

University of Nevada, Reno

**Making Sense of Adding Environmental Sustainability as a Core Value by a
Company with a High Carbon Footprint: A Single Case Study**

A dissertation fulfillment of the requirements for the degree of
Doctor of Philosophy in Education

by

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THE GRADUATE SCHOOL

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Abstract

A qualitative single case study was conducted to explore how a single company with a high fossil fuel use, ITS Logistics, has adapted to the triple bottom line components of social, environmental, and economic sustainability. The research question for the study was: How and why did ITS Logistics, a company with a high fossil fuel use, adopt sustainability as a core value? Data collection was comprised of document reviews, three site observations, and 14 semi-structured interviews with three executives, three directors, four managers, three hourly employees, and one truck driver. Two prominent findings were found. First, the (Hi)story of ITS Logistics was paramount to the efforts that ITS Logistics had undertaken; company employees shared stories related to historical aspects of the company's founding and how current practices related to the long-established organizational culture. Within this theme of the company's history, the first subtheme was a focus on economic sustainability and growth. Additionally, to reach company economic sustainability goals, social sustainability, the second subtheme, was found to be in practice at ITS Logistics. The second prominent finding was centered on the company's organizational culture, along with a subtheme focused on the core values at ITS Logistics. As the organization appeared to have a family-oriented culture, company members frequently remarked related core values at ITS Logistics, such Teamwork, Having Fun, and Integrity. Altogether, it appeared that the company's history and focus economic and social sustainability were essential to establishing opportunities for changes toward adopting environmental sustainability. Based on these findings, the company appeared to be positioned to integrate efforts in support of environmental

sustainability, with aspirational goals to have sustainability prevail as a shared core value among organizational members at ITS Logistics.

Dedication

Without hesitation, I must dedicate this research to hope. Hope has found its way into each scholarly article I have read, each interview I have conducted, each place I have traveled while writing, and each paragraph written in this dissertation. Hope leads researchers to push past long nights, to embark on new topics, to share uncomfortable findings. Hope breeds meaning in a world focused on fear, pain, and apathy. Hope found me in Costa Rica, where sustainability is an unapologetic way of life. Hope rippled through the world in September when 8 million people, including hundreds at the University of Nevada, Reno, protested for stronger environmental leadership. Hope tagged along at the Climate Leadership Conference in Detroit as leaders shared their vision of a sustainable planet. Hope started this PhD, hope found me at 2am night after night, and hope finished this PhD. “Don’t ever underestimate the impact you can have, because history has shown us that courage can be contagious, and hope can take on a life of its own” (The White House, Office of the First Lady, 2011).

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Hope has not been possible without amazing people in my life. I must first acknowledge my advisor, Dr. Jafeth Sanchez, who saw something in me that I myself did not see. I worked every day to live up to her expectations and I hope I succeeded. I know my desire to study environmental leadership and organizational culture caused her to spend more time supporting my work than a normal Ph.D. student. I'm incredibly grateful that she dedicated that time to me when she absolutely did not have to. To the team at ITS Logistics, whom without hesitation, opened their doors to me and my study, granting me access to the sites, and allowing me to interrupt their busy schedules. I thank all participants at ITS Logistics for sharing their experiences with me. To my committee, who pushed me out of my comfort zone and showed me other perspectives to strengthen my studies. To my supervisor, Jim McClenahan, for supporting me every day for the past 6 years. A big thank you to my son, Marius, and my daughter, Theia for being with me this entire journey, including middle of the night snuggles as I worked. My husband, Tom, understanding the difficult nature of this journey. Finally, my sister Sara, for reading my papers at incredibly inconvenient times, for telling me my work means something, and to not give up. I will always remember that "my name is volatile, I've been this way a long while, I'd surely like to rest but the energy gets the best of me. It's been a wild ride, I wouldn't change a minute, I can't slow down inside, guess that's why I live it" (Martinez, Hexum, & Mahoney, 2003).

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CHAPTER ONE: INTRODUCTION

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere...over comparable time periods” (UNFCCC, 2011, para. 6). The alterations in the composition of the atmosphere, driven chiefly by the increase in fossil fuel use, have caused the planet’s average surface temperature to rise, a process referred to as global warming (NASA, n.d.-a). The term *climate crisis* is used to emphasize that climate change is the “crisis of our time” and the warming effects are “happening even more quickly than we feared” (United Nations, n.d.-c, para. 1). Since data collection began in the late 1800s, the hottest years on record have occurred in the last two decades, signaling an increase in frequency and intensity of extreme weather events (NASA Jet Propulsion Laboratory, 2019).

According to the United Nations (2019), humanity has 10 years to drastically change how the climate crisis is solved. The 6th mass extinction, due to the increased warming of Earth, has created a drastic decline of millions of plants and animals (Ceballos, Ehrlich, & Dirzo, 2017; Diamond, 1989). At the helm of global warming is fossil fuel use by large businesses (Griffin, 2017; Riley, 2017; Starr, 2016). While stable energy use supports economic growth and global dominance, 71% of global greenhouse gas emissions since 1988 can be attributed to 100 fossil fuel companies (Barclay & Irfan, 2019; CDP, 2017; Griffin, 2017). Perhaps in response, extreme climate events (e.g., floods, droughts, hurricanes, wildfires, heatwaves, warming of the ocean, and pollution) are heavily influencing decision-making within the transportation industry (Koetse & Rietveld, 2009; United Nations, n.d.-b). Furthermore, while the trucking industry serves

as a major participant to fulfill transportation needs, consideration must now be given to the environmental effects and the specific role of trucking in environmental sustainability as it navigates societal expectations with financial outcomes (Shin & Thai, 2014).

Recently, ITS Logistics, a business with a high carbon footprint, adopted sustainability as a core value. This single case study explored how this company with a high fossil fuel use has adapted to the triple bottom line components of social, environmental, and economic sustainability.

Fossil Fuel Use, Emissions, and the Trucking Industry

As early as 1859, scientists found that certain gases were opaque when released into the atmosphere (Weart, 2018b). Tyndall (1861) executed hundreds of atmospheric experiments to test the relationship between fossil fuel use and opaque emission observations in the atmosphere. Through experiments, Tyndall confirmed that “carbon dioxide and methane, do indeed absorb more energy than oxygen and nitrogen when radiant heat is passed through them” (as cited in Hulme, 2009, p. 121). Additional atmospheric work through observations of invisible infrared radiation led to the discovery of the greenhouse effect (Weart, 2018b). Greenhouse gases (GHG), due to their concentration and abundance of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases, contain heat in the atmosphere and warm the planet’s surface (EPA, 2018). With the discovery of GHG, scientific research on how humans exhaust energy through the release of fossil fuels helped advance research on the detrimental effects of global warming (Hulme, 2009).

Extracting fossil fuels (e.g., oil, coal, and natural gas) from the ground and burning the fossil fuels through consumption releases an unprecedented amount of GHG

into the atmosphere (NASA, n.d.-b). In turn, as GHG warm the planet's surface, weather events drastically change and increase in intensity, leading to extensive biodiversity loss (Jentsch & Beierkuhnlein, 2008). Without global solutions to mitigate the climate change crisis, humans could trigger the next mass extinction event.

As the 20th Century unfolded, scientists continued to examine fossil fuel pollution, global warming, and the negative consequences of human activity (“A brief history of climate change,” 2013; Svoboda, 2018). By 1960, the world's population reached three billion people, leading to an increased demand in fossil fuel use; this expanded damage to the atmosphere by GHG (Roser & Ortiz-Ospina, 2017). Increased population growth further increases consumption resources, which drives energy use. Scientists advised that population stress with a warming climate could lead to a resource scarcity of clean air, water, and land (Roser & Ortiz-Ospina, 2017). For instance, Mercer (1978) contended that the West Antarctic Ice Sheet was vulnerable to the continuing warmth of the surface. He reported that “any environmental change that diminished or destroyed these ice shelves would also diminish or destroy the ice grounded below sea level” (Mercer, 1978, p. 323). These changes to the ice sheet could result in loss of populated areas, as a sea level rise is predicted in the 21st century (National Snow & Ice Data Center, n.d.; Weart, 2018a).

At the turn of the 21st century, scientists expanded their research on global GHG to include the release of fossil fuels. Part of the reasoning for this expansion was because fossil fuel use is deeply ingrained in the transportation industry as global markets grow to include “new technologies, manufacturing methods, materials, information channels, transportation capacity, and trade policies” (EPA Smart Way, 2020). Within the global

market, a *supply chain*, or how goods are moved, is defined as the “network of entities through which material flows” and “encompasses every effort involved in producing and delivering a final product (Lummus & Vokurka, 1999, p. 11).

Additionally, the Council of Supply Chain Management Professionals defines *logistics* as “part of the supply chain process that plans, implements and controls the flow and storage of goods and services between the point of origin” (as cited in Brand, n.d., para. 6). In understanding the environmental effects of the supply chain process and logistics within the transportation industry, a 2017 report indicated that transportation “account[s] for about 29 percent of total U.S. greenhouse gas emissions” and that the percentage had risen more than any other emissions segment in the previous two decades (EPA, 2019). See Figure 1 for GHG emissions per economic sector.

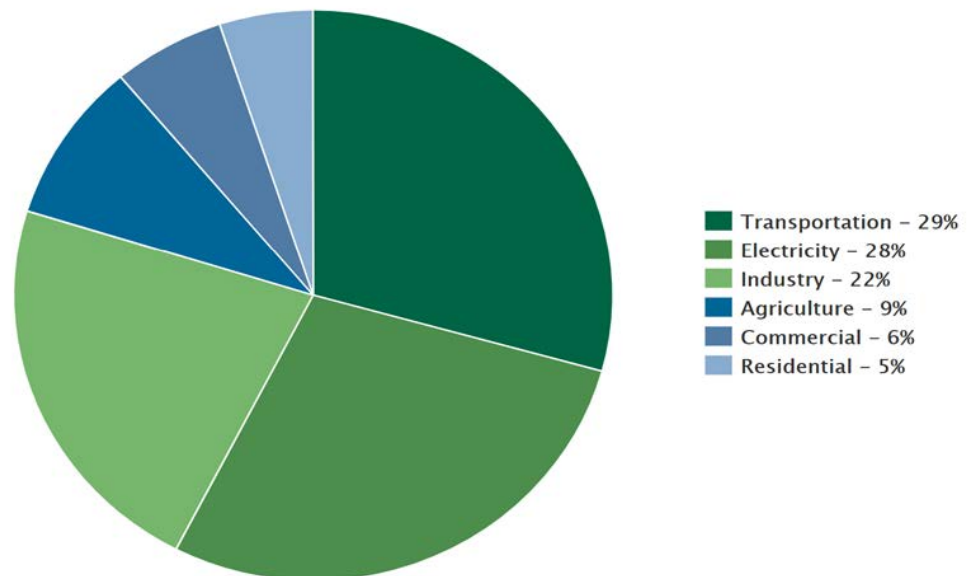


Figure 1. 2017 U.S. GHG Emissions by Sector. Reprinted from *United State Environmental Protection Agency*, 2019. Retrieved November 20, 2019, from <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>.

Within the transportation sector, medium- and heavy-duty trucks, which are defined as vehicles over 8,500 pounds, single-unit and combination trucks, tractor-trailers, box trucks, and service and utility trucks, accounted for 23% of the total 29%, representing approximately 7% of all GHG emissions (EPA, 2019). See Figure 2 for the sources of emissions in the transportation sector.

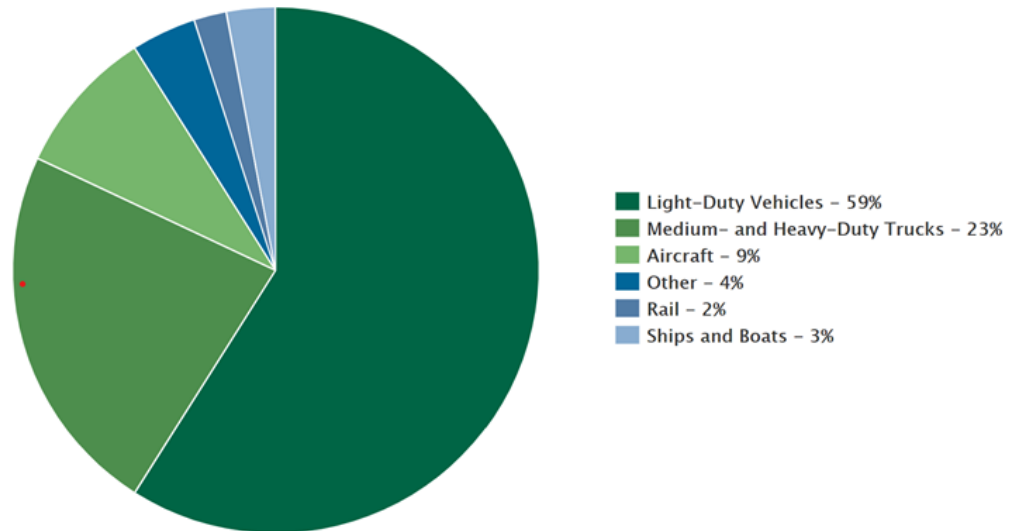


Figure 2. 2017 U.S. Transportation Sector GHG emissions by Source. Reprinted from *United State Environmental Protection Agency*, 2019. Retrieved November 20, 2019, from <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>.

According to the EPA Smart Way (2020) program, in 2015, the U.S. logistics industry “moved more than 49.5 million tons of goods worth nearly \$52.7 billion every day,” as a response to significant demand for goods over long distances (para. 3). This program also listed heavy-duty trucks as the fastest-growing contributor to U.S. emissions. It is projected that, by 2025, “as international commerce increases and supply chains become more global and complex, shipments of U.S. goods will grow another 23.5 percent, and by 2040, a total of 45 percent” (EPA Smart Way, 2020, para. 7).

As the world population is set to reach nine billion people by 2050 and energy consumption is expected to rise to unprecedented levels, researchers argue that the increased energy consumption will require industries to rethink their fossil fuel use, contribution to society, and contribution to biodiversity loss (Miller & Croft, 2018). Thus, as the transport of people and goods continues to surge, economic growth remains entangled with carbon use and its environmental impacts.

The Triple Bottom Line

Increased awareness and expectations of businesses' environmental impacts have driven the development of a triple bottom line (TBL) approach. The TBL approach magnifies the economic component in traditional accounting frameworks to include social and environmental components in business evaluations and operations (Elkington, 2018; University of Wisconsin, 2020). These three bottom lines are often referred to as the three P's: people, planet, and profit. As such, the TBL brings into focus social and environmental impacts, in conjunction with the economic impact throughout the organization's value chain (Boiral, Henri, & Talbot, 2011; Heikkurinen & Bonnedahl, 2013).

Through the TBL approach, company leaders take into consideration the consequences of the business as related to the three components, and respectively measure progress through social, environmental, and economic performance. Therefore, for the purpose of this study, social, environmental, and economic sustainability will be used to represent the business's actions. The TBL approach has mainstreamed the idea that a healthy and sustainable business requires several considerations, often represented as a Venn diagram (Figure 3). The social, environmental, and economic components

overlap to bring forth what is considered the area of where optimal business performance and strategic sustainable development occur (Brooks, 2014; Elkington, 2018; Missimer, Robert, & Broman, 2017).

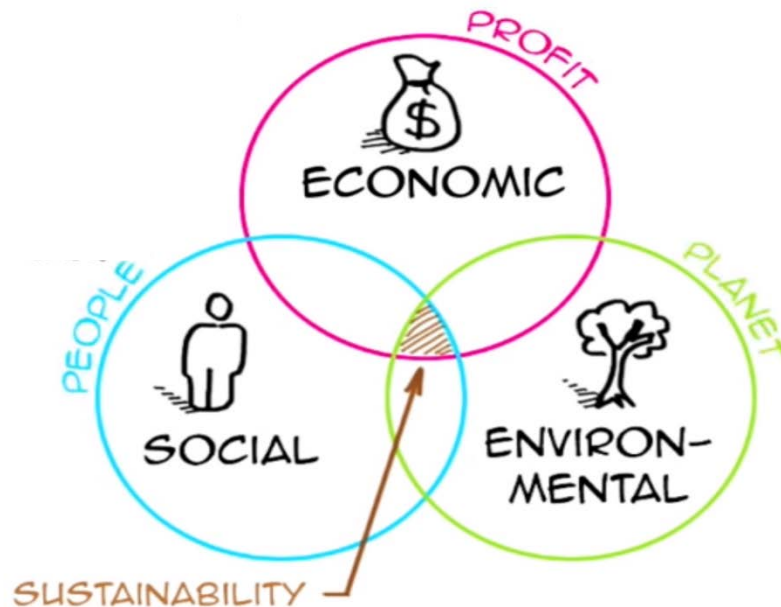


Figure 3. Triple Bottom Line: The science of good business. Reprinted from *Sustainability Illustrated*, by S. Brooks, 2014. Retrieved April 7, 2020, from <https://sustainabilityillustrated.com/en/portfolio/triple-bottom-line-the-science-of-good-business/>.

