganize and well as improve the flexibility of the workforce to remain profitable. I used the annual report from P1 to show the 5-year decline in workforce cost starting in 2009. The SEC 10K and MarketLine reports both indicated a decrease in the training budgets for both Company 1 and 2, further validating the interview data regarding the shift in training methods and length of training.

All participants acknowledged that operations managers increase a company's ability to strategically place management in the right terminal, which could be the difference between remaining profitability or faced with the need to close a terminal to save cost. The railroad companies had to be strategic in how they diverted human resources into regions that might not be worth saving after coal shipments declined. P1 stated, "Before the 2008 recession, when a manager finished the trainee program, the company would put them anywhere they saw fit within the network of terminals." For example, a trainee could be from Atlanta but after the trainee finishing the program the company places the trainee within another region of the company. The trainee had the choice either to accept the position or resign because of declining the position. P1 stated, "The new training program focuses on putting trainees closer to the region they lived in."

The move cut down drastically in relocation, and cost of living adjustment fees. The strategy also helped companies from losing employees who would decline the position after the training. P4 stated, “It is difficult to ask a 21-year-old person fresh out of college or a 28-year-old person with a family to pack up and move to another region of the country they have never been in.” This finding confirmed the research of De Meuse (2017) who noted that effective leaders recognize the needs of their new employees and try to accommodate reasonable request from the employees to improve their work-life balance and job satisfaction. In reviewing the annual reports from Company 1 and 2, I was able to verify that both companies take into consideration trainees’ needs, family status, and desire to work within a specific region.

The workforce strategy theme aligns with the transformational leadership theory. All participants understood that a transformation regarding the workforce in their railroad companies was an essential element of their overall strategy to remain profitable. Transformational leaders must inspire and motivate the workforce to succeed in a competitive environment (Bedi et al., 2016). As noted by Burns (1978), transformational leaders consider the individualized needs of each employee. The railroad leaders who participated in this study recognize that new employees had specific needs that deserved consideration. Transformational leaders use inspirational motivation to influence employees to do more than they previously thought possible (Burns, 1978). The participants used cross training to improve the effectiveness of their workforce, resulting in reduced costs and increased profitability.

### **Applications to Professional Practice**

The ability of the leaders in this study to use a multitude of strategies allowed for the railroad to remain profitable. Railroad industry leaders using effective strategies to remain profitable during the recession is the reason the industry is as strong as it is in today's time (Korkmaz, 2017). Leaders agreed that keeping the railroad industry profitable when the reduction of coal occurred took thinking outside the box and moving back timelines for expansion (Sedehzadeh, Tavakkoli-Moghaddam, Baboli & Mohammadi, 2016). The Bureau of National Statistics (2017) documented the United States would still need the railroads to transport good and services which would lesson having so many trucks on the highway. Transformational leadership is a valued asset in times of uncertainty when dealing with an entire industry. The industry understood that one company could just try to save itself, the industry had to come together to deploy sustainable strategies to combat the reduction of coal markets (Taptich, Horvath, & Chester, 2016).

The application of these findings might allow railroad leaders to streamline certain processes and procedures to allow for a more sustainable approach to remain profitable. Businesses in the railroad industry need to understand that the reduction of coal was no mistake and the strategies used by leaders will have a permanent effect on the industry either good or bad. The application of this finding might allow railroad leaders to employ leaders that tend to have a more transformational leadership approach to business. The three major themes regarding the strategies that U.S. coal railroad

leaders use to remain profitable that emerged from the data were (a) equipment control strategy, (b) intermodal strategy, and (b) workforce strategy.

The participants' strategies for equipment control might allow railroad leaders to have universal equipment. Being able to use shared equipment could be very profitable for all companies involved without having to bear all the equipment cost every time. The research could also allow leaders to move up the timeline on automation of equipment. A fully automated rail terminal is a possibility within the next decade. If leaders can use this study to delve deeper into the cost benefit analysis of having a fully automated terminal, the reduction in labor costs could be well worth the risk. The application of these findings might allow for leaders to start investing in all DC locomotives. There is a cost benefit to increasing the life cycle of any piece of equipment but purchasing the right equipment could lend itself to be cost effective in the long run. The application of these findings could help leaders understand the needed strategy of the First in First Out method in terms of the equipment life cycle. Leaders need to ensure that the older equipment depletes entirely before the new equipment enters the equipment cycle.

