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Mixed Method Analysis of Apparel Corporations for Future Policy Development

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Mixed Method Analysis of Apparel Corporations for Future Policy Development

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Abstract

This study focused on analyzing the gaps and inconsistencies in sustainability reporting by conducting a needs assessment on 14 apparel retailing corporations. An analysis for new public policies that would enhance the sustainable efforts by apparel retailing corporations were explored. Additionally, the efficiencies of current sustainable practices were analyzed and the current trends were reported. This study provided a comprehensive review of apparel retailing corporations' interest towards governmental support in developing policies for efficient sustainability practices and for standardized reporting.

A mixed methods approach was used with the primary focus being the evaluation of emission reduction, governmental influence, sustainability reporting, and climate change initiatives. Particularly, the concurrent nested/embedded research design was utilized in this research; whereby, one data collection phase incorporated the collection of both quantitative and qualitative data at the same time. This project utilized a quantitative method embedded within a predominately qualitative research design.

The external changes related to sustainability policy were explained by the Punctuated Equilibrium Model. Some of the sustainability issues that corporations are currently focused on with legislators are the reduction of carbon emissions, energy efficiency, environmental protection, and clean energy. These are all forces that are punctuating a system to drive change in environmental policy. Policy makers have been made aware of the consequences of disastrous events that could disrupt the environment by interest groups, consumer advocacy groups, stake-holders and corporations. The on-going push for change by the aforementioned groups will drive policy makers into examining the consequences and creating new sustainability policy.

Based on the study, the corporations analyzed indicated that there is a need for consistent and clear standards in sustainability reporting. The United States (US) government could devise a simple and straightforward program/policy that capitalizes on the main environmental concerns of corporations to be reported within their sustainability initiatives. In this regard, government support could be a motivation for participation by all apparel retailing corporations.

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I. Introduction

A. Context of the Problem

The apparel industry accounts for 10% of global carbon emissions and is second only to oil as the world's largest polluting industry. Globally, it is a $3 trillion business with the United States (US) contributing close to a third of the total (Conca, 2015). Every stage in the production of a garment threatens the planet and its available resources. In order to produce 1 kilogram of cotton (the amount needed to produce 1 pair of jeans), it requires 20,000 liters of water. In addition, 24% of all insecticides and 11% of all pesticides are used in the universal production of cotton, which adversely affects air, soil, and water quality (WWF, 2017). Nearly 8,000 different chemicals are used in the dyeing and finishing processes involved in turning raw materials into fabric. These chemicals can potentially harm the environment if not disposed of properly (BOF, 2016). Approximately 70 million barrels of oil are used each year to produce the world's synthetic polyester fiber. It takes more than 200 years for polyester to decompose which, in turn, furthers the environmental impacts associated with this industry. Plastic microfibers from apparel products made from polyester are often discarded into the water supply, accounting for 85% of the manufactured material found along our oceans. This pollution affects marine wildlife, and eventually, affects our food supply (Zady, 2017).

With all these systematic issues regarding apparel companies and global concerns, should the development of sustainable supply chains within the apparel industry be required for the protection of the planet? Fletcher and Grose (2012) state that sustainability issues within the production of a garment may ultimately impact the climate; water and its cycles; chemical pollution; loss of biodiversity; overuse and misuse of non-renewable resources; waste production, negative impacts on human health; and damaging social effects on the producer

communities (p.13). Moreover, many consumers are expanding their knowledge and familiarity with environmental issues and they expect apparel corporations to be ethical in their decisions to ensure sustainability practices that correlate with their own opinions and environmental values (Diddi & Niehm, 2016).

There are several definitions of Corporate Social Responsibility (CSR) and the way that it is understood varies for each company. However, the definition from the United Nations Industrial Development Organization (UNIDO) states that “Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders. CSR is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives while, at the same time, addressing the expectations of shareholders and stakeholders” (UNIDO, 2018). For the purposes of this research project, only the environmental aspects of CSR pertaining to sustainability have been explored.

Because CSR is voluntary, businesses are encouraged by stakeholders, regulators, and environmental protection groups to apply sustainability principles to the way their operations are conducted and reported (D'Amato, Henderson, & Florence, 2009). Typically, organizations refer to the reporting of their sustainability initiatives as a CSR report, or Sustainability Report, or Sustainability Business Report, or they post information on their websites. One organization that has taken efforts to create a guideline for sustainability reporting is the Global Reporting Initiative (GRI). The GRI is an independent international organization that assists companies and governments worldwide to understand and communicate their effect on sustainability issues such as climate change, human rights, governance and social well-being. The GRI protocol suggests the following disclosures to be incorporated into CSR Reports: Economic Considerations,

Environmental Issues, Ethics and Integrity, Social Impact, and Stakeholder Engagement (GRI, 2013a).