The TBL approach aims to include environmental sustainability as an equal component to economic sustainability and social sustainability. Environmental sustainability is defined as a business’s “engagement in green values, adoption of a proactive approach to climate change, and [an] emphasis on sustainability” to support a “long-term competitive advantage” (Rajala, Westerlund, & Lampikoski, 2016, p. 52). Researchers have confirmed that environmentally sustainable business practices influence essential business operations through identity (Rajala et al., 2016), resource management,

the balance of conflicting demands, and accountability of company actions (Landrum & Ohsowski, 2018).

When a company includes environmental sustainability, its outcomes have shown a positive influence on market performance, brand equity, and financial goal fulfillment (Lee & Park, 2009; Yang, Hong, & Modi, 2011). According to the United Nations (n.d.-a), industries can create positive impacts on business innovation, leadership, economic growth, production, consumption, and clean energy, with contributions on both a local and global scale when they focus on environmental sustainability. Furthermore, a company that integrates a TBL approach accounts for the full cost of conducting business (Triple Bottom Line, 2009).

Industries of all sizes have found ways to positively contribute to environmental sustainability. Specifically, companies focused on outdoor recreation have become leaders in efforts to preserve the environment due to their founding values, the need for sustainable raw materials, and the increased impact from global warming events (Golden, Subramanian, & Zimmerman, 2011). Mihalic (2000) indicated that, with a direct connection to nature, sustainable clothing, and recyclable gear, companies champion ecotourism practices through adapted sustainability in an effort to mitigate the economic risks. Golden, Subramanian, and Zimmerman (2011) also emphasized the need for “greater transparency in the value chain” as a way to address environmental sustainability and increasing expectations from consumers (p. 822). Overall, positive environmental actions have helped businesses increase market share, exceed financial goals, and improve communities (Bain, Hornsey, Bongiorno, & Jeffries, 2012; Pizer, 2002).

Regardless of the reason for environmentally responsible actions, businesses continue to see social and economic benefits when environmental sustainability is integrated into business operations (Liu, Wong, Shi, Chu, & Brock, 2014). As the transportation industry enhances business operations, changing conditions in global economies and thin profit margins have caused leaders to focus on the reduction of fossil fuels (Pahl-Wost, 2006). Value chains cannot operate without the involvement of the transportation industry to move people and goods. Transportation, chiefly powered by fossil fuels, is now the largest producer of global warming emissions in the U.S. (EPA, 2018; Markolf, Hoehne, Fraser, Chester, & Underwood, 2019). This makes the TBL approach a vital model for businesses for which transportation is essential.

Statement of the Problem

Scientific data surrounding GHG continue to show that the climate is changing faster than businesses can adapt. Companies are facing a need to adopt the TBL approach or risk negative consequences to business operations (Ernst & Young Global Limited, 2016). At the same time, environmental pressures affect businesses both internally and externally and are increasingly important to companies that are reliant on fossil fuels. It has been argued that the implementation of the TBL approach can support companies toward meaningful environmental contributions and direct “supply chain behavior throughout the life cycle” (Golden, Subramanian, & Zimmerman, 2011, p. 821; Hussain, Rigoni, & Orij, 2018). However, few research studies, if any, have explored how companies with high fossil fuel use adapt to the TBL components of social, environmental, and economic sustainability.

Purpose of the Study

The purpose of this study was to explore how a single company with a high fossil fuel use has adapted to the TBL components of social, environmental, and economic sustainability. This qualitative study was guided by the following research question, How and why did ITS Logistics, a company with a high fossil fuel use, adopt sustainability as a core value? The results from this study shed light on how executive leaders, directors, managers, hourly employees, and a truck driver at ITS Logistics were navigating the core value of sustainability.

Methodology

Qualitative research methods guided the design of this study. Specifically, this qualitative, single case study used sensemaking to focus on employee perspectives and provide context to business activities (Yin, 2013). This study was conducted through an in-depth examination using publicly available documents, observations, and semi-structured interviews, to explore how a single company with a high fossil fuel use adapts to the components of social, environmental, and economic sustainability.

While the single case was isolated to one company, ITS Logistics, this study provides a thorough and holistic understanding of sensemaking principles as operations, concerns, and aspirations were made known by participants. First, publicly available documents were reviewed to understand the background of the company, its competitors, and industry pressures. Second, three site observations were conducted at the ITS Logistics locations in Sparks and Reno, Nevada. Third, semi-structured interviews were conducted with 14 people in the organization including executives, directors, middle managers, hourly employees, and a truck driver. Thus, the information gathered in this

case study was guided by the following research question: How and why did ITS Logistics, a company with a high fossil fuel use, adopt sustainability as a core value?

Theoretical Framework

Sensemaking, as defined by Weick (1995), highlights the ability for a person to understand what is happening and what the event means in a greater context.

Sensemaking involves structuring the unknown; it asks “how they construct what they construct, why, and with what effects” (Weick, 1995, p. 4). This deeper understanding is highlighted in seven interrelated properties (i.e., grounded in identity construction, retrospective, enactive of sensible environments, social, ongoing, focused on and by extracted cues, and driven by plausibility rather than accuracy). Researchers, such as Brown (2004) and Boudes and Laroche (2009), highlighted the use of the sensemaking theory after disastrous events, such as oil rig explosions and deadly heatwaves. In this case study, the use of sensemaking provided an opportunity to shed light on the different meanings that individuals at ITS Logistics held, within the context of environmental sustainability (Helms Mills, Thurlow, & Mills, 2010).

Significance of the Study

With rising pressures to support the environment through business practices, it is essential to understand how a company manages its operations amidst multiple forces, particularly those related to the TBL approach. This study provides an opportunity to better understand ITS Logistics, and help interested stakeholders learn about potential successes and challenges encountered by the organization. In an industry that contributes to global warming, this study is essential and timely, and it seeks critical insights into the efforts undertaken at ITS Logistics to enact environmental sustainability.

Knowledge gained from these findings could also provide an opportunity to support other organizations in their efforts to align environmental sustainability with economic and social sustainability. This study can help to illuminate how businesses and leaders make sense and adapt to environmental pressures, and the role TBL components play in developing environmental sustainability as a core value. It may also serve as a framework for those at ITS Logistics to learn more about its leadership, organizational culture, environmental operations, and employee shared values.

Delimitations

The delimitations set by the researcher bounded this qualitative single case study. First, the case study was restricted to a single company, ITS Logistics, and its employees. The study was not randomized and no preselection criteria were included other than the employee's title at the company. Executive leaders were sought as study participants due to their leadership position at the company. Second, the scope was limited to 14 participants due to availability and the company's time commitment to the researcher. Third, this case study was physically confined to the northern Nevada locations. Fourth, additional information gathered from publicly available documents outside of ITS Logistics was used to support questions asked during the semi-structured interviews. The documents were not verified, or researched beyond what was needed for this study. This study stayed within the boundaries of ITS Logistics' core values.

Limitations

ITS Logistics is a trucking company headquartered in Northern Nevada. The company has seen sizeable growth in location, team members, and clients within the past five years. However, compared to the worldwide transportation industry, ITS Logistics is

a small logistics company with less than a dozen locations to serve its national trucking fleet and warehouse services. Findings cannot be generalized to other carbon-heavy industries or trucking companies. This study cannot address the other sources that are known to contribute to greenhouse gases, such as light-duty passenger vehicles, aircraft, trains, ships, and boats.

This case study represents a snapshot in time and does not explore longitudinal changes at ITS Logistics. As a result, observations and interviews cannot offer a full view of how the company adapts and mitigates climate change concerns (Luscher & Lewis, 2008), particularly with only three onsite observations. Also, climate change is a broad topic that affects many aspects of business operations; therefore, participants in this study may not have been comfortable responding to environmental questions. Participant motivations in relation to TBL were not used, and measurements related to social, environmental, and economic aspirations were not attained.

Definition of Terms

Carbon Dioxide

Carbon dioxide (CO₂) “enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees, and other biological materials, and also as a result of certain chemical reactions such as the manufacturing of cement” (EPA, 2018). CO₂ is naturally “absorbed by plants as part of the biological carbon cycle” (EPA, 2018).

Carbon Footprint

Carbon footprint is the carbon dioxide (CO₂) and greenhouse gas (GHG) emissions produced during personal and entity (e.g., building, corporation, country, etc.) activities. These emissions come from fossil-fuel use in manufacturing, heating, and

transportation, as well as the production of electricity, to make the goods and services humans purchase and consume (Eckley Selin, 2013).

Climate Change

Climate change is a “pattern of change affecting global or regional climate, as measured by average temperature and rainfall, and how often extreme weather events like heatwaves or heavy rains happen” (BBC, 2019).

Corporate Social Responsibility

Corporate social responsibility (CSR) is a concept used to describe an organization’s vision that focuses on initiatives that are deemed as socially responsible in order to support society’s well-being (Lu, Ren, Zhang, Wang, Ahmed, & Streimikis, 2020). (CSR) is used synonymously with triple bottom line and sustainability to describe how a business creates a positive impact on social, environmental, economic components.

Emissions

Emissions are the release of gases such as carbon dioxide leading to global warming. Emissions can be small-scale in the form of exhaust from a car or methane from a cow, to large-scale such as those from coal-burning power stations and transportation fleets (BBC, 2019).

Environment

The environment as defined by the Organization of Economic Cooperation and Development is the “totality of all the external conditions affecting the life, development and survival of an organism” (Organisation for Economic Co-operation and Development, 2005).

Environmental Stewardship

Environmental stewardship is defined in three ways: environmental education, stewardship action, and stewardship measure. Stewardship for the environment is through responsible use and protection of the natural environment through conservation and sustainable practices to enhance ecosystem resilience and human well-being (Chapin III et al, 2011). Stewardship connects people with ecosystems and supports the understanding of “how individual behavior impacts the environment” to encourage an “active role in managing and protecting these resources” (NOAA, n.d., para 3). Stewardship takes five forms: restoration and protection, everyday choices, community awareness, civic action, and stewardship science (NOAA, n.d.).

Fossil Fuels

Fossil fuels include coal, petroleum, natural gas, oil shales, bitumens, tar sands, and heavy oils. These fuels can be burned to provide heat, create energy, supply electricity, and fuel transportation (Kopp, 2019).

Global Warming

Global warming is the consistent rise in average temperatures. Significant global increases have transpired in the past two decades. Scientific research has determined that human-produced greenhouse gas emissions are the reason for the severe upward trend (BBC, 2019).

Greenhouse Gases

Greenhouse gases (GHG) are made up of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. These gases pass through the atmosphere at a

slower rate causing the gas to stay in the atmosphere and warm the planet's surface (EPA, 2018).

ITS Logistics

Headquartered in Sparks, Nevada, ITS Logistics offers shipping solutions through a large trucking fleet and provides warehouse space. ITS Logistics' fleet primarily serves the western United States but contracts other modes of transportation to serve its customers throughout the entire country. ITS ships goods for large companies, such as Starbucks, Patagonia, and Mercedes Benz.

Shareholder/Stockholder

The Corporate Finance Institute (n.d.) defines a shareholder/stockholder as a person or entity that owns shares or equity in a corporation. "A shareholder must own a minimum of one share in a company's stock or mutual fund to make them a partial owner. They have the right to vote on certain matters with regard to the company and to be elected to a seat on the board of directors." (Corporate Finance Institute, n.d., para. 1-2).

Stakeholder

Stakeholders take six forms. The first form is customers, through the purchase of a product or service as they are impacted by the quality and value. The second form is employees, through their direct stake in the company with benefits (both monetary and non-monetary). The third form is investors and can be included as both shareholders and debtholders. The fourth form is suppliers and vendors through the goods and services the business relies on for revenue generation. The fifth form is communities to include how businesses interact with economic development, health, and safety. The sixth form is

governments as they collect taxes and benefit from the overall Gross Domestic Product (GDP) that companies contribute to (Corporate Finance Institute, n.d.).

Sustainability

Sustainability as defined by the United Nations as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations Academic Impact, n.d.).

Triple Bottom Line

The Triple bottom line (TBL) approach considers the business consequences for people, planet, and profit. It measures progress through social, environmental, and economic performance. A company that produces a TBL is accounting for the full cost of conducting business (Triple Bottom Line, 2009).

Value Chain

A value chain is the chain of activities, primary or support, an organization engages in to create a product or service for its customers. Primary activities are categorized as inbound logistics, operations, outbound logistics, marketing and sales, and service. Secondary activities include firm infrastructure, human resource management, technology development, and procurement (Tarver, 2019).

Organization of the Study

This dissertation encompasses five chapters. Chapter One presents the purpose and significance of the study. Chapter Two presents a review of related literature, a detailed description of the TBL approach, organizational culture and the role of core values, and the sensemaking theory. Chapter Three provides the case study methodology.

Chapter Four includes the detailed results of the single-case study, and Chapter Five focuses on the discussion of the findings, along with recommendations and conclusions.

CHAPTER TWO: LITERATURE REVIEW

The purpose of this study was to explore how a single company with a high fossil fuel use has adapted to the TBL components of social, environmental, and economic sustainability. The literature review for this study encompasses three areas of focus. First, the triple bottom line (TBL) approach is explained in greater detail within the construct of environmental sustainability. Second, organizational culture and the role of core values are discussed. Third, the sensemaking theory is shared and its process is described, along with examples of how sensemaking has been used in organizations are discussed and its application to existing research.

Triple Bottom Line Components

As company leaders strategize to achieve long-term business viability, a TBL approach can be integrated into business operations through the overlap of social, environmental, and economic sustainability. Environmental sustainability accounts for a business' proactive approach to the preservation of the natural environment through climate change mitigation and adaptation, resource efficiency, waste reduction, energy conservation, and public health support through national and global efforts (Rajala et al., 2016; Walsh & Dodds, 2017). Supporting an environmentally conscious culture creates adaptable processes and shows dedication to society and stakeholders by changing the world in meaningful ways (Dess & Picken, 2000). Social sustainability identifies social issues that should be managed as a way to increase a corporation's long-term survival (Carter & Rogers, 2008). Examples of social issues when evaluating business operations relate to stakeholders, "human rights, workers' health, diversity, equity, and other social and safety-related issues" (Ahmadia, Kusi-Sarpong, & Rezaeic, 2017, p. 101). Economic

sustainability establishes how a company allocates “scarce resources to meet desired goals” (Polansky et al., 2019, p. 5233). Specifically, economics is the production, distribution, and consumption of goods and services. Polansky et al. (2019) continues, both goods and services are important drivers of economic development. This can be seen specifically in an increase of living standards, availability of “food, housing, and other basic human requirements” (p.5233).

The three sustainability components can be measured in various ways based on the company’s industry, approach to the three components, and the aspects of the TBL it finds most important. One measure used frequently by businesses is the Sustainability Business Scorecard (SBSC). Hubbard (2006) determined that the “simplicity of the SBSC means that it can be easily understood by senior managers and analysts and will be more likely to be accepted as a performance measurement tool” (p. 190). Figge, Hahn, Schaltegger, and Wagner (2002) identified three basic requirements to develop an SBSC. First, a company cannot engage in TBL evaluation without the integration of environmental and social management into business management. Environmental and social sustainability must be present. Second, the SBSC must create the “characteristics and requirements of the strategy” and specify the measurements. Third, “environmental and social aspects of a business unit must be integrated according to their strategic relevance” while meeting the specific company’s economic needs. In meeting company needs, though, Hansen and Schaltegger (2018) indicated it is important to account for factors that cannot be monetized in order to create stronger business viability in the global market and found that the SBSC is an important contributor to measurement aspect of sustainable development.

In a reprised approach to the TBL concept, environmental sustainability signifies the boundary for all existence on the planet. The environment creates a structure in which society, and social sustainability, exists. Within society, the economy is formed. When integrating the TBL approach within business operations, authentic business sustainability encompasses all three areas – the environment, its society, and the economy (Isil & Hernke, 2017; Montabon, Pagell, & Wu, 2016). Therefore, it is important to reference environmental sustainability in describing each of areas of sustainability.

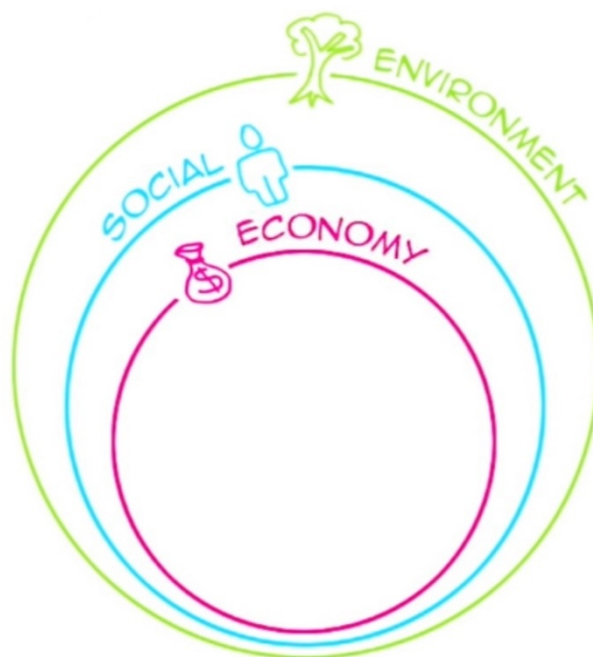


Figure 4. Relations of Triple Bottom Line Components within Environmental Sustainability Triple Bottom Line: The science of good business. Reprinted from *Sustainability Illustrated*, by S. Brooks, 2014. Retrieved February 23, 2020, from <https://sustainabilityillustrated.com/en/portfolio/triple-bottom-line-the-science-of-good-business/>.