The participants strategies for intermodal profitability might allow railroad leaders to look at the long-term agreements with the parcel companies and branch out into a third-party parcel provider cutting out the actual parcel company as the middleman. The agreements will take some innovative thinking because railroad companies would have to create the infrastructure for UPS and FedEx to place the industry into the direct to consumer business. The application of these findings might call for long-term agreements with parcel companies to become 50/50 partnerships rather than the current agreements in

place by having the railroad work as a subcontractor for the parcel companies. The application of these findings might allow for companies to invest more into RMG and chassis innovation. RMG's and chassis on a train yard is the main equipment when it comes to intermodal business. Faster RMG's with better technology and more durable chassis could increase profitability for the industry if RMG's receive the proper attention from leadership.

The participants' strategies for having a better and more efficient workforce as it pertains to remaining profitable in the industry is a game changer. The application of these findings by leaders might improve the retention in the company by having stronger job fairs and employee forums so that all employees understand the state of the industry. Leaders could apply the findings to create more incentives for employees remaining with the company like stock options after a certain amount of years or free college tuition is the employee signs on long term. The application of these findings by leaders could result in improved cross training for all front-line workers so that if there is another reduction in work, the company is better prepared to make the necessary workforce adjustments. Railroad leaders could apply the findings to optimize their workforce, reduce labor cost, and improve their profitability. When the 2008 recession occurred, the industry had to layoff many workers because the industry had more employees than the companies needed (Korkmaz, 2017). The application of these findings could allow leaders to increase the length of training programs of new incoming managers to a full year so that the managers are better prepared once placed into a terminal.

### **Implications for Social Change**

The implications for positive social change include the potential for leaders of U.S. coal railroad companies to lower regional unemployment, improve economic stability, and provide improved living conditions in affected communities because of improved profitability in the railroad industry. Positive social change occurs when profitable business leaders create new jobs, improve wages, and stabilize their ability to remain viable in the respective regional economy (Yang, Lee, & Cheng, 2016). A goal of this research study was to contribute to positive social change because improved profitability in the railroad industry potentially leads to a lower the regional unemployment rate, improved economic stability, and improved living conditions in affected communities. Increased revenue and profitability within for-profit businesses typically creates a positive social chain reaction (Yang et al., 2016). Leaders in the U.S. railroad industry might use the findings of this study to stabilize profitability; therefore, reducing the need for future employee layoffs. Increased regional employment improves regional economic and community conditions (Yang et al., 2016).

Implementing an equipment control strategy could lead to positive social change by reducing the amount of waste in the environment resulting in more recycled equipment. The strategy could lead to less injured employees because companies are limiting the amount of equipment on yards now. Finally, the equipment control strategy could lead to more land for home and communities because there is more space because of less equipment.

Leaders implementing an intermodal strategy could lead to positive social change by creating more jobs in IT and mechanical engineering dealing with RTGs. The strategy could also lead to hired paying jobs because operating RTGs takes extensive training and experience. Finally, the intermodal strategy could lead to better safety regulations and a safer work environment for employees.

Implementing a workforce strategy could lead to positive change by contributing to society through initiatives that stimulate self-worth and organizational buy-in. The decisions by railroad leaders have major implications to communities and its residents. If leaders within the human resources department can help improve their recruiting tactics, the industry can revitalize its talent pool, which may result in improved local economic growth.

### **Recommendations for Action**

Railroad leaders could use the findings of this study to develop sustainable strategies and procedures to remain profitable and overcome the challenges associated with reductions in shipments of coal. When leaders in the coal railroad industry lacks meaningful strategies to remain profitable, the potential result is a negative effect on the industry, the workforce, the affected communities, and the regional economic environment. In this study, I explored the strategies U.S. coal railroad leaders used to remain profitable.

I recommend that coal railroad leaders implement an equipment control strategy to improve their profitability. Implementing an equipment control strategy has the capability of improving profitability while reducing waste and improving efficiency.



Railroad leaders who participated in this study used a variety of tactics to implement their equipment control strategy, such as equipment agreements, engine conversions, and equipment consolidation to reduce operational costs, which has had a positive effect on their profitability.

A second recommendation is coal railroad leaders use an intermodal strategy to improve their business model and their profitability. An intermodal strategy involves the leaders engaging in agreements with trucking and shipping companies to move their goods from the port or distribution center to the next supply chain partner. By utilizing long-term parcel agreements and intermodal agreements with other, the railroad leaders participating in this study developed a sustainable strategy to remain profitable even with declining coal shipments.