Several apparel companies have made the commitment to implement sustainability reports within their organization. However, there are organizations that view it as a waste of money, time, effort, and resources, and which have no positive impact to their bottom-line. Some of the objectives of corporations producing sustainability reports are to provide transparency to stakeholders; to improve public perception; to improve systems and to efficiently stay up-to-date concerning best practices and benchmarking in sustainability management (Leavoy, 2015).

The US has to continually make progress toward the development of a sustainable society. One way to do this is for policies to be developed and incorporated into company requirements for reporting and publishing sustainability information. While environmental laws do exist, they compose only a part of the legal framework being used to achieve sustainability. In contrast, some European countries are well advanced in policy making pertaining to the environmental dimension of corporate social responsibility. This results in implications for trade agreements between and among other countries. The implementation of administrative arrangements may vary, but could include government and industry voluntary partnerships, voluntary initiatives facilitated by industry associations, or government regulations (Benn & Bolton, 2011). In the US, most corporations are interested in sustainability practices but have limited governmental support. In recent years, industries that were once resistant to the regulation of carbon emissions have taken the initiative to invest more in renewable energy and natural gas production. Furthermore, large corporations that consume tons of electricity state that renewable energy sources are more affordable than ever. Regrettably, our current government

has reluctantly ignored opinions from corporate leaders concerning their interest in further reducing greenhouse gas emissions (Campbell, 2017).

B. Statement of the Purpose

The purpose of this research project is

1. to explore US apparel corporations that publish sustainability reports in order to determine if there is a need for governmental support requiring federally mandated policy across industries.
2. to analyze if there is a significant decrease in carbon emissions (CO2) due to the sustainability practices followed by the apparel retailing corporations.
3. to analyze the published sustainability reports and the Carbon Disclosure Project (CDP) Climate Change Request form with reference to the need for standardization/harmonization and for future legislative actions.

C. **Research Questions**

There are 4 research questions (RQ) addressed in this project:

1. **RQ1**. What are the methods being followed for sustainability reporting in the apparel industry? What policies pertaining to sustainability are observed on the organizations sustainability report and what are the legislative issues most important to apparel retailers according to their CDP input?
2. **RQ2**. Is there a significant impact on the environment due to the sustainability practices followed by apparel organizations?
3. **RQ3**. What type of policy changes should the US government implement in regards to the sustainability initiatives of apparel corporations?

4. **RQ4.** Can the Punctuated Equilibrium theory be used to explain the current scenario of apparel retailing corporations' efforts towards securing governmental support in the regulation of sustainability practices and reporting?

D. Definitions

1. Corporate Social Responsibility (CSR) – "Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders. CSR is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives while at the same time addressing the expectations of shareholders and stakeholders" (UNIDO, 2018).
2. Sustainability – Sustainability involves practices and policies that reduce environmental pollution without exploiting natural resources or communities to benefit the present without comprising the future (Kadolph, 2011). It is composed of the economic, social, and environmental impacts of doing business and implies that these 3 areas are connected and should be considered together when making business and organizational decisions (Elkington, 1997). Measuring and reporting this "Triple Bottom Line (TBL)", a term often used to refer to the 3 dimensions of sustainability, is a way in which corporations can create value in these multiple dimensions and integrate that value into their business activities to both gain business advantage and reduce supply chain impacts (Benn & Bolton, 2011).

3. Sustainability Reporting – "A sustainability report is a report published by a company or organization about the economic, environmental and social impacts caused by its everyday activities. A sustainability report also presents the organization's values and

governance model, and demonstrates the link between its strategy and its commitment to a sustainable global economy. Sustainability reporting can help organizations to measure, understand and communicate their economic, environmental, social and governance performance, and then set goals, and manage change more effectively. A sustainability report is the key platform for communicating sustainability performance and impacts – whether positive or negative" (GRI, 2013b). Some corporations also refer to this concept as a CSR report or Sustainable Business Report.

4. Stakeholder - Freeman (1984) defines a stakeholder as "any group or individual who can affect or is affected by the achievements of the firm's objectives" (p. 49).
5. Greenhouse Gases (GHG) – Greenhouse gases are those that trap heat in the atmosphere. The most significant greenhouse gases are water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and fluorinated gases (Environmental Protection Agency; EPA, 2017a).
6. Synthetic Fibers – Synthetic fibers are produced from laboratory created chemical polymers. Examples include nylon, polyester, spandex, acrylic and rayon. Synthetic fibers are also referred to as chemical fibers, manufactured synthetic fibers, or noncellulostic manufactured fibers (Kadolph, 2011).

E. Significances of the Study

Over the past decade, environmental issues have posed tough challenges in the apparel industry. These issues include climate change, protecting nature and biodiversity, and resource and waste management. The development of these problems typically take a long time to accrue. Many of them are camouflaged by corporate acceptance of common sustainable practices. With thousands of apparel corporations operating on a global scale, consumer interest in corporate

sustainability practices has become evident. Some corporations have spent money and time on social and environmental responsibilities that result in the improvement of both environmental and economic performances for their organizations. Sustainability issues, such as climate change, shortages of water, pollution, and contamination of air, land, and water are all environmental factors that need addressing (Kunz & Garner, 2011).