Globally, the implementation of environmentally responsible practices has shown a positive influence on market performance, brand equity, and meeting financial goals (Lee & Park, 2009; Yang et al., 2011). Whether global or local, it has been argued that an

industry's power and influence can have significant, positive impacts on environmental sustainability through business innovation, economic growth, production, consumption, and clean energy (United Nations, n.d.-a).

Warming and drastic climate events are a global concern as life-forms struggle to adapt to the climate crisis. Warming has been found to increase health risks, food insecurity, overconsumption, and lead to mass human migration (Lorenzoni & Pidgeon, 2006). Collective public concern for warming and its effects is high; yet, climate change concerns have not become a priority for many people in economically developed nations (Bertrand, 2014). However, Nisbet and Kotcher (2009) argued that, through better consumer choices and political motivation, consistent climate change messages delivered around the world can change personal habits and hold businesses to a TBL approach.

Environmental Sustainability

An essential component of the TBL approach is a focus on the environment. This is when a company works to better understand its unique and specific impacts on the natural environment. With 35 years of consecutive warmth, all living creatures are competing for limited resources and are threatened by heat, precipitation changes, aridity, sea level rise, food security, and migration (Dempewolf et al., 2014; NASA, 2017; Serdeczny et al., 2016). Adaptation and mitigation efforts through industry actions are needed for all species to thrive in the unknown territory of global warming (Second Nature, 2011).

As business leaders provide opportunities for employees to become environmentally conscious, adaptable processes that meaningfully impact the planet can be created, as well as show dedication to society and stakeholders (Dess & Picken, 2000).

Also, if a leader is credible and sincere, there is a greater chance of being effective in “motivating employees to constructively implement the necessary solutions” (Dess & Picken, 2000, p. 30). To this end, Dess and Picken (2000) argued that such efforts can enable employees to consider not only themselves but also the organization and its role in the natural environment.

Notably, as business leaders work to enhance their focus on the environment, global and national expectations to manage climate change have forced a divide between political issues and corporate support. Still, with numerous international events to gather global leaders to discuss climate change solutions, national efforts have begun to positively impact country-specific climate change concerns. Thus, as nations and businesses capitalize on the inundation of competing priorities, resilience is needed to combat environmental scarcity (Kahn, Casey, & Jones, 2017; Kollmuss & Agyeman, 2002; Nisbet & Kotcher, 2009).

Social Sustainability

Considering the inundation of competing priorities, social sustainability reflects a company’s efforts to account for the positive and negative impacts it has on its most important stakeholders. These stakeholders may include employees, families, customers, suppliers, communities, and any other person influenced or affected by the organization (Kraaijenbrink, 2019). Within social sustainability, businesses can invest company resources on a larger scale to support worker’s rights and health, promote diversity and equity, and strengthen safety-related issues. Reasons for organizations to be socially conscious vary, but many stakeholders expect organizations to enact socially sustainable practices. Freeman (2010) highlighted that stakeholders “are affected by organizational

activities spanning from the internal organizational level...to the societal level” (Longoni & Cagliano, 2018, p. 1099).

Social sustainability also encompasses a company’s ability to gain public trust. While global warming is not a new problem to the scientific community, from a social sustainability perspective, the public’s association with warming through global leadership agreements, media coverage, and admission from fossil-fuel producers have only occurred in the last few decades (Grasso, 2019; Weber & Stern, 2011). Polls have shown that a majority of people in the U.S. understand the severity of climate change and its causes (Wike, 2016). Still, personal opinions, assumptions, and political affiliation can outweigh scientific research and the sources collecting data (Gauchat, O’Brien, & Miroso, 2017; Weber & Stern, 2011; Wike, 2016). Gauchat (2018) acknowledged the importance of public trust and scientific authority. For example, exposure to media and political views can influence views of climate change based on feelings and perception, rather than the realities of a deregulated oil and gas industry (McCright & Dunlap, 2003; Rynes, Colbert, & O’Boyle, 2018; Weber & Stern, 2011). Therefore, while the public may grasp the severity of the climate crisis, the media’s projection of scientific information, climate events, and stories of human suffering remain at low levels. To combat skepticism, the Intergovernmental Panel on Climate Change (IPCC) frequently releases reports to highlight global warming data and its effects on social sustainability; its latest report synthesized data from 91 authors, cited over 6,000 references, and encompassed 42,000 “expert and government review comments” (IPCC, 2018, para. 24). These types of reports from the scientific community present new data, theories, and findings to enhance social justice, business’ sustainable efforts, and collective action.

With the effects of global warming beginning to transform several facets of American life, concerns of health, safety, education, and preparedness for the environment may be called into question; public expectations of businesses to consider their environmental actions are increasingly relevant. Rising public attention to environmental sustainability suggests logistics companies fully consider their energy consumption and contribution to waste and emissions (Colicchia et al., 2013). More specifically, society's expectation that heavily polluting industries adjust their course of action, coupled with more natural disasters striking westernized countries, has led to protests around the globe. More recently, protests have been led by youth activists or teens who have protested by way of school absences (Givetash, 2019). Earlier in 2019, 3.6 million people across 169 countries protested inaction, with pressure on the leadership in the United Nations, in governments, and business, such as fossil fuel producers (Gould, 2019). "The current European divide over climate policy illustrates much deeper economic, political and cultural divisions" and the emotion is replicated in other countries around the world (Kottasová, 2019, para. 19).

With 28 countries at various levels of economic development, efforts toward social sustainability have shown that a multitude of distinct social actions influence change. For example, "it's partly about political leadership, it's partly about cultural values, norms, partly about religious beliefs, it's partly about geopolitics, and the perceptions of who holds power and influence in the world" (Kottasová, 2019, para. 20). With heightened momentum, society's expectations to enact social sustainability are being directed towards polluting industries as the climate conversation becomes a priority (Bain et al., 2012; Pizer, 2002).

Economic Sustainability

The third focus of the TBL approach includes the economy. Specifically, the company's focus in this area means that its ongoing efforts toward environmental sustainability can still ensure that there are financial gains in the business. As stated above economic sustainability establishes how a company allocates "scarce resources to meet desired goals" (Polansky et al., 2019, p. 5233). Hardin (1968) advised on those scarce resources stating that "air and waters surrounding us cannot readily be fenced" (p. 1245). To create economic sustainability, businesses began to control and profit from nature's limited raw materials. Hardin (1968) stated that if the resources are made available, humans would exceed their needs through economic and capitalistic means. Overuse of resources demonstrates how easily people and companies can manipulate environmental resources. Shultz and Holbrook (1999) added that "the world's most compelling problem was selfish exploitation of the planet's scarce resources" (p. 281), which can result as private and collective interests integrate (Van Vugt, 2009).

Businesses and global industries can support economic growth in multiple ways, such as through energy production, farming, trade, and tourism. At the very foundation of economic development, oil, gas, and agriculture industries are built on the extraction of Earth's resources in exchange for growth, all while global uncertainty is at risk (Grasso, 2019). Governmental entities, such as the Environmental Protection Agency (EPA), with contributions from nonprofits and NGOs, keep business operations in line with public expectations when seeking economic sustainability. Businesses that are successful in shifting global economies away from capitalism and resource management have reduced the burning of fossil fuels and lessened waste (Pahl-Wost, 2006). Therefore, businesses

built on environmentalism have shifted its economic impact and role in society, and this has helped them exceed financial goals, create higher market shares, and improve their impact on the community (Bain et al., 2012; Pizer, 2002).

Business development. As economic forces impact change, business development is a key component of sustainability. Leaders in some of the most prominent industries, for example, have claimed that environmental sustainability will limit economic vitality; such leaders have spent a disproportionate amount of money to evade environmental consequences rather than to adjust operations and create new market opportunities (Clarke et al., 1994; Karnani, 2010; Torres-Spelliscy, 2017; Watts, 2018). Research has shown the need for vehicle fleet greening, with acknowledgment of the rise in environmental regulations and the desire to enhance the company's image (Litman & Burwell, 2006). Negative consequences, such as rising fuel costs and shortened fuel availability, can also dictate the industries' acceptance of sustainable practices (Litman & Burwell, 2006). Centobelli, Cerchione, and Esposito (2017) have highlighted research associated with how businesses consider environmental sustainability in operations. These critical cost reductions include financial incentives, energy efficiency, and tax reliefs. Increases in sales are attributed to an increase in customer demand for sustainable services, improved customer relationships, and the ability of the company and its employees to participate in sustainability programs.

The transportation industry relies heavily on economic vitality as the shipment of goods increases when growth is strong. International trade agreements impact global deliveries that, in turn, impact local progress. Global disagreements between nations can hinder progress in international trade, therefore impacting national companies. Saka

(2019) reported that the dispute between China and the United States continues to “posture and threaten with increasing tariffs and no end in sight, this trade war will likely continue into the upcoming years with no clear winner expected, causing a potentially dramatic reshaping of the shipping and logistics industry” (para. 2). With an increased focus on government and state regulations, businesses are expected to meet basic business expectations while adhering to forces outside its control.

For example, the California Air Resources Board continues to set California’s emissions standards creating an industry shift to continue business with the state and its port (Beam, 2019). Requirements by states with large economies drive change throughout the country and accelerate the expectation that logistics providers comply. With thin margins to support operations, environmentally sustainable practices have shown economic benefits through increased fuel efficiency, incentive programs for drivers, and imploring technological advances (Centobelli et al., 2017; Colicchia et al., 2013; Litman & Burwell, 2006). In searching for trends to enhance business, the logistics industry has shown that the addition of environmental sustainability results in an economic benefit.

Corporate Social Responsibility

Corporate social responsibility (CSR) is a concept used to describe an organization’s vision that focuses on initiatives that are deemed as socially responsible in order to support society’s well-being (Lu, Ren, Zhang, Wang, Ahmed, & Streimikis, 2020). According to Aguinis (2011), CSR is “context-specific organizational action and policy that takes into account stakeholders’ expectations and the triple bottom line of economic, social, and environmental performance” (p. 855). It is suggested that, to develop an effective CSR platform, business leaders cultivate followers who are aware of

the need for corporate social responsibility “before engaging in behaviors and making critical business decisions that reflect greater social responsibility” (Groves & LaRocca, 2011, p. 515).

Businesses will typically adopt a CSR platform to address the TBL components. One type of CSR effort involves detailed attention to environmental issues. For example, in consideration of the natural environment, researchers have focused on sustainable transportation through various business topics. Litman and Burwell (2006) indicated that the transportation industry was negatively impacting social, environmental, and economic sustainability efforts through its “depletion of non-renewable sources” (p. 335). The impacts on sustainability within the three TBL components are listed in Table 1.

Table 1

Transportation Impacts on Sustainability

Economic	Social	Environmental
Traffic congestion	Inequality of Impacts	Air and Water Pollution
Mobility barriers	Mobility disadvantaged	Habitat Loss
Accident damages	Human health impacts	Hydrologic impacts
Facility costs	Community interaction	DNRR
Consumer costs	Community liveability	
DNRR	Aesthetics	

Note. DNRR is the Depletion of Non-Renewable Resources. Recreated from “Issues in Sustainable Transportation,” by T. Litman and D. Burwell, 2006, *International Journal Global Environmental Issues*, 6, p. 225. Copyright 2006 by Global Environmental Issues.

When a company focuses on environmentally sustainable transportation through an economic perspective, it is able to serve its customers and support the planet while minimizing its logistics costs (Colicchia et al., 2013). As a result, sustainability efforts should not lead to tradeoffs among the three areas; rather, a company must find long term

strategies to support all three TBL components within the logistics industry (Litman & Burwell, 2006).

Organizational Culture

Schein (1983) stated that a successful organization must have members who interact and work toward the same goal; in doing so, an organizational culture begins to form. He added that the founder creates the group, chiefly based on personality, and begins to shape the culture. Allaire and Firsirotu (1984) explored various schools of thought to examine the meaning of organizational culture and defined it as, “a particularistic system of symbols shaped by ambient society and the organization’s history, leadership and contingencies, differentially shared, used and modified by actors in the course of acting and making sense out of organizational events” (p. 216). The researchers concluded that a strong organizational culture can inform efforts within the organization in order to better navigate radical changes or other events within it.

In the late 1980s, Schein (1988) added that organizational culture was becoming more prominent as a concept in the literature, as compared to the concept of organizational climate or group norms. He indicated that an increased focus on organizational culture was occurring particularly because of an emphasis on “trying to explain why U.S. companies do not perform well” as compared to those in other countries, particularly in Japan (p. 3). In a subsequent study, Schein (1993) provided the definition of organizational culture as:

the set of basic assumptions invented, discovered or developed by a particular group, when learning how to deal with problems of external adaptation and internal integration and that has worked well enough to be considered as valid and

to be taught to new members as the correct way of perceive, think and feel in relation to these problems. (p. 12)

More recently within business settings, Costache, Popa, Dobrescu, Zaleschi Negrea, and Cotet (2018) indicated that an organizational culture can position a company to have a competitive advantage when the culture creates an “entrepreneurial type value” where respect is provided internally and externally to the organization for all individuals (p. 241). They argued that this leads to new service developments that meet consumer needs because there is “confidence and courage to take responsibility for the promotion of their own ideas” (Costache et al., 2018, p. 241). Within Costache et al.’s (2018) description of organizational culture in the business setting, the authors indicated that a specific focus on innovation and learning, along with a future-oriented focus are important for a company.

The organizational culture also influences decision-making among its leaders. For example, Marchisotti, Almeida, and Domingos (2018) found that this influence occurs by (a) having leaders act from rules and standards that have been set by the company, while (b) using existing support tools in making decisions, and (c) learning from relationships with peers. These relationships can be from the past or present, but the learning through relationships is considered “one of the strongest mechanisms of how the influence of the organizational culture in the decision-making of a certain company works” (Marchisotti et al., 2018, p. 20). In this regard, the organizational culture’s influence on decision-making occurs because those in top-level leadership positions observe and learn from their peers; this is used to then inform ongoing behavior. Susca (2019) similarly indicated

that the culture can influence all elements of an organization but more so can influence decision-making.

Hosseini, Hajipour, Kaffashpoor, and Darikandeh (2020) found that the leader can have a positive, significant effect on organizational culture. However, in examining companies that have engaged in large-scale fraud or other forms of corporate misbehaviors, Contreras, Dey, and Hill (2020) found that senior leaders can create a certain tone that will dilute or counter existing values, creating negative company effects. For example, when focused on companies that have conducted large-scale fraud, Susca (2019) indicated, while culture may be difficult to measure, it is also “closely personal to a leader’s sense of duty” (p. 24), so it can become challenging to discuss culture with others in the organization. However, when individuals are asked to discuss what prevents success at the organization, they will likely provide information that is focused on the organizational culture (Susca, 2019).

Farrell (2018) highlighted that, “it is the reluctance to change or adapt that points to the culture as an explanation of why individuals are holding back or unable to move in a new direction” (p. 864). This understanding of culture and its implications on change becomes vital for companies that strive to create change that supports environmental sustainability. Orazalin (2019) affirmed that modern businesses face growing demands to engage in sustainability through corporate environmental activities, and companies seem to be more motivated to integrate strategies or environmental sustainability. Uniquely, Orazalin (2019) found that financial capacity or the company’s total assets have a positive impact on sustainability performance. They acknowledged that these types of

companies may face greater societal pressure and, as a result, implement company incentives or practices that align with environmental sustainability.

The way in which companies face environmental sustainability pressures can often derive from basic awareness through informed stakeholders, such as its consumers and employees, and they can take action against companies they find environmentally irresponsible (Chen, Lin, Lin, Hung, Chang, & Huang, 2020). However, when an organization strives to become environmentally sustainable, core values become critical within the organizational culture because employees can identify with the company and help to effectively respond to this need.

Organizational Core Values

Allaire and Firsirotu (1984) stated that organizational cultures use some “*basic values from the society from which they emerge*” (p. 211, emphasis in original). The organization is able to use values as a *meaning-structure* of circumstances through various degrees of interactions, beliefs, and behaviors that are shared among its members. Value structures are derived from three components. The first is the organization’s history, then different situations or actions are established by dominant leaders, and finally, the members “make interpretations and sense-making of ongoing actions and interactions” (Allaire & Firsirotu, 1984, p. 208).

Values are foundational to the organizational culture. Indeed, if a company uses the values to guide the direction, like a compass within the company, the leaders must ensure that there is a minimal deviation from the established culture, which can occur if the leader inconsistently exhibits the values. Organizational values allow addresses individuals to function through shared assumptions that serve to support learning and

expansion of efforts at the individual and company levels (Schein, 1988). The shared assumptions, in turn, also serve to reduce feelings of anxiety and concern among its members (Schein, 1988). As concern is lessened among employees, an increase in organizational commitment can occur; then, “higher levels of commitment are associated with general feelings of goodness towards and within an organization” (Levine, Carmody, & Silk, 2019, p. 132). Altogether, these experiences and forms of shared assumptions relate to the core values of the organization and define the organizational culture (Levine et al., 2019). Thus, the core values guide actions and behaviors within the organization, and the values of the individual are often very similar to the values of the organization (Levine et al., 2019).