Finally, I recommend coal railroad leaders use a workforce strategy to remain profitable. Coal railroad leaders experienced a significant loss of high-value employees because of reductions in coal shipments. The participants in this study used an effective workforce strategy to retain quality employees, improve cross-training programs, and improve productivity. By implementing a workforce strategy, leaders in the railroad industry could potentially reduce employee turnover, decrease new hire training costs, and increase employee training and development, resulting in increased profitability.

I will provide each participant a 1-2-page executive summary of the findings of this study. I intend to disseminate the findings by submitting articles for publication in the *Progressive Railroading Journal* and *Railway Age Journal*. I intend to submit a

proposal to the American Short Line and Regional Railroading Association conference to present at their 2021 annual session.

### **Recommendations for Further Research**

One of the limitations I found while completing this study was the sample population of four railroad leaders within in the industry. Future researchers could expand this study to encompass a broader sample to query on profitability, such as conductors, train engineers, intermodal managers, and front-line employees. Sampling more front-line workers and some transactional leaders, such as supervisors could prove pivotal in understanding how to remain profitable after the reduction of coal markets. Future researchers should consider conducting this case study outside of the Southeastern United States. By expanding the geographic region of the research, researchers could understand if the same issues are happening national wide or if the profitability issues are just a regional problem. Future researchers could do a profitability research study in other sectors that rely heavily on coal, such as coal-fired power plants. The findings from that study could lend helpful data to the research of keeping the industry profitable. A limitation of this study was the findings are not generalizable to a larger population. To overcome this limitation, I recommend further research using the quantitative method, testing the significance of the relationship among variables, such as coal shipments, intermodal shipments, and profitability. Lastly, future researchers could use a mixed-method approach to explore strategies and statistically evaluate the financial consequences of those strategies to remain profitable in the declining coal markets.

### **Reflections**

My experience with the doctoral process was challenging and included a lot of sleepless nights. I can definitively say the process, under the tutelage of my chair has been extremely rewarding. When I started this doctoral journey, I was working within the railroad field but after a year in my program, I left to go into another career. I learned within this process there is much I did not know about the industry and how the industry could remain profitable following the reduction of coal. I gained a newfound respect for the executives at the companies I researched because it could not have been easy making decisions putting people out of work and taking pay reductions to keep the company solvent. I am so grateful to have made connections during this process with people far more knowledgeable about the railroad industry than I am. Because I had experience working within the industry, I utilized the protocol (see Appendix A) which also included semistructured interviews that included open-ended questions (see Appendix B) to mitigate any bias.

### **Conclusion**

Leaders of coal railroad companies in the United States experienced significant losses in profitability because of declining coal consumption by electricity generation companies. Through the lens of the transformational leadership theory, the purpose of this qualitative multiple case study was to explore the strategies leaders of U.S. coal railroad companies use to remain profitable. I collected data through semistructured interviews from four leaders of two coal railroad companies in the Southeastern United States, a review of annual reports, Marketline reports, U.S. SEC 10K reports, and

member checking. I analyzed data using Yin's 5-step process resulting in the three emergent themes of an equipment control strategy, an intermodal strategy, and a workforce strategy. The findings indicated implementing strategies to control equipment usage, increase intermodal shipments, and improve workforce retention and training resulted in increased profitability. The implications for positive social change include the potential for leaders of U.S. coal railroad companies to lower regional unemployment, improve economic stability, and provide improved living conditions in affected communities because of improved profitability in the railroad industry.

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## Appendix: Interview Protocol

**Interview preparation.** After receiving Walden IRB approval, I will contact potential participants using an invitation to participate email. I will attach a copy of the informed consent form to the email. Once I have informed consent from a participant, I will propose a place to meet and to conduct the interview.

**Opening the interview.** I will greet each participant by name, introduce myself, and go over the purpose of the study, the possible benefits and risks, thank them for their willingness to be a part of the study, ensure they know I am recording the interview. And then begin by asking Interview Question 1.

**Informed consent.** I will ensure each participant provides informed consent either by replying “I Consent” to the email containing the informed consent form, or by them signing a form just prior to the interview.

**Conducting the interview.** The interview will be semistructured. I will ask the interview questions, wait for a complete response, and ask follow-up questions as needed for clarity. I will take reflective notes in addition to recording the interview.

**Theme verification.** I will ask probing questions regarding emergent themes that arise during the interviews to ensure I fully understand the perspective of the participants.

**Coding.** I will explain to the participants that I will be coding their names to avoid identifying them in the published study.

**Ending the interview.** After all the interview questions have been answered, I will thank the participants for their time, remind them that I need them to meet with me again for about 30 minutes to review my interpretation of their interview responses, and remind them once again that I will keep their identities confidential.