Jaskyte (2010) affirmed that core values are essential to the organization’s identity and its survival. While there are numerous ways in which values can be categorized or detailed, Jaskyte (2010) shared several dimensions of existing organizational values, including a team orientation, respect, employee involvement, stability, innovation, and results- or mission-driven.

In establishing core values, a leader’s role is important. Specifically, “if employees believe in leaders and what they are doing and if leaders’ directed behaviors result in desired results, the employees will come to share the leader’s beliefs and use them as criteria for future action” (Jaskyte, 2010, p. 427). In this effort, the leader can choose what values get reinforced, which influences the ongoing development of the organizational culture that is being established. For example, with a focus on innovation or a people orientation, Jaskyte’s (2010) results suggested that organizations with higher

levels of cultural consensus had leaders who focused on opportunities, collaboration, celebrating successes, and supporting others.

While values can be reinforced by a leader to create the organizational culture, competing values can exist. Denison and Spreitzer (1991) developed a framework showing that competing values play a role in the organization when conflicts occur between stability and change or the internal organization and its external environment. The framework for competing values details that certain cultures need to have certain values, and that there can be opposite types of cultures with largely varying values. To illustrate, Denison and Spreitzer indicated that a culture that is based on the whole group might emphasize flexibility and have an internal focus; whereas, an opposing culture that is based on being rational, might emphasize having control and maintaining an external focus.

Denison and Spreitzer (1991) argued that cultures can have parallel (or matching) values and they can have competing values, but ideal values do exist to fit a specific organizational culture. For example, Ogwuche, Urama, and Nyam (2019) found that the value of justice or fairness provides employees with certain opportunities such as development and promotion options; when employees know this is valued within the organization, they improve their job performance, so the company's performance is also improved. Mahfouz and Muhumed (2020) found that there does not need to be a preference for certain values, but when the values align with whatever type of organizational culture is desired, a business is able to reap positive financial benefits.

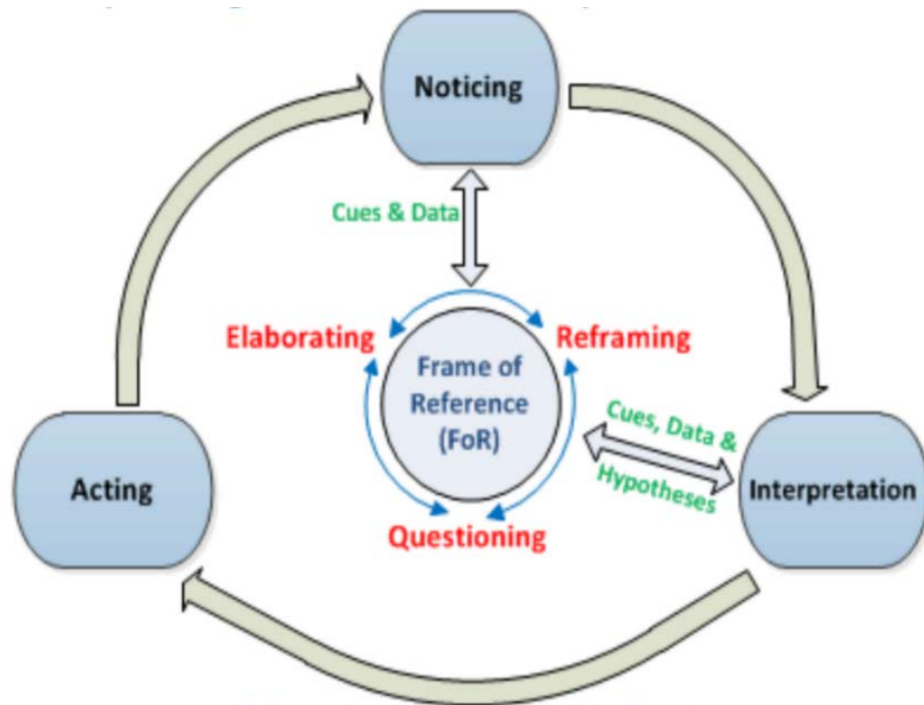
Sensemaking Theory

Sensemaking provides an individual perspective on how the world works and how decisions are interpreted. Sensemaking concepts were initialized by Garfinkel (1967) and Polanyi (1967) to support interactions and interpretations of reality (Maitlis & Christianson, 2014). The application of sensemaking theory within organizations was introduced by Karl Weick in 1969. Through the decades, Weick (1995) indicated that sensemaking serves to acknowledge ambiguity and interpret a complex situation coupled with uncertainty. “When faced with chaos, people look for some explanation to resume what they were doing before the disruption, such as various institutional pressures, organizational norms and values and a range of traditionally accepted ways of looking at the world” (Angus-Leppan, Metcalf, & Benn, 2010, p. 192).

In 1995, Weick described sensemaking as “grounded in both individual and social activity” (p. 6). Weick’s work continued to focus on the role individuals have in sensemaking and the need for the individual to define relationships between meaning, action, and context. This explanation of meaning, action, and context is further defined by their “values, priorities, and clarity about preferences” when an individual is overwhelmed (Weick, 1995, p. 27). Sensemaking is needed when the “world becomes unintelligible in some way” (Ancona, 2011, p. 4). During times of uncertainty, leaders are expected to have “emotional intelligence, self-awareness, the ability to deal with cognitive complexity, and the flexibility to go between the ‘what is’ of sensemaking and the what can be ‘of visioning’” (Ancona, 2011, p. 5). Removal of preconceived notions, labels, and stereotypes through sensemaking generates new, innovative, and sustainable solutions to solve complex problems.

The Sensemaking Model

Sensemaking is often referred to as a “fundamentally social process,” where a group of individuals begins to understand the environment through interactions, processes, and consensus (Maitlis, 2005, p. 21). Given that sensemaking is often triggered by changes in the external environment, the process begins when individuals notice and bracket information about the situation (Lycett & Marshan, 2016; Weick, Sutcliffe, & Obstfeld, 2005). These efforts lead to the development of a mental model or frame of reference that had been acquired through “work, training, and life experience” (Weick, Sutcliffe, & Obstfeld, 2005, p. 411). The discrepancy between the incoming information about the situation and existing mental models prompts questions. Once sensemaking questions are formulated for a particular situation, interpretation through postulation takes effect. To support this step, a frame is created around ongoing dynamics of reflection, elaboration of the theory, and reframing (Lycett & Marshan, 2016). Successful use of sensemaking will lead to the final action stage. This step is best executed through organized patterns where communication in the organization extends from tacit knowledge into an explicit understanding of the situation (Weick, Sutcliffe, & Obstfeld, 2005). The three stages by Weick (1995) were recently adapted by Lycett & Marshan (2016) through their conceptual sensemaking model (Figure 5).



*Figure 5. Conceptual Sensemaking Model. Reprinted from “Capturing Sensemaking Pattern during Data Analysis: A Conceptual Framework,” by M. Lycett and A. Marshan, 2016, *Information Systems Development: Complexity in Information Systems Development (ISD2016 Proceedings)*, p. 111.*

This process model includes the interaction between stages, as information and decisions flow after awareness. Interpretation spans in two directions simultaneously since it mediates the translation of cues, data, and hypotheses, as well as the interpretation of the acts associated with the event (Weick, 1995). This sequence is rudimentary “because it omits feedback loops, simultaneous processing, and the fact that over time, some steps might drop out” and that allows for additional interpretation when needed (Weick, 1995, p. 18). Furthermore, while objectivity is key to interpreting the individual perspective, it involves interpretations of “political interests, consequences, coercion, persuasion, and rhetoric” (Weick, 1995, p. 7).

There are seven properties of sensemaking: “identity, retrospect, enactment, social, ongoing, extracted cues, and plausibility” (Weick, 1995, p. 61). A person’s identity is defined by “who we think we are (identity)...shapes what we enact and how we interpret, which affects what outsiders think we are (image) and how they treat us, which stabilizes or destabilizes our identity” (Weick, Sutcliffe, & Obstfeld, 2005, p. 416). Identity involves a person’s experiences as well as their questions about who they are. Retrospect is enacted when the person learns what they think and can reflect on what was experienced or previously said. Enactment is when the person recreates the action, object, or experience; this enactment can also be reflected in how a person speaks, the conclusions that are determined by socialization from the audience, those engaged with the person, and the person themselves. Ongoing is the fifth property of sensemaking; this has to do with time and the expectation that there is competition “for attention with other ongoing projects, and is reflected on after it is finished, which means [the person’s] interests may already have changed” (Weick, 1995, p. 62). The focus on extracted cues become noticeable through “context and personal dispositions” based on “the what that [is] singled out and embellish[ed]” (Weick, 1995, p. 62). Finally, plausibility allows the person to gather enough information “to get on with [their] projects, but no more, which means sufficiency and plausibility takes precedence over accuracy” (Weick, 1995, p. 62). Generally, the seven properties of sensemaking ask, “how can I know what I think until I see what I say?” (Weick, 1995, p. 61).

Weick (1995) also noted that “everyday sensemaking and organizational sensemaking are not identical” (p. 63) as stories create frames, ideologies, paradigms, and traditions that differ between the context of regular encounters and distinct events.

Individuals describe their ideology through examples and patterns that support their beliefs. These stories illustrate how frames create the substance that makes sensemaking more meaningful as small cues come into focus. Overall, sensemaking seeks to understand “how people cope with interruptions” and how the individual interactions are then communicated to the larger community (Weick, 1995, p. 5). Then, according to Kahlbaugh (1993), “the large community generalizes these ideas such that they become part of the culture” (p. 80).

Sensemaking and Case Study Research

Numerous case studies have generated legitimacy for the sensemaking model. These studies have enhanced the theories of sensemaking and the “future direction” of the seven associated properties. Sensemaking has been interpreted through institutional theory, distributed sensemaking, power and sensemaking, and emotion and sensemaking (Weick, Sutcliffe, & Obstfeld, 2005). Case studies have sought to understand the meaning behind specific questions related to the inner workings of the organization.

The sensemaking model is often used when researching chaotic events. Maitlis and Christianson (2014) reported on the strategic outcomes of social dynamics described within an organization and its leader’s success to motivate individual action toward organizational goals. Stieglitz, Mirbabaie, and Milde (2018) analyzed the social positions on the social media platform, Twitter, after two events in 2016 – the Brussels terrorist attacks and the Munich rampage. In both case studies, social media behavior was monitored, and it was found that collective sensemaking was not a homogenous process but, instead, divided into two subforms: (a) how sensemaking was guided and (b) the evaluation and post-development of sensemaking. Overall, this showed a “fundamental

reflection of the new challenges of social media crisis communication” and the evolution of how individual social positions affect the collective sensemaking process (Stieglitz, Mirbabaie, & Milde, 2018, p. 18).

Sensemaking has also been used to examine the shared beliefs among members of organizations through organized and meaningful action (Weick, Sutcliffe, & Obstfeld, 2005). For example, Schultz and Wehmeier (2010) used sensemaking at a Swedish, state-owned energy company to understand the meaning behind the institutionalization of a corporate social responsibility program. Competition, regulative norms, professional norms, and public pressure were examined to bring meaning to communication within the corporate culture. Through sensemaking, Schultz and Wehmeier identified communication strategies through a “horizon of indeterminacy and contingency” (p. 20). Their findings suggest a need to cope with “complex and conflicting demands” and create sympathetic demands on “moral communication, dialogue, and trust” (p. 20-22).

Included in the shared beliefs, emotion plays an important role in sensemaking. Steigenberger (2015) found emotions to be both inputs and outcomes of sensemaking. Anger, as a strong emotion on one side of the spectrum, is an emotion that creates a “strong impetus for action, caus[ing] sense-makers to become engaged and motivated” (Steigenberger, 2015, p. 445). Hope, on another side of the emotion spectrum, is described through sensemaking as a “low-effort emotion,” lessening “motivations to act” (Steigenberger, 2015, p. 445). Emotional states are also shown in the achievement of organizational goals, Berscheid & Ammazzalorso (2003) concluded that enclosing the proximity to superficial colleagues has been shown to “move [employees] toward closeness by becoming increasingly dependent on each other’s activities for the

performance of their daily behavioral routines and the fulfillment of their plans and goals” (p. 317).

Employees’ sensemaking was described as a social, communicative process and was further examined during a major organizational transformation. Bean and Eisenberg (2016) found that workplace boundaries in nomadic work “reflect social, technological, and workplace trends” through three primary frames, identity, culture, or structure (p. 210). Through a historical perspective, the employees at the organization interpreted relationships through “the employee and changing internal (financial and power) social structures” (Bean & Eisenberg, 2016, p. 218). Overall, the findings suggested that “employees used sensemaking to work out the tensions between social action and the systemic realities of organizational life” (Bean & Eisenberg, 2016, p. 210).

As the sensemaking process explores “our changing world through multiple kinds and sources of data, selecting new frameworks and new interpretations to form new maps and mental models” means resilience to external forces is needed to “better our understanding and achieve more desirable outcomes” (Ancona, 2011, p. 11). As described by Weick (2005), crises and momentous events also invoke individual perspectives of sensemaking within case study research. Sensemaking is vital to the pursuit of answers behind motivation and action within an organization. The climate crisis combines the concepts of the seven distinguishing properties in the understanding, interpreting, and attribution, “perceived environmental uncertainty” (Weick, 1995, p. 86), and the emotional response associated with disruptions to the movement (Weick, 1995).

Summary

The TBL approach is used by businesses to focus on its operations, and through the societal, environmental, and economically sustainable actions, a business can address its long-term business viability. The TBL components represent company actions in implementing corporate social responsibility. The leaders' continued improvement toward an organization's culture is paramount in support of employees to enhance the established goals. The establishment of core values is essential to the success of the company, ensuring acceptance at all levels. Through sensemaking, the seven properties provide context to how individuals value and understand experiences and crises. Therefore, sensemaking becomes a critical lens as it establishes an individual's perspective toward the TBL components and an organizations behavior and values.

CHAPTER THREE: METHODOLOGY

The purpose of this study was to explore how a single company with a high fossil fuel use adapts to the components of social, environmental, and economic sustainability. A qualitative, single case study methodology was used, and the theoretical framework used was sensemaking. The research question that guided this study was, How and why did ITS Logistics, a company with a high fossil fuel use, adopt sustainability as a core value? This chapter focuses on the methods used to support the research question for this study and is organized by: (a) research design, (b) the case, (c) data sources, (d) data collection, (e) data analysis, (f) researcher experience and stance, and (g) summary.

Research Design

A qualitative single case study design was used in this study. A single case study describes an authentic phenomenon that is taking place (Yin, 2013). Qualitative case studies answer *how* and *why* questions to understand the behavior of those involved and information that is relevant to the study (Baxter & Jack, 2008). Through a constructivist paradigm, the truth is relative and dependent on a person's perspective (Baxter & Jack, 2008). A constructivist paradigm "recognizes the importance of the subjective human creation of meaning" as well as includes "some notion of objectivity" (Miller & Crabtree, 1999, p. 10). The descriptive case study approach allowed the collection of data from several sources (Woods & Catanzaro 1988).

Creswell (2013) highlighted that the use of a case study design "explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information... and reports a case description and case themes" (p. 97). For this study, the

bounded system was the company, ITS Logistics. The use of a single case study “makes the writer have a deeper understanding of the exploring subject” (Gustafsson, 2017, p. 11). Consequently, the use of this methodology provided an opportunity to better understand how the leaders and employees of ITS Logistics made sense of environmental sustainability as a core values at the company. This single case study design supported a “real-life example of a company” to detail the participants’ understanding at the company in relation to environmental sustainability (Farquhar, 2012, p. 5). A single case study approach provided support to integrate variable and complex information through proper interpretation (Boblin, Ireland, Kirkpatrick, & Robertson, 2013).

The Case

Since 1999, ITS Logistics has been a third-party logistics (3PL) provider on the west coast of the United States. Specifically, ITS Logistics provides supply chain management to businesses seeking to outsource elements of fleet services, fulfillment services, and complete transportation management. Through these three logistics channels, the company is the intermediary between the raw material supplier, the manufacturer, and the retailer. Headquartered in Sparks, Nevada, business operations present the company as offering highly customizable solutions to reduce the cost to its clients and increase on-time delivery, accuracy, and supply chain visibility (ITS Logistics, n.d.).

ITS Logistics has over 530 employees to support the range of services. At the time of the study, 42 employees were in management or executive positions, 125 staff members supported the integrated national capacity division, and 405 staff members supported their dedicated fleet services, distribution services, and were truck drivers.

Temporary employees from outside staffing agencies accounted for an additional 50 employees and doubled in size during the peak holiday season. As the company continues to expand, ITS Logistics anticipates bringing in revenues well over \$260 million in 2020 (ITS Logistics, n.d.). The transportation management division has brought in \$200 million of that total amount. ITS Logistics uses industry-leading systems to ship goods for companies such as Wal-Mart, CLIF Bar, DHL, Amazon, Starbucks, Sherwin Williams, Tesla, Porsche, and Mercedes Benz. The company's purpose is to "improve the quality of life by delivering excellence in everything we do" (ITS Logistics, n.d., para. 1).

ITS Logistics ships to 11 western states, with additional dedicated fleet service hubs in seven locations in the Pacific Northwest, Northern California, Southern California, and Arizona. The seven fleet hubs are terminals staffed with managers and hourly employees to support drivers and their shipments. The Sparks, Nevada location houses the corporate division with executive leadership, dedicated fleet services, and distribution services. Additionally, terminal operations, warehouse operations, finance, marketing, sales, and customer service offices all are located at the Sparks, Nevada location. The Reno, Nevada location houses the integrated national capacity division, which supports transportation management of carriers across the United States, Mexico, and Canada.

The company uses 10 core values to guide their work: Safety First, Integrity, Respect, Teamwork, Compassion, Quality, Continuous Improvement, Having Fun, Results, and Sustainability. Each core value is associated with a picture and brief description on the company's website, marketing materials, and printed displays throughout the company locations.

In its pursuit of becoming environmentally sustainable, ITS Logistics, boasts a modern fleet of trucks with an average of fewer than two years and trailers with an average of fewer than three years. Overall, ITS Logistics' marketing materials showcase the company as an industry leader in average miles per gallon driven and successful greenhouse gas initiatives (ITS Logistics, n.d.). Their newly-renovated Sparks and Reno, Nevada locations are equipped with LED lighting, motion sensors, skylights, 100% low-flow plumbing, air circulation systems, and xeriscaping. Additionally, a multi-faceted recycling program is available at all locations.

Data Sources

Three sources of data were collected and analyzed for this study. The first source of data was existing documents. The second data source was observations in the northern Nevada offices. The third data source was semi-structured interviews with executive leaders, directors, managers, hourly staff, and truck drivers. Each is discussed in further detail, below.

Documents

The first data source included publicly available documents. Documents were used to gain a general understanding of the formal aspects of the company. Company documents included its mission, scope of work, and sales information. Documents from competitors were also used to support and clarify data from the observations and interviews. These reports helped determine the economic forces that drive decisions at the company and support data collected during observations and interviews. Annual reports from competitors on their website included environmental reports, standards, and agreements. Other documentation included public information on federal and state

legislation and regulations on the industry. Transportation magazines were also obtained for information on pertinent issues and to understand leadership in the industry.

Observations

Observations took place at ITS Logistics in the Sparks and Reno, Nevada operations, as they were the locations of the company headquarters, warehouse, fleet services, and transportation management divisions. The northern Nevada locations provided the best outlet to view the company's total operation. Observations focused on daily activities in November 2019, the company's busiest time of year. This enhanced the opportunity to observe a diverse range of company operations, activities, and employee participation in daily tasks. The three-day observation schedule was set by the Director of Marketing and included:

- The fleet office, including terminal and driver operations.
- Corporate office, including executive leadership, finance, marketing, and sales.
- Distribution center, including office, warehouse operations, and customer service.
- Integrated National Capacity office, including management, sales, and customer service operations.

Field notes were written after observing the sequence and flow of daily operations.

Interviews

Face-to-face, semi-structured interviews were conducted. Following researcher recommendations (e.g., Bass, 1990; Hammersley, 2008; Moran-Ellis et al., 2006; Wolcott, 2009), three levels of employees were interviewed: (a) executive leadership, (b) managers, and (c) hourly employees and drivers.

Participants. Participants included three executive leaders, three directors, four managers, three hourly employees, and one truck driver. One employee, a warehouse floor leader, started her career at ITS Logistics two weeks prior to the interview. Due to her short tenure at the company, she was excluded from the findings. Executives were selected based on the division they oversaw at the company. Additional interviewees outside the executive and director level were selected by the Director of Marketing, as well as randomly by the researcher. The participants are described below. Because of the public availability of their names in association with their unique roles in the company, executives agreed to have their names used in this study. All other individuals are referenced by their position in the company.

- Scott Pruneau, Chief Executive Officer (CEO), started his career in the logistics industry 26 years ago. Scott worked his way through asset management and warehouse operations in previous roles. Starting as the Chief Commercial Officer and Executive Vice President, Scott transitioned to CEO in 2019.
- Mike Crawford, President of Integrated National Capacity, started his career at ITS Logistics in 2011 in the asset management division. Mike created the Integrated National Capacity brokerage division, building it into a division with 150 employees and \$200 million in sales per year.
- Ryan Martin, President of Distribution Services, completed his business degree from the University of Nevada, Reno. Majoring in logistics, Ryan spent two decades managing large retail operations in Northern Nevada, and throughout the United States. He began his career at ITS Logistics in 2017.

- Patrick McFarland, Director of Marketing, started his career after graduating from the University of Nevada, Reno. With two decades of marketing experience in Northern Nevada, Patrick joined ITS Logistics in 2015 to manage its internal and external brand.
- Paul Brashier, Director of Intermodal, began his career in distribution and logistics almost two decades ago. In 2014, Paul joined ITS Logistics as the Director of Training and Recruiting to formalize all recruiting and training processes. As the division grew, Paul became the Director of Operations in 2016 before settling into his current role in 2018.
- Molly Campau, the Director of Recruiting and Training, started her career in the supply chain transportation industry in 2009. She has worked mostly in sales within that industry until 2017 when she transitioned to training and recruiting for the Integrated National Capacity division.
- Manager #1 is a warehouse area manager who began his career at ITS Logistics in 2017, after previous warehouse experience out of state. His role supports warehouse operations, including billing, for almost 40 customers needing warehouse services.
- Manager #2 began as a sales and executive assistant at ITS Logistics in 2012. After a few years in that role, she moved into a management position under fleet operations overseeing customer service. After creating new processes for the department, she transitioned to the sales department as the operations manager.
- Manager #3 is an asset manager who began his career at ITS Logistics in 2018 with nine years of experience in the truck leasing industry. At the time of the

study, he oversaw 700 pieces of equipment used strictly by ITS Logistics as a dedicated fleet service to transport goods.

- Manager #4 began his career at ITS Logistics as a Logistics Sales Executive in 2017. After several promotions within the Integrated National Capacity division, he served as the expedited manager in the intermodal department at the time of his interview.
- Employee #1 is a warehouse lead who started his career at ITS Logistics in 2016. He worked his way up from unloading carriers, to being a certified picker. At the time of his interview, he was overseeing teams on the warehouse floor.
- Employee #2 started her career at ITS Logistics as a temporary worker and applied for a permanent position when one became available. She was hired on in the customer service department in 2018. As a customer service representative, she creates contracts and maintains relationships with companies seeking dedicated trucking needs.
- Employee #3 is a senior logistics sales executive (LSE) in the Integrated National Capacity division. In 2017, she began as an account executive focusing on sales, then moved to support procurement. She has worked with multiple large customers with her promotion into the LSE role.
- Truck Driver #1 started his driving career 30 years ago. As a third-generation truck driver, he joined ITS Logistics in 2006. His routes consist of local deliveries throughout the Reno/Sparks area.

Interview questions. Interview questions were designed to facilitate discussion with executives, managers, hourly employees, and truck drivers. Two sets of questions

were developed for the semi-structured interview. The first set of questions was for executives and managers, and the second set was for hourly employees and the truck driver.

All questions were developed to reflect the current state of business operations and touch on emergent environmental topics. The questions allowed participants to indicate what they found valuable about the company. Executive leaders and managers were asked to describe the company values in relation to their work and leadership. Leaders were also asked about the future of ITS Logistics, how they measure success, and the reasons for adopting sustainability as a core value. The question for the executives and managers are found in Appendix A.

Hourly employees and the truck driver were asked to reflect their views of leadership and operations from their lenses. Understanding their views of success and improvement, along with their perceptions of the company and workplace culture helped uncover more about ITS Logistics' core values and sustainability efforts. Questions were designed to promote a general understanding of viability, with consideration for leadership, influence, and strategic decision-making. Additional questions were asked to clarify the role environmental sustainability has had on daily operations at ITS Logistics. The questions are provided in Appendix B.

Data Collection

Data collection occurred under the auspices of the University of Nevada, Reno's Institutional Review Board (IRB). Upon IRB approval (Appendix F), data were collected in an open-ended, exploratory manner appropriate to case study methodology. With a focus on naturally occurring events and socially constructed processes, the method

supported “the exploratory stages of theory development” (Angus-Leppan et al., 2010, p. 196). Participants verbally consented to their voluntary willingness to participate, disclosure of their identity (executives only), and how data would be shared. Participants were able to stop the interview at any time and withdraw their participation in the study.

Documents

Publically available documents from the ITS Logistics website, competitor websites, and industry news available online and in print were collected to gain a general understanding of the organization and clarify operations. Documents publically available online through the Environmental Protection Agency and California Air Resources Board were collected. Additional documents, such as sales presentations, marketing information, and company figures were obtained from the Director of Marketing.

Observations

Observations occurred in November 2019, during the company’s peak season, in both northern Nevada locations. Observations consisted of normal job duties with no interaction with employees. Observations occurred at different times on different days over two weeks. The researcher wrote and stored field notes on a ReMarkable tablet. Field notes synced to the researcher’s desktop application for backup. Field notes were stored on a password-protected desktop computer.

Interviews

Under the support of the Director of Marketing, the researcher was introduced to specific executive leaders and communication was conducted in-person and through email (Appendix C). The researcher contacted managers through email and in-person. Hourly employees and the truck driver were asked to participate in-person (Appendix D).

Using an information sheet (Appendix E), the researcher explained the purpose of the research project, the format for interviewing, and the ability to withdraw from the research at any time to each participant. After the initial contact, interviews with executives were scheduled at dates and times of their convenience. Interviews occurred November 2019 and in January 2020 after the company's peak season had ended. Interviews occurred in the participant's private office or a secured conference room at the company's locations in either Sparks or Reno, Nevada. Once individuals in each category agreed to participate in the study, recruitment ceased.

All communication with participants was conducted one-on-one to protect their privacy. The length of time for the semi-structured interviews ranged from 10 minutes to one hour and 15 minutes per participant. Additional questions were asked, depending on the pace of the interview or the need for further clarification and prompting. Memos after each interview were written to acknowledge tone, body language, and setting of the interview during questioning. Executives were interviewed first, followed by managers, hourly employees, and the truck driver. The researcher used a professional manner, asked questions with a neutral tone, and rephrased questions for clarification when the question was unclear to the participant. The researcher did not interject feelings, thoughts, or counter-arguments in the interview to give participants full control over the interview (Groenewald, 2004). Setting the correct tone in the interview enhanced the respect and credibility of the data collection process.

Throughout the interviews, questions and responses were recorded through the Voice Recorder application on the researcher's laptop, as well as through the Otter.ai application on the researcher's cell phone. Both items recorded the entire interview in

case an application failed during the interview. Audio recordings were then transcribed, verbatim, through the Otter.ai program and reviewed by the researcher, in full, for transcription accuracy. Once the audio recordings were transcribed, they were kept in the original form on the researcher's desktop and stored digitally in a secure location.

Data Analysis

The order of the data collection process was important in supporting the data analysis efforts. Document analysis occurred in two phases. The first phase was completed by reviewing websites and highlighting important information. The purpose of this initial analysis was to gain a broad understanding of the company, including its mission, scope of work, sales information, and operations. During the second phase, documents collected after the observations and interviews were examined. During this second phase, the researcher clarified information found during observations and interviews. The field notes described daily settings and experiences. This provided an understanding of how the company operated during peak times with rich descriptions to support the case study.

Data analysis of the transcripts for the 14 interviews was conducted in two phases. In the first phase, transcriptions and memos were read to better understand the content provided and the role and background of each participant. This first phase provided a holistic view of the data. In the second phase, a priori coding was used to segment the data. A priori coding established codes as a template to analyze the data as a "tool for framing data into coherent construct" (Blair, 2015, p. 17). A priori coding was used to separate key concepts throughout the transcripts. Transcripts were printed, read, and highlighted with five codes: (a) the TBL components of social, environmental, and

economic sustainability; (b) leadership; (c) core values; (d) economics and growth; and (e) work style and empowerment. Data from the printed transcripts were then cross-referenced with the electronic copies and highlighted areas were separated into separate documents under the five codes. Keywords, concepts, and explanations helped determine how the themes were identified. Specific interview questions were asked to identify core values, culture, and sustainability, leading to a clear analysis of those codes. The identified core values, as indicated by the interviews, were tallied by hand for each executive leader, director, and manager. The top three core values were determined from that list. Data signifying core value concepts were also found through keywords identified in how the core values were described. Content discussed during the interviews were categorized to reflect how environmentally sustainable practices were discussed and what, if any, outside influences (i.e., customers, suppliers, regulations, economy, policy, and community) impacted operations.

Researcher Background

As the researcher of this study, environmental concerns were a family topic growing up. As a native to Lake Tahoe, one of the most pristine lakes in the world, support for pro-environmental behavior became second nature. After the completion of my Bachelor of Science in Business Administration/Entrepreneurship, I started an outdoor equipment company committed to building products that closed the loop in manufacturing and created less waste. Throughout my Master of Business Administration studies, I researched sustainable actions that industries could employ to remain viable in an environmentally conscious culture. To take action and address the business's relationship to global climate change, I began to advocate for environmental policy and

regulations during political campaigns, as well as, attending national climate change training sessions.

For over a decade, I have built an expertise in environmental sustainability with a focus on business operations. My current employment in the College of Business at the University of Nevada, Reno supports that business lens and aids in the research with the major trucking company. Potential research bias may exist if considering the validity of climate change. However, I have established the context for why global climate change is an issue and only seeks to examine sensemaking principles related to environmental sustainability within the unique company, ITS Logistics.

Summary

This section focused on the methodology and design used to support this study. The primary research question, along with details of the processes that were carried out in this study were presented. Therefore, the research design, efforts to attain data sources, and the process that were used to analyze the data were shared. Lastly, this chapter provided information about the researcher who conducted the qualitative single case study. Chapter Four presents the case (findings), while Chapter Five provides a discussion of the key findings of the case, recommendations, and conclusions.

CHAPTER FOUR: FINDINGS

The purpose of this case study was to explore how a single company with a high fossil fuel has adapted to the triple bottom line components of social, environmental, and economic sustainability. The research question that guided this study was, How and why did ITS Logistics, a company with a high fossil fuel use, adopt sustainability as a core value? Data sources that were analyzed to support these findings included publicly available documents, observations, and interviews. Interviews were conducted with 14 individuals, three executives, three directors, four managers, three employees, and one truck driver.

This chapter is divided into two primary sections. The first section describes the (hi)story of ITS Logistics with a focus on its founding and two subthemes. The first subtheme is centered on economic sustainability and growth. The second subtheme is on social sustainability at ITS Logistics. The next section of this chapter focuses on the company's organizational culture and core values at ITS Logistics, specifically those that were most remarked by participants.

The (Hi)Story of ITS Logistics

The founding and growth of ITS Logistics was described in each interview, regardless of employee status, length of time at the company, or the division they worked in. According to documents located online, the company was founded by three individuals in 1999. At the time of its founding, the company had one dedicated customer, two trucks, and 40,000 square feet of warehouse space. Within a few years, the company added warehouse space, additional trucks, and took on new clients. In 2012, the founders expanded ITS Logistics offerings to include the Integrated National Capacity

division. During the next five years, the company partnered with investors, McNally Capital and Coughlin Capital, to enhance growth with the expansion in space and employees (ITS Logistics, n.d., para. 7).

In terms of founding leadership, Jeff Lynch, as one of the three founders, transitioned from CEO to board member during the second quarter of 2017. Darryl Bader and Dan Allen, the other two founders, transitioned from executive leadership to board members in the first quarter of 2018. Dan Allen returned as interim CEO August 2018 through December 2018, until Scott Pruneau was promoted to CEO in January of 2019. The three founders are currently active on various committees in the company. As of late 2018 and early 2019, ITS Logistics' continued growth led to investments in technology, a full fleet presence in Southern California, and recognition as the 44th top freight brokerage division in Transport Topics Top 50 Freight Brokerage list. In the second quarter of 2018, the company's core values were assessed and sustainability was added as the 10th core value. Supported by company documents, interviews consistently focused on the long term sustainability of the company. Two of the TBL components, economic sustainability and social sustainability, were in strong evidence.

Economic Sustainability and Growth

Growth was reported to be a longstanding goal put in place by the three founders of ITS Logistics. Each participant highlighted growth and employee success when considering the long term goals and the potential change in culture, physical size, employees, and revenue. Growth was also described by the participants through industry shifts. When describing where interviewees saw the company in five years, a sense of

pride, admiration, and optimism were present throughout the interviews, especially from senior leadership.

The founding principles and guiding values appeared to have created opportunities for growth and prompted significant changes in how ITS Logistics executives led the company's three divisions. With two decades of business in northern Nevada, ITS Logistics has grown not only through profits but the hiring and development of its people. Growth was discussed in the interviews through the expansion of national shipping, the incorporation of global goods, and the acquisition of warehouse space. Participants spoke of the opportunities and struggles presented by growth. When executives and managers were asked where they saw ITS Logistics in five years, all responded with a variation of growth based on their division and role. Ryan, President of Distribution Services, discussed that growth was a must in the next five years, "for distribution, if we're not outside of Reno I'll be pretty disappointed in myself." Many participants added a specific goal to the five-year mark, stating that ITS Logistics will be a billion-dollar company.

Imbedded in the same feeling that growth must be part of ITS Logistics, executives saw challenges executing that transformation. Many indicated that ITS Logistics had the right leadership to put expansion in place. However, Ryan shared that leadership was not going to "just plop up a building and move on to the next. We want to be ingrained as much as we can within the community, build up our fleet services, really create a presence within the communities that we service." The infrastructure needed to support change outside of northern Nevada was described as a struggle due to the nature of the logistics industry and its role in the U.S. economy. Paul commented on how the

varying factors outside the company's control could very well determine their growth, "it's going to depend on what the economy does overall. Right? Because we are closely aligned with the ups and downs in the economy." Even with a future so closely tied to the economy, politics, and consumer behavior, each person interviewed exhibited confidence that their role at the company could only get better with growth. Manager #2 remarked that organic growth may support development separate from the whims of the market,

You know, a billion dollars may be shooting for the stars, but I absolutely feel that we have the people in the right places to make that happen. You know, and we, we kind of joke, freight breeds freight. You know, business breeds business. We're really, really fortunate to have a lot of organic growth within our clientele. So if we continue that organic growth within our clientele we can be that premier provider and, you know, tip the scales on that billion-dollar company.

The nature of the logistics industry and the volatility of the economy were discussed as a way for the company to adapt, create new markets, and produce a competitive advantage. The federal and state government's role in ITS Logistics' organizational strategy was shared by Patrick, Paul, and Manager #3. Paul shared outside factors and influences,

The biggest one's legislation. There's a lot of laws that go into place at either federal or state level that we have to navigate. And that directly affects us in real-time. So, you know, take for instance AB5 that just went to the California legislature. That has a big impact on the folks that we contract out the work for us. Anytime that the Department of Transportation in DC implements e-logs or hours of service requirements or clean, you know, truck requirements, that affects us.

Not just financially, but how we vet and operate daily. Right, so it affects the staff, it affects our planning, it affects what we do because we are a company that complies to those. And we're not trying to get a bunch of lawyers up in here, find a way to finagle and get out of that compliance as well.

Regarding compliance with standards and industry practices, Truck Driver #1 shared, "ITS doesn't shy away from that." However, the "trifecta of trying to manage a lot of different areas at once and still provide your customers with good service" was a concern Manager #3 felt when wading through the prospects of growth with increasing regulations and heightened economic challenges facing the transportation industry. Manager #2 continued, "and as the economy shrinks, the transportation industry feels it first." Molly added that the dynamic, ever-changing logistics industry reiterates the trepidations ITS Logistics has when considering growth, economic vitality, and meeting environmental compliance.

Social Sustainability

Whereas economic sustainability and growth were portrayed as fundamental to the viability of the company, social sustainability was reported as the primary means to achieve the company's long-term goals. Leadership was a key theme when participants discussed strategy and growth opportunities. Specifically, many of the interviewees experienced the transition from the company's three founders to a more traditional corporate structure with a CEO, CFO, presidents of the divisions, and director level for all the other main services. Ownership of the company's culture, its role in their employee's lives, and the role the company has in the community were thoroughly discussed by senior leaders, directors, and managers. Many executives remarked that

their interview process for their position included a long courtship with the founders. This strategy was described as ensuring that the right leadership was put in place. Manager #3 detailed his interviewing process, “they’re [executives] going to put the right people in the right place, and they’re going to do whatever they can to support those people.” The same sentiment was felt by the local Truck Driver #1,

When talking about the founders doing a good job of putting the right people in place...absolutely. If you’re a square peg in a round hole, you’re out pretty quick. They don’t try to force the situation. So that’s very comforting.

Future aspirations were described in terms of personal growth, team performance, and individual goals. The culture built by the three founders defined how the company cares for its employees and the community.

In the transition to poise the company for growth, ITS Logistics created leadership opportunities that fit its established values. Motivation from senior leadership to keep the values intact and maintain the established culture played a significant role in how the company grows, physically and financially. Specific goals were shared such as doubling the size of employees from five hundred to one thousand, expanding to the other floors in the brokerage building, setting up operations east of the Mississippi River, and being able to donate a quarter of a million dollars back to the Reno/Sparks community. Connection to the Nevada area was deemed important, as stated by the CEO, “part of what makes us special, but we, but our ambitions are to take what we’ve built here and be able to replicate that and grow it on a national scale.” Without the development of the company’s employees, economic growth on a larger scale was difficult to envision.

Additional information on long term growth and success was seen during the observations in the executive suite. CEO Scott Pruneau stood at the end of four grouped desks while two employees discussed time and distance constraints for a potential client. Each employee shared their ideas with the CEO using current client examples. Scott remarked on the concern to over-promise services ITS Logistics might not be able to deliver. After the observation, interviews confirmed the power and influence executives appeared to have and their ability to use them towards long-term vitality. Scott shared, “it’s just making sure you act, you’re disciplined enough to act according to your values all the time.”

Since the transition to a structured leadership team, executives commented that strategic decisions up until now would not have been possible without a strong team of managers, employees, and truck drivers. Eleven of the fourteen participants in the study started their career at ITS Logistics in a lower position than their role at the time of the study. The 11 participants spoke highly of the transition from their start at the company and noted the leadership opportunities available. The other three participants were able to describe opportunities available for others, and their personal aspirations for growth in the future. Even without changing roles, employees in all three divisions (i.e., fleet, distribution, and brokerage) indicated that they were able to enhance their skills through pay-based skill development, cross-training, and leadership programs. The President of the Integrated National Capacity division, Mike Crawford, explained how much supporting his staff meant to him when describing the long term, internal leadership, and people development,

I mean, that's everything to us. That's so important. So we've got a, you know, people need to from the moment they walk in the door, it's our belief that people need to know where they're going, how to get there, how they can progress, how they can attain goals, what they need to do, how long it takes, that type of thing.

So we've got a pretty prescriptive path.

Employees at all levels from managers to the truck driver expressed how leadership was involved at various levels and dedicated to long term success. Developing employees already entrenched in the culture and values were seen as successful by the employees interviewed in the warehouse, office suites, and brokerage division.

Details from the interviews also showed that success for the company went beyond internal employee relationships. Building long-term connections with suppliers, customers, and the community were described as helping ITS Logistics improve sales and operations against competitors. This was emphasized when leaders described the one thing about the ITS products or the services that they love. Paul remarked,

The high level of interaction that we have with our clients. The care that we have for our clients supply chain. Every one of our clients that do a lot of business with us, you know, over the years, it's a relationship. We take their supply chain personal. We take their calls just like they're family members, right? So if one of my clients calls me up while I'm on vacation next week, I'm going to respond to that. At least gonna check the voicemail or email and make sure that everything's okay. So, no one else is trending that way. We're actually adding more to that interaction with the client. The folks that work for our clients all the way down the chain of command, the proactiveness, the care that goes into the services that

we offer them, and most folks [are] going away from that. Competition is automating processes, laying off people, trying to do everything with, you know, bits and bots. And we are going the other way, right? We are adding people. We want the human interaction. We want to care.

Throughout the interviews, participants provided examples of a long-term strategy built on its relationship with customers. For instance, Patrick indicated, “the culture itself leads to being invested in what you’re doing and working hard for the company.” Similarly, Manager #4 shared, “it’s the culture that’s created here that you just love and that keeps you coming back day in and day out.” Comments from executives, directors, managers, employees, and the truck driver focused on the legacy of the founders, support from senior leaders, and the competitive atmosphere upon which ITS Logistics was built.

Organizational Culture of Family

Eight participants used the word *family* to describe the atmosphere and culture of ITS Logistics. The sense of family was described as initially created by the founders and has since been maintained by the leadership that followed. Everyone interviewed was asked how they would describe the company to someone who has ever heard of it. Answers ranged from what ITS Logistics does, to the role of the company in the market, to the family values, and then some variation. The understanding of what the company is and what they stand for was best summarized by Manager #2,

Well what we do and who we are two very different things. We’re a third-party logistics company so we handle any manner of logistics needs, transportation, freight brokerage, and asset-based fleet. But ITS Logistics is a family-oriented company with roots in northern Nevada.

The sense of family within the company presented itself as a reason why candidates wanted to work for ITS Logistics, and a reason the employees felt like they found a career. Remarking on the value of input, being able to work with employees at all levels, and having access to all leaders in the company solidified this feeling. Employee #2 in the dedicated customer service role shared that “we actually care and listen.” Truck Driver #1, even with his nomadic missions, still felt included in the family culture, remarking that “nobody around here is a nobody.”

The family culture was also defined within the company’s decision making. The “bottom-up approach” meant the company was “very interactive,” valued opinions from all levels, and participated in decision making that went beyond the executive staff. Furthermore, appropriate autonomous decision-making was remarked as energetic and supportive of the family-oriented culture. Many interviewees felt supported in their ideas and their decisions. Specific examples were shared by employees recalling events where decisions had to be made in the middle of the night, thousands of miles away from Sparks, Nevada, and without the help of the customer service department. At least one participant commented that if the employee can justify why that was the right decision to make, that employee is always supported. Examples of efforts to make the company as successful as possible highlighted the ability to do what is right by the company, and the extension of family values beyond desks and building walls. The feeling below best summarized the deep admiration employees had for the company. Paul expressed that,

Best idea always wins. And there’s, you know, a high level [of] respect for those ideas, regardless of what the predetermined path for something might be. So that

by far is what separates us from anything else. Not really, you know, job or career. It's a lifestyle and family.

Aspirations to be the best at their job, to contribute positively to the culture, and develop others, were frequently discussed during the interviews. Culture played a significant part in how participants described their work conditions, their goals, and their understanding of leadership. Leadership, growth, and core values were not discussed lightly and were felt beyond daily tasks. In considering how employees at ITS Logistics interpreted their roles, the core values became a defining presence in the interviews.

ITS Logistics Core Values

In the last quarter of 2018, ITS Logistics added sustainability to its core values. To understand the role of core values in the work-lives of participants in this study, data analysis included specific attention to how core values were described. The core values ITS Logistics created to support its culture are: Safety First, Integrity, Respect, Teamwork, Quality, Continuous Improvement, Compassion, Results, Having Fun, and Sustainability. Executives were aware of their impact on the company and its employees in relation to the 10 established core values. To illustrate that understanding, Scott remarked, "I think I see myself as a culture champion, I see myself as someone who has to be, who's here to protect our values."

Participants at each level described the support they received to successfully navigate the established core values. Each interviewee also showed respect around the discussion of core values and could describe the value that best fit their work and personal values in depth. Only one interviewee described a core value that was not on the list: commitment. For a company described by the CEO as a "purpose driven business,"

its leaders rely heavily on the core values to guide decisions and serve as a vehicle to deliver quality to its employees and its community. Mike shared,

You just have to do the best you dang can; training, equipment, hiring great people, you know. So probably a lot of it falls back to the core values. But that has to extend all the way to those fingers on the steering wheel.

Responsibility to ensure that employees live, work, and act according to the core values falls on the company's leaders and mentors. When asked about the expectation that employees exhibit all the core values, Manager #2 remarked,

Absolutely, especially in the leadership side. I don't think that's necessarily the case when you're trying to develop an employee from maybe a ground level position. ... If we feel that they have good integrity ... that they'll treat others with respect that ... help[s] us develop some of the other core values.

Discussions on the importance of core values continued as several participants described how a key leader was let go from the company for not meeting the expectations of the core values. The preservation of long term leadership was not always successful. The effect of hiring the wrong leaders was mentioned by many of the participants. In particular, Manager #2 with eight years of experience at the company remarked,

We've lost executive team members because they didn't meet core values. So I've never, I've never worked for an organization where a CEO is no longer sitting in the seat because of core values. Results were great, financials were great, great person, but their core values didn't align with those core values on the wall. And they're no longer with the organization. So that tells that, and that those types of decisions tell you how strongly we feel about our core values.

While employees and truck drivers were not expected to exhibit all the core values, leaders were expected to act in accordance with the values at all times.

Core values also appeared when discussing physical company growth, and the aspirations and value of the founding principles. Ryan continued,

We're very focused on our growth initiatives. So, you know, sustainable, good sustainable growth, without losing the soul of what ITS is. So that's always the quandary as you get big as a company. Lot of companies have core values, but most people don't know what they are. A lot of companies have a vision, but most companies can't recite it, right. So those are the things that we can't lose sight of and make sure that those are always at the forefront.

In several interviews, core values were described as malleable with input from all levels in the company. Others described the process as executive leaders coming together to evaluate what ITS Logistics stood for, right down to changing the image used to describe the initiatives. Paul shared, "it wasn't like, you know, Moses, and came down from on high with the stone tablets and everybody will march to these orders. There was a lot of collaboration, ground level, all the way up, to what those were."

The 10 core values of Safety First, Integrity, Respect, Teamwork, Compassion, Quality, Continuous Improvement, Having Fun, Results, and Sustainability were prominently featured in offices, at employee's desks, and displayed on the walls on the brokerage floor. Interview data focused on some of the values more than others. The core value most cited in the interviews was teamwork, followed by having fun, and integrity.

Teamwork. Teamwork was described by participants as support throughout the stressful periods in the transportation industry. Employee support for their department

through economic swings was also shared. Employees in each interview talked about the ability to solve problems with other team members, departments, and clients, all to advance company goals. Hands-on commitment to training, development of teams, and exercising accountability was considered vital to executing those goals. Scott remarked on why teamwork was his top value, “I mean teamwork is probably the one I would go to the most because I don’t think anyone in our organization can achieve their professional goals without the rest of the organization supporting them.”

Collaboration, as a tradition with the founders, was evident in three different ways in the interviews. First, collaboration was remarked as a key attribute when leaders made decisions for the company. Second, teamwork was noted as a major contributor to how well the employees worked together to solve problems and achieve goals. Third, partnerships were considered a key factor when gaining business and working with established customers.

The foundation for professional development for all employees was noted in relation to discussing the family culture of the company. Steps taken to utilize teamwork were described in detail by executives, managers, and employees. Weekly senior leadership meetings are called every Friday. According to Paul, “and that’s where a lot of stuff begins and ends.” On top of the weekly leadership meetings, a daily ‘finish strong’ call, hosted by the CEO or the vice president of fleet operations, asks each department manager what they accomplished that day and what their goals are for the next day. Manager #3 shared, “then tomorrow you talk about whether or not you accomplished yesterday’s call. ...So we’re all getting together, talking about how we won the day. ...It’s just keeping everybody engaged and accountable.”

Collaboration from leaders created strategic advantages at all levels of the company. As shared by Scott,

Well, you can't have clarity if you haven't [been] part of the conversation. ... I want you to be passionate about the direction we're going and you have to buy in. ... You'll buy in much more if you're part of the creation of the plan. ... If you model the behavior that either happens at the executive level, and then the C leadership level and the frontline management level, and the people collaborate a lot, then when you make future decisions, it's something you know, you've got a team of people going towards. Like I said earlier, our number one values I would choose is teamwork. So for me if, if you can't, if you don't have teamwork in decision making, how do you have teamwork in operations?

Acceptance from the frontline staff, as the company launched services to market, was described as incredibly important. Leaders at ITS Logistics supported a grassroots approach to collaboration knowing execution of the service would fall back on regular employees. Teamwork, therefore, meant excellent communication among leadership and employees, which was particularly emphasized by Employee #3 in the brokerage division, "everyone knows what's going on at all times. There's not really, I mean, there's no secrets. There's nothing really hidden. Which I think is great."

Managers and employees recounted several instances where collaboration created stronger relationships. With support from upper management, co-workers were seen as a major driver of motivation. When asked to share a favorite example and recent success story within the past six months, each person interviewed recounted a story where they

worked with a team to secure future business or shared how they developed a stronger process for efficiency through some form of collaboration.

Stressful days were also discussed. The logistics industry was described as influenced by outside factors that ITS Logistics could not always control. The team atmosphere at ITS Logistics was developed to overcome difficult situations that truck drivers, employees, managers, and the executive staff might encounter. For instance, when ITS Logistics lost business accounts and struggled financially, the desire to push forward and overcome the next big obstacle was prevalent. Truck Driver #1 was able to recount the struggles he experienced at the company, and how working through the problem at all levels supported progress,

I think the biggest thing is, is we always seem to pull ourselves out of whatever turmoil we're in. ... I don't want to say that, uh, we kind of started heading towards the iceberg and, and everybody up top really cranked on that, on that wheel and kind of got us veered off. And I've seen that, I don't want to say time and time again cause that kind of sends the wrong message. But it always seems like just when we're all wiping our brows thinking oh my god, what's gonna happen, everything just kind of fills in, everything kind of falls into place. We pick up new accounts, you know, we'll pick up bigger accounts than what we had. And like if we lose Starbucks, we're like, oh my god, what are we going to do? Next things you know, here comes Lowe's, Home Depot, Daimler, Mercedes Benz. And it's like, it just keeps revolving, right? Something always bigger or better comes along. And that's what I think drives this company is just never give

up. Right? We're that little guy in a fight and it just, I'm just going to keep punching until you give up.

Along with important success stories, the motivation to perform as a team at their best was described by employees in several ways. Acknowledgment of the entire team needing to buy-in was critical. Manager #1 in the warehouse commented that coming into work and collecting a check was fine, but that employees still needed to help the machine move along and if one wheel was not turning, it could cripple everything.

But not all employees understood when a line was crossed; as a collaborative group, knowing when to get the work done and when to allow another employee to complete their tasks was blurred. This was a concern for Employee #2 in a customer service role, "we all kind of put our hands in each other's pots." Confusion with other employees was present when trying to balance the defined role an employee was hired to do and when it is necessary to extend the job duties into other roles to solve problems.

Collaboration also played a significant role in how ITS Logistics obtains customers. Patagonia was mentioned several times as a pivotal customer and a company with values similar to those at ITS Logistics. To secure the account with Patagonia, strict requirements were expected from the logistics provider. ITS Logistics collaborated with Patagonia to support their values, make internal changes, and secure the account. Several other customers were mentioned on the warehouse tour and when discussing customer expectations. Several examples of different customers leaving ITS Logistics for another provider were shared in the interviews. One participant shared that less than a handful of ITS Logistics customers did not return once they tried another logistics provider. Overall, the ability to collaborate at all levels was discussed at great length and all participants,

regardless of their role, felt they directly contributed to the success and growth of the company.

Even with remarks on confusion with job assignments, most participants interviewed also appeared comfortable seeking support from other employees, managers, and executive leaders. A warehouse manager remarked that no one in the company holds all the answers. To be successful, Manager #1 continued, the experience of others is needed to get the job done. Observations in the brokerage offices showed a collection of employees collaborating on freight orders, playing ping pong, and discussing the latest sports. The president of the division showcased the seven-year journey as teamwork brought the division from zero dollars in sales to over 200 million. This was considered a feat that several directors directly tied to strong leadership, teamwork, and intentional development of the staff.

Having Fun. Having fun was a core value witnessed during the observations in each division. Singing was seen in the warehouse, talk with other employees about the latest sports game at the university lit up the executive suite, and frequent laughter filled the brokerage floors. Three participants in leadership commented that having fun was their top core value. This core value was remarked as essential given the high-pressure environment of the logistics industry. While the participants commented on the value of increased profits, growth in space and employees, and the company's impact on the community, knowing fellow employees were happy at work sparked the ultimate compliment of a successful business. Patrick shared, "success for me is when you work anywhere in this company, whether it's the CEO down to the lowest level of, you know, seasonal warehouse worker, I want them to be happy to come here." The view of a fun

culture was also revealed by Molly as a quality that managers shared with potential employees. Paul continued, “I’ve worked at a lot of places, you know, startups all the way up to billion-dollar companies and this, by far, [is] the best environment and organization that have ever had the pleasure to work for.” Strong feelings of pride towards a happy and strong culture is shared with others to continue the happiness trend. As reflected by the customer service Manager #2, “it’s almost palpable, you can feel it.”

Integrity. Integrity was a core value that came up several times in the interviews with one senior leader, one director, and one manager. Integrity was heavily discussed when considering employees, growth, and business transactions. When describing the legacy of the founders, integrity was closely tied to success in the eyes of ITS Logistics leaders. Supporting a great place to work for its employees and the community meant, according to Ryan, “we’re more focused here on just getting the job done right.” An extension of integrity went beyond the building walls to include customers and the community. Scott commented,

We take being invested in this community seriously...I see the amount of involvement that our leadership has in the community...And as the person whose job it is to kind of carry that flag for everybody...we value where we live and where we work.

Making honest decisions about business accounts, customer pricing, and environmental concerns were shared in the interviews as a key driver to the company’s success. Patrick described ITS Logistics as a partner with their stakeholders, “we want to be the good guys and we want to work with the good guys.” The desire to do what is right and in the right way was shown as important at all levels in the company.

Sustainability. Each participant interviewed was asked specifically about sustainability as a core value. Sustainability was added to the list of core values in 2018, complete with imagery featuring a cupped hand, holding a newly sprouted plant. With the sustainability core value, a tag line stated “Driving towards a cleaner future” (ITS Logistics, n.d.). Spurred by inspiration from living and working in the Reno/Tahoe area, several interviewees remarked on their respect for their client’s environmental efforts. Patagonia was again referenced by interviewees as a company ITS Logistics aspires to emulate.

Executives and directors shared why the decision to add sustainability as a core value was made, remarking that awareness was the first step towards sustainable growth, Mike continued, “so now it’s part of that serious conversation anytime values are brought up and we take our values seriously.” The value was discussed as important to key decision-makers in the company, from the founders to the company’s board, and with each executive. It is also the core value most participants struggled to define, take action towards, and measure. Opportunity and the potential for a better quality of life were reflected in the interviews as a form of sustainability. When discussing how the company was a good steward in the community senior leadership remarked that they saw employment, benefits, and a path for career betterment as meeting the expectations of the core value. Interviews also referred to community involvement through monetary and time donations. Several participants, in discussing the continuation of socially sustainable efforts as the company grows, were able to elaborate with familiarity.

In consideration of the social element in sustainability, ITS Logistics was described as a stable and actionable company. However, action towards sustainable

efforts to better the environment through concentrated and deliberate actions was stated as a personal concern by Mike,

I mean, they say by 2050, you're not gonna be able to go into the ocean catch fish. I mean on that subject firsthand, my mother lives the Sea of Cortez down in Baja, halfway down Baja. That's what she lives on right there like a little tiny fishing village. And we've been going down there for 25 years. And just in that short span, within my lifetime, seeing the rapid deterioration of our environment, it's disgusting. So, it's, I mean, it's sad. It's almost like it's almost unstoppable. I mean, it isn't. It's the only thing I'm really pessimistic about. So I don't know how it's going to stop.

Citing that the problem was bigger than one person, or even one company, several employees described positive and dedicated efforts the company was taking to achieve sustainability. Motivation to be environmentally sustainable came from several sources. First, many participants, including the truck driver, commented on the compliance to industry standards set by competitors, the EPA, and state legislatures. Second, ITS Logistics adopted a monetary incentive program for truck drivers to recognize efficient driving and increase the trucks miles per gallon. It was shared by several senior executives, directors, managers, and the truck driver, that this program began as a means to save the company money through fuel costs, however positive impacts towards the environment were realized with the increase efficiency. Third, the assets the company leases are newer with shorter contracts. This has allowed the company to use the latest technology with the best environmental features. Observations showed trucks displaying

California complaint stickers outside the fleet office. Manager #2 summarized the feeling behind environmental efforts,

Because we have an organization and people that tend to do what feels right and feels better before, you know, looking at the cost or the impact ... they're going to do what feels right. What morally feels right. And typically, sustainable efforts morally feel better than ones that are not.

As shown in other aspects of the company, several participants noted the desire to be the best in the industry. If the company was complying with the environmental efforts mandated by the EPA and the California Air Resources Board, the company should, as several participants remarked, tout their successes towards that achievement. Managers from the fleet and brokerage divisions saw this as the chance to fit it, gain market share, and enhance day-to-day operations.

As a company focused on growth, the desire to grow sustainably was discussed by Ryan when discussing culture. However, by adding sustainability as a core value, most managers and employees were able to speak to the importance of the environment when tied to that growth. Employee #1 stated, "we're definitely a growing company and we're trying to be as environmentally safe as we can. ... It's one of our goals this year was to be more green than we have been." Employee #3 in the brokerage division saw the impact trucking had on the core value as well, "I know that within the fleet side, they're trying to adapt to that [environmental sustainability] as much as they can."

In the effort to define what sustainability means to the company, its employees, and the community, a few participants struggled to identify what environmental sustainability was and what their role meant with the introduction to the new core value.

For the most part, participants indicated the company would be successful in its efforts because of the successful track record shown with the other core values; however, several participants noted that traction was not at optimal levels. Mike, credited by others for spearheading the initiative and summarized the need to do more, “yeah, we need to freaking do our best. How about that?”

Unremarked core values. There was a lack of focus on the following values: quality and compassion. These core values were not cited in specific interviews or found in the observations. Participants shared examples of the quality work the company provides when describing business lost to a competitor and the ability to regain the client based on the company’s commitment to quality. Even with these examples, employees did not specifically share this value as an advantage to the company’s culture.

Compassion was not specifically stated by any of the participants; however, several leaders and employees shared their view of ITS Logistics in the community. Compassion for others can be inferred when considering community support and the desire by executives to provide resources beyond the bare minimum. In discussions of growth, giving more to the community was considered as part of that development. The feeling of compassion was shared by Truck Driver #1 when describing his tenure at ITS Logistics. He recounted that on his first day of the job, “I really felt like I had a home.” He felt that if he no longer wanted to drive trucks and be on the road, he could still work with the company. Similar to quality, this core value was represented by participants but not specifically called out when describing the values represent their line of work.

Summary

In conclusion, the company's (hi)story was intertwined with a strong focus on economic sustainability and growth at ITS Logistics; this was described as important to all participants. The organizational culture at ITS Logistics was summarized and revealed an emphasis on family and the ability to support employees. Core values most important to the participants were then described, along with the addition of sustainability. Overall, participants were able to describe ways that value impacted their work and the company's operations.

CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

The purpose of this study was to explore how a single company with a high fossil fuel use has adapted to the triple bottom line (TBL) components of social, environmental, and economic sustainability. This study was guided by the research question, How and why did ITS Logistics, a company with a high fossil fuel use, adopt sustainability as a core value? Publicly available documents from the ITS Logistics website, competitor websites, and federal and state governments were reviewed, three observations at ITS Logistics' northern Nevada offices were conducted, and 14 participants (i.e., three executive leaders, three directors, four managers, three hourly staff, and one truck driver) engaged in semi-structured interviews to support this study. This chapter includes a discussion of the notable findings, as well as implications for practice. Then, recommendations for future research and conclusions are provided.

Discussion

The defined parameters of this study focused on TBL components and the specific addition of sustainability as a core value. However, the most notable findings of this study are related to the founders and their development of company leadership; they appeared to have been instrumental in how employees extended the family culture and the more prominent core values into this study. Specifically, the case study illuminated social sustainability as the key TBL component in the business actions at ITS Logistics. The key areas are discussed in detail below.

Organizational Culture

A notable finding from this single case study of ITS Logistics is that the company's history and its founders played a critical role in establishing the company's

organizational culture. However, in addition to the history and its founders, the company's current leaders were described as upholding values that were linked to the company's culture. While attributes of the transportation industry create uncertainty, the founders established concrete practices to support employee development, guide customer service, and grow operations. This aligns with Schein's (1988) work on organizational culture in which he affirmed that it is important for founders in an organization to bring values to the company and support them toward becoming basic assumptions of all members within the group. These established assumptions then allow members to "deal with problems of external adaptation and internal integration" in how they respond to the organizational culture that being formed (Schein, 1988, p. 12). As potential problems are dealt with, the organizational culture is strengthened; Allaire and Firsirotu's (1984) concluded that such a culture can support a company in its efforts to adapt to radical changes.

The (hi)story of ITS Logistics appeared to be fundamental to its long-term strategy for success. This recounted history was intertwined with the company's current leaders. Moreover, when leadership was described by the participants at ITS Logistics, they indicated that leaders modeled the way for their employees. This mirrors the work of researchers Johnson et al. (1998) and Williams (2013) who found that leaders can only ask from other employees what they are willing to do themselves. Through its organizational culture, ITS Logistics appeared to demonstrate an investment in its employees and increased customer support beyond industry standards. These practices seemed to have improved as the newly appointed executive leaders supported the established culture and integrated their own expectations to the existing company values.

The ITS Logistics' leaders work in this regard reflects a form of cultural synergy and respect, as described by Costache et al. (2018); the leaders seem to have provided opportunities to embrace and improve upon the company's core values at ITS Logistics.

Marchisotti et al. (2018) and Susca (2019) emphasized that executive leaders could directly impact employee development and add strength to decision-making processes based on their relationships with peers. Employee development, decision-making, and relationships were similarly described within the organizational culture, the expansion of the core values, and the execution of the company strategy at ITS

Several managers and hourly employees, along with the truck driver, shared their personal views of the influential individuals in leadership roles, often referencing a family-oriented culture as a defining characteristic of ITS Logistics. These basic assumptions or shared values were consistent with the literature. For example, several values cited by Jaskyte (2010), such as team orientation, respect, employee involvement, innovation, and results, were reflective of statements provided by participants at ITS Logistics. With these shared values, leaders fostered employee engagement and strengthened the family-oriented culture through compassion, collaboration, and continuous improvement.

Adapting the Triple Bottom Line Components

Through the recounted stories of the founders and family-oriented culture, economic sustainability was a pervasive concept throughout the interviews; however, the concept was enhanced through social sustainability. Interestingly, little evidence, beyond economic considerations, showed that environmental sustainability had risen to the level of being a shared value among its members. For example, the term *sustainability* could

not be clearly defined by executives and managers, nor could they indicate what it meant to the company, its employees, and the community. Indeed, sustainability was most frequently described as a means to incentivize economic growth, as well as a personal value with a direct tie to nature and the aspiring goals of companies with similar values.

The areas of social, environmental, and economic sustainability are complex topics to examine. Even more, the interactions between the three triple bottom line components within a business are difficult to articulate in a single Venn diagram; none the less, Figure 6 provides context to the complexity of this study in an effort to visually depict the TBL approach at ITS Logistics. As shown in Figure 6, the three TBL components do not completely overlap but, instead, move fluidly based on what ITS Logistics deemed important. However, overlap could through intentional considerations to how the three components can interact. The focus on the TBL components at ITS Logistics appeared to begin with its people. Entangled with the family-oriented culture, most core values (i.e., teamwork, having fun, and integrity) could best be described as part of the social component. The positive impact of the workforce was referenced at every level of the company, particularly in with a focus on economic outcomes. This is consistent with Mahfouz and Muhumed's (2020) affirmation that the alignment of values with organizational culture can achieve positive economic benefits. Ogwuche et al. (2019) also indicated that strong social aspects can be linked to economic performance through development, promotions, and value in a company. Therefore, the company's focus on the social component of TBL appeared to emphasize economic feasibility, creating the second gear of the triple bottom line approach.

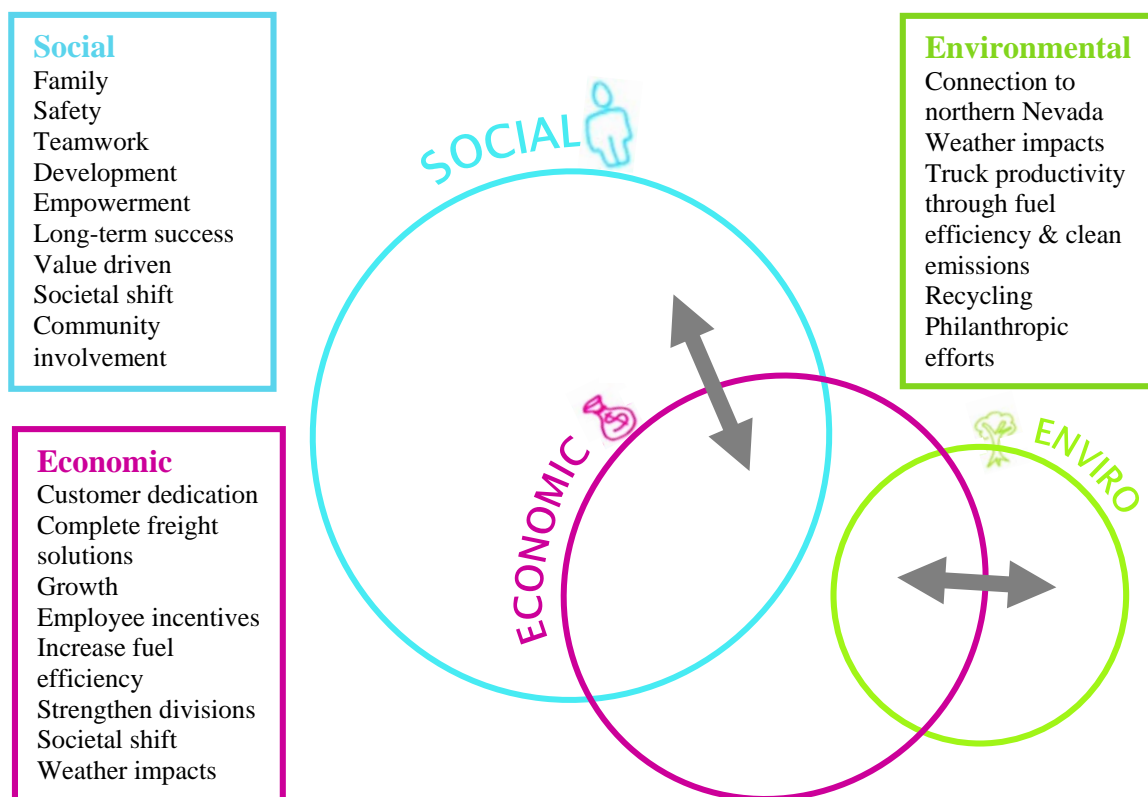


Figure 6. Triple Bottom Line Components at ITS Logistics. Adapted from Components within Environmental Sustainability Triple Bottom Line: The science of good business. Reprinted from *Sustainability Illustrated*, by S. Brooks, 2014. Retrieved February 23, 2020, from <https://sustainabilityillustrated.com/en/portfolio/triple-bottom-line-the-science-of-good-business/>.

Findings from this study suggested that the success of its people was perceived to strengthen the company's profits and economic capabilities. Profit and growth initiatives focused on the three other core values (quality, continuous improvement, and results) that drive economic progress at ITS Logistics. The participants' desires to maintain operations and grow were dependent on their ability to leverage the economic benefits. The participant data presented economic sustainability as a means to implement environmental actions. These actions were listed as being highly dependent on environmental regulations, a healthy society, fuel efficiency, and a viable fleet. These aspects, as described by Litman and Burwell (2006), were seen as an economic advantage

through the enhancement of the company's image when accounting for environmental benefits. Bain et al. (2012) and Pizer (2002) agreed that an economic shift, due to a focus on environmental sustainability, supports business growth and its impact on the community. Similarly, the research by Carter and Rogers (2008) also showed that the gains in economic advantages were sought after as cost-saving measures, with environmental benefits ensuing. As revealed in interviews by senior executives and directors, environmental sustainability was increasingly part of the company's general way of operating; however, participants struggled to define how the core value was integral to their work. The addition of sustainability as a core value supported the commitment ITS Logistics has made toward the environment through cost-saving measures. As the company leverages its economic benefits towards environmental sustainability, the addition of sustainability as a core value became the next logical action for ITS Logistics.

Implications for Practice

With heightened attention to the perspectives of employees at ITS Logistics, it is important to consider several implications for practice in support of an organizations attempt to reach full sustainability. A company's actions to integrate TBL components or implement policies related to environmental sustainability should be individualized to each company's and industry's needs. The inner workings of a company based on their leadership, organizational culture, and core values will dictate how a company approaches enacting sustainability. Employees of an organization may respond better to environmental sustainability if their core needs are met, while sustainability actions are intended to enhance the areas that are most important to the company. Findings of this

study reinforce the notion that the TBL components of social, environmental, and economic sustainability should be intertwined with one another. The importance of one component over the others can alter a company's outcome in the long-term; therefore, it is important to highlight that the TBL approach is not linear. The three components interact differently depending on the leadership, culture, goals, and aspirations. The model and the focus within the TBL remains an essential consideration for a company, as elevating one over the other may depend on a company's initial focus and direction.

First, as leaders seek balance within the organization, a higher purpose from an operational standpoint is expected from stakeholders. The leadership at a company can drive a strong vision beyond tasks and goals by focusing on socially sustainable actions, such as strong ethics, altruistic behavior, and proactive decisions. If leaders can harness the motivational drivers behind these actions, employees will likely support efforts that enhance environmental sustainability among the three components. In gaining support of employees through socially sustainable efforts, the focus on social responsibility can gain attention.

Second, companies can learn best practices and mirror core values from other businesses to drive sustainable development. In this effort, integrity plays a strong role in supporting a company's focus on ensuring that operations are moral and just. While environmental sustainability may not be a priority within a company's founding values, a heightened awareness to the natural world, along with economic concerns, can shift how current leaders enrich a company's culture to reflect an environmental foundation. Using the TBL platform companies can establish credibility and create a network of support to achieve its sustainability goals.

Additionally, the existence of a family culture can serve as an investment in employees, as well as provide opportunities to develop employees at all levels of a company. Family culture values should not work against environmental sustainability but in conjunction with the company's long-term efforts and its desire to create a cleaner future. The integration of environmental considerations into a company's family-oriented culture could move a company closer to achieving its intended core values.

Third, the ability for leaders to motivate employees to do their best at work could, in turn, translate to employees doing their best for the planet. The interviews revealed that managers felt a direct connection, and an ability, to influence employees toward meaningful actions. Employees described their connection with leadership in a similar way. Environmental beliefs can be a direct result of the area where operations exist, but still lack an increase in sustainable behavior. Leaders must harness their ability to motivate employees and use their influence toward environmentally sustainable actions. It is important for company leaders to recognize how to empower employees that actively change environmental behaviors. Employees, with a strong dedication to a company, are likely to engage with and be more responsive to a company's agenda if the leader's statements are consistent with their actions.

The fourth and final implication is tied to the aspirations for growth at ITS Logistics. Growth was described as both employee development and physical expansion, highlighting social sustainability and economic sustainability. Several participants also acknowledged the company's intent to follow guidelines and legislation, and not undermine efforts to improve environmental sustainability. Changing efforts to intentionally transform the company's culture, core values, and social impact

provides an opportunity for a company to create a comprehensive and long-term corporate social responsibility (CSR) plan to encompass the three TBL components even when the company's long-term goals are set on economic growth.

When discussing a CSR plan, it is necessary to understand which aspects of the TBL components are important to the company in order to see how they interact. A successful CSR plan would highlight the company's culture and core values to include what is morally right from an environmental standpoint. For example, a CSR plan focused on transportation relies heavily on economic progress, however, the plan should build on environmentalism as a means to achieve economic stability. As stated in the interviews, the fleet offered the most economic return for seeking environmental benefits. Economic return, along with societal pressure, should encourage executive leaders to expand their basic awareness of environmental sustainability and encourage support from stakeholders in the development the CSR plan. A company can shift its social, environmental, and economic impact to cohesive long-term efforts that improve business strategy and operations while seeking growth.

Recommendations for Future Research

Future research could be conducted in three key areas. First, as a pronounced concern by Litman and Burwell (2006), data on the goals and objectives are often not defined at a company that aims to become environmentally sustainable. Therefore, future qualitative research should include an examination of how specific goals and objectives related to environmental sustainability are established within a company. Future research should include ways in which to measure company performance in relation to the three TBL components to better understand the social and economic viability within

environmental sustainability. Second, Centobelli et al. (2017) shared that customer expectations are a vital aspect of a sustainable supply chain. Therefore, future studies could include a focus on customer expectations and experiences in order to better understand company operations. Third, data from participants often spoke of location specifics and business operations within the context of a relatively small logistics company on the west coast of the United States. Therefore, an exploration of logistics companies of varying sizes and different locations may offer richer data to the components of social, environmental, and economic sustainability.

Conclusion

While sustainability did not appear to be a dominant core value that was shared among employees at ITS Logistics, almost all participants demonstrated a sense of awareness of the environment, with a particularly strong connection to the environmental benefits of the Reno/Tahoe area. Many participants struggled to define sustainability and what the sustainability as a core value meant to the company. This was, perhaps, most evident when several participants remarked on general business viability and not the environmental consideration the core value's imagery and tag line would suggest. To the senior executives, the addition of the value meant it was part of strategic economic decisions benefiting the company, its employees, and its customers, even if the company was unclear of its larger role.

Participants' motivations behind the desire to engage in environmentally sustainable practices showed depth to the company's engagement with the core value. While economic factors drove the implementation of sustainability, the lens of sensemaking fostered a greater understanding of the environmental drive. Although not

found in the data, the observation that organizational core values were shared among employees, creates a possibility that with time, environmental sustainability will be shared, as well.

As the logistics industry faces pressures to adjust its operations and address environmental sustainability, the TBL approach may support efforts to advance business viability. As was found in this study, participants were supported through strong leadership and an organizational culture that maintained a family-oriented focus. Within the organizational culture, shared core values appeared to be critical to the ITS Logistics' future direction toward becoming a company that includes environmental sustainability.

Fluidity among the TBL components is paramount to moving and surviving in uncertain and unpredictable circumstances. Using the momentum that has driven employee development, company growth, and economic viability, employees at all levels may be better positioned to focus on environmental sustainability. Companies interested in similar efforts should not underestimate the importance and influence of the established organizational culture and shared core values. Perhaps, with the continued support among senior leadership and their dedication to the development of its employees, ITS Logistics, a company with a high fossil fuel use, can continue to improve upon its implementation of environmental sustainability.

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Appendix A

The questions for Executives, Directors, and Managers will be:

- 1) Please indicate what your title is and describe your career journey in attaining this role.
- 2) How would you describe your company to someone who has never heard of it?
- 3) What is the one thing about your product/service that you love?
- 4) On the flip-side, is there anything you would change and why?
- 5) How does your company promote and/or support leadership?
- 6) What keeps you up at night when thinking about ITS?
 - a) How would you overcome these concerns?
- 7) If I were to say “ITS is a very successful company” what is the first thing that comes to your mind? Specifically, how do you define a successful company and why would ITS be included in that definition?
- 8) Where do you see ITS in 5 years?
- 9) What outside influences affect operations?
- 10) What company core values do you best represent in your line of work?
- 11) Tell me about your organization’s key environmental initiatives.
- 12) ITS recently added sustainability as a core value. Can you tell me about how that decision came about?
- 13) How has adding sustainability as core value changed the way you do business?
- 14) If you had a magic wand, what would you do to achieve the core value of sustainability for ITS?
- 15) How are strategic decisions made at ITS?
 - a) Social
 - b) Economic
 - c) Political
- 16) Is environmental sustainability considered when discussing strategy? If yes, then how so?
- 17) Do you see yourself as an environmental leader? If yes, how so?
 - a) environmental initiatives
 - b) actions
 - c) efforts
- 18) Do you see monetary savings at ITS with environmental initiatives?

Appendix B

The questions for Hourly Employees and Truck Drivers will be:

- 1) Please describe your career journey in attaining this role.
- 2) How would you describe ITS Logistics to someone who has never heard of it?
- 3) What is your favorite success story from the past 6 months?
- 4) What is the one thing about your product/service that you love?
- 5) On the flip-side, is there anything you would change and why?
- 6) What does a great workplace culture look like to you?
- 7) Under what conditions do you do your very best work?
- 8) Describe an instance in which you were very concerned about business operations.
- 9) How does ITS Logistics promote and/or support leadership?
- 10) How do you perceive power in the leadership roles?
 - a) How does that influence the way processes/operations/strategy is implemented?
 - b) What is your role in executing/implementing strategy and development?
- 11) Can you describe situations where you can make decisions, or change a process?
- 12) Do you see ITS as an environmental leader? Why or why not?
- 13) What qualities would you expect an environmental leader to have?
- 14) Do you see yourself as an environmental leader? If yes, how so?
- 15) Tell me about your organization's key environmental initiatives.
- 16) What do you do here at ITS to support environmentalism?
- 17) Do you have ideas of how ITS could be more environmentally friendly? Please elaborate if you do.

Appendix C

Recruitment Email for Executives and Directors

Good (morning or afternoon),

My name is Stallar Lufrano-Jardine, and I am a doctoral candidate at the University of Nevada, Reno. I have been working with Patrick McFarland to research the business processes at ITS Logistics.

I am emailing to ask if I could interview you for my dissertation on environmental sustainability. The interview should take approximately 60 minutes, and participation is completely voluntary. I have attached a copy of the information sheet and questions that will be asked in the interview. **If you are interested in voluntarily participating in this study, please respond to this email.**

I greatly appreciate your time and consideration. If you have any questions, please do not hesitate to contact me at stallar@unr.edu or 775-682-9144.

Thank you,
 Stallar Lufrano-Jardine, MBA
 University of Nevada, Reno
 College of Education
 Educational Leadership Candidate

In-Person Script for Executives and Directors

Nice to meet you _____. My name is Stallar. I am a doctoral candidate at UNR. I have been working with Patrick to learn more about ITS Logistics and its business processes. As a key executive here, I was hoping to talk with you more about your perspectives and environmental processes.

I'm building a business case-study around this topic and have had the opportunity to observe different areas around ITS. My next phase is to interview executives, which would take about an hour. I'm happy to email you a copy of the interview questions beforehand.

Interviewing is completely voluntary and you are welcome to withdraw from the research at any time. ITS has been a great supporter of the University so I appreciate your consideration of my research.

May I follow up with you in a week or so about your participation?

Appendix D

In-Person Script for Managers, Hourly Employees, and Truck Drivers

Hello, _____. My name is Stallar. I am in a PhD program at UNR. I have been working with Patrick to learn more about ITS Logistics and its business processes. He gave me your information in hope that you would like to interview with me about ITS operations. As an employee here, I was hoping to learn more about your perspectives and environmental processes.

Your participation is completely voluntary and your personal information will not be shared in the research. Nothing you say in the interview will be shared with anyone at ITS Logistics. All information will be reported at the aggregate level. I've already had the opportunity to observe the operations around ITS, as well as interview executives and managers. The interview would take about an hour during your normal work time, and I can provide the questions before we start.

Interviewing is completely voluntary. You can also withdraw from the research at any time. If you are not interested that is absolutely okay. ITS has been a great supporter of the University, so I appreciate your time and consideration of my research.

May I follow up with you in a few days about your participation?

Appendix E

University of Nevada, Reno Information Sheet for Research

We are conducting a research study to learn how a single company, with a high fossil fuel use unifies the factors of environmental sustainability and business viability.

If you volunteer to be in this study, you will be asked to participate in a semi-structured interview that will last approximately 1 hour. The interview will be conducted during regular business hours in a private conference room or office at ITS Logistics.

This study is considered to be minimal risk of harm. This means the risks of your participation in the research are similar in type or intensity to what you encounter during your daily activities. All questions asked will be about your professional practice and routines at ITS Logistics.

Benefits of doing research are not definite; but we hope to learn how employees within ITS Logistics, a company with a high carbon footprint, make sense of environmental sustainability based on political, social, and economic forces. There are no direct benefits to you in this study activity.

The researchers and the University of Nevada, Reno will treat your identity and the information collected about you with professional standards of confidentiality and protect it to the extent allowed by law. You will not be personally identified in any reports or publications that may result from this study. The US Department of Health and Human Services, the University of Nevada, Reno Research Integrity Office, and the Institutional Review Board may look at your study records.

You may ask questions of the researcher at any time by contacting Dr. Jafeth E. Sanchez (jesanchez@unr.edu, 775-682-9078) or Ms. Stallar Lufrano-Jardine (stallar@unr.edu, 775-682-9144).

Your participation in this study is completely voluntary. You may stop at any time. Declining to participate or stopping your participation will have no negative effects on you.

You may ask about your rights as a research participant. If you have questions, concerns, or complaints about this research, you may report them (anonymously if you so choose) by calling the University of Nevada, Reno Research Integrity Office at 775.327.2368.

Thank you for your participation in this study!

Appendix F



University of Nevada, Reno

Research Integrity
 218 Ross Hall / 331,
 Reno, Nevada 89557
 775.327.2368 / 775.327.2369 fax
www.unr.edu/research-integrity

DATE: October 29, 2019
 TO: Jafeth Sanchez, PhD
 FROM: University of Nevada, Reno Institutional Review Board (IRB)
 PROJECT TITLE: [1502271-1] High Fossil Fuel Use: Making Sense of
 Environmental Sustainability and Business Viability
 REFERENCE #: Social Behavioral
 SUBMISSION TYPE: New Project
 ACTION: DETERMINATION OF EXEMPT STATUS
 REVIEW TYPE: Exempt
 DECISION DATE: October 29, 2019
 REVIEW CATEGORY: Exemption Category # 2

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An IRB member has reviewed this project and has determined it is EXEMPT FROM IRB REVIEW according to federal regulations and University policy. Please note, the federal government has identified certain categories of research involving human subjects that qualify for exemption from federal regulations.

Only the IRB has been designated by the University to make a determination that a study is exempt from federal regulations. The above-referenced protocol was reviewed and the research deemed eligible to proceed in accordance with the requirements of the Code of Federal Regulations on the Protection of Human Subjects (45 CFR 46.101).

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Reviewed Documents

- Advertisement - Lufrano-Jardine Recruitment Scripts.docx (UPDATED: 10/10/2019)
- Application Form - Exempt IRBFlex Min Risk No Federal Support 10.10.19.docx (UPDATED: 10/10/2019)
- Consent Form - Information Sheet.docx (UPDATED: 10/10/2019)
- Letter - ITS Stellar Lufrano-Jardine Consent Form.pdf (UPDATED: 10/29/2019)
- Questionnaire/Survey - Lufrano-Jardine Interview Protocols.docx (UPDATED: 10/10/2019)
- University of Nevada, Reno - Part I, Cover Sheet - University of Nevada, Reno - Part I, Cover Sheet (UPDATED: 10/10/2019)

If you have any questions, please contact Nancy Moody at 775.327.2367 or at nmoody@unr.edu.

NOTE for VA Researchers: You are not approved to begin this research until you receive an approval letter from the VASNHCS Associate Chief of Staff for Research stating that your research has been approved by the Research and Development Committee.

Sincerely,



Richard Bjur, PhD
Co-Chair, UNR IRB
University of Nevada Reno



Janet Usinger, PhD
Co-Chair, UNR IRB
University of Nevada Reno

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Nevada, Reno IRB's record.