According to Karl, Melillo, & Peterson (2009), human-induced climate change is happening now and greater impacts are being projected if heat-trapping gas emissions continue to persist. These facts have been previously established and the report, *Global Climate Change Impacts in the United States,* confirms and solidifies these conclusions (USGCRP, 2009). In the US, there have been many types of climate change related events, such as heat waves, regional droughts, destructive hurricanes, sea level rising, and cold-season storms, that are likely to increase faster and become more intense if emissions continue to rise. Climate change responses fall into 2 broad categories:

1. Mitigation - measures to reduce climate change by reducing emissions of heat-trapping gases and particles, or increasing removal of heat-trapping gases from the atmosphere.
2. Adaptation - measures to improve our ability to cope with or avoid harmful impacts and take advantage of beneficial ones, now and in the future (Karl, Melillo, & Peterson, 2009).

These 2 categories are linked when more effective mitigation measures are taken to reduce climate change, thus creating a lesser need for adaptation. Certainly, responses to climate change will evolve over time as society becomes more knowledgeable about their environment. Ascertaining societal responses to climate change will be an ongoing process involving scientists, policymakers, and public and private decision makers. The implementation of these

response strategies regarding the impacts of mitigation and adaptation policies will require careful planning and continual feedback on the part of government, industry, and society (Karl, Melillo, & Peterson, 2009).This study focused on analyzing the gaps and inconsistencies in sustainability policies by conducting a needs assessment. In addition, an analysis for new public policies that would enhance sustainable efforts were explored. Also, the efficiencies of current sustainable practices were analyzed and the current trends were reported. Overall, the study provided a comprehensive review of apparel retailing corporations' interest towards governmental support in developing policies for efficient sustainability practices and for standardized reporting.

II. Review of Literature

A. Introduction

The literature regarding corporate social responsibility (CSR) has been studied by scholars for many decades (e.g., Berle, 1931; Bowen, 1953; Davis, 1960; Dodd, 1932; Frederick, 1960). However, interest in CSR has only recently become prevalent (Serenko & Bontis, 2009; Wagner, Lutz, & Weitz, 2009). According to Aguinis (2011), CSR is defined as "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance." As the concept of CSR began to evolve and became even more intriguing, several studies emerged addressing specific research questions regarding the importance of CSR (Aguinis & Glavas, 2012). For instance, Peloza (2009) concentrated on how to quantify the effect of CSR on financial performance; Carroll (1999) and Waddock (2004) examined the functions of CSR; Wood (2010) studied aspects of how to measure CSR; and Peloza and Shang (2011) analyzed how CSR can create value for stakeholders. In addition, Aguinis (2011) focused on organizational behavior, human resource management, and industrial and organizational psychology; Brammer, Hoejmose, and Millington (2011) focused on operations; and Elliot (2011) focused on information systems. Only the environmental aspects of CSR pertaining to sustainability have been explored in this research study.

Moreover, the CSR literature is fragmented regarding institutional, organizational, and individual levels of analysis. There is a need to integrate and synthesize CSR in an intelligible and comprehensive method which should include a multilevel and multidisciplinary review with vast and diverse existing literature (Aguinis & Glavas, 2012). Empirical studies, relevant to this sustainability research project encompassing the apparel industry, have been utilized to show

how the merchandising supply chain, consumer behavior, retailers, and theory are a necessary function of CSR and should be explored for research purposes. For clarity of sustainability issues within the apparel industries, only 4 segments have been discussed and supported by empirical studies. These include the merchandising supply chain, consumer behavior, retail, and the policy framework of the study. In addition, various sustainability organizations and global sustainability initiatives have been discussed.

B. The Merchandising Supply Chain

According to Willard (2012),

> “business and industry – not just American business and industry, but global business and industry – must change its ways to survive…and by survive I do not mean maintain identity and integrity within the context of a financial system in meltdown, either. By survive, I mean business must be steered through a transition from an old and dangerously dysfunctional model to a far better one that will operate in harmony with nature – thrive in a carbon-constrained world, and put down the threats of global climate disruption, species extinction, resource depletion, and environmental degradation. In a word, develop a business model that is sustainable” (p.1).

Survival in the apparel industry must take into consideration the impact that a corporation makes toward being sustainable with regards to their use of natural resources through their sustainability initiatives. In order for CSR to be effective, sustainability needs to be included in all aspects of the merchandising supply chain.

The merchandising supply chain represents the flow of goods from the point of production to the point of consumption. This supply chain traces the distribution of a product from the producer, or manufacturer, to the final consumer or ultimate user (Donnellan, 2002).

According to Hugos and Thomas (2006), the supply chain is composed of an organization and the suppliers and customers of that organization, citing the following supply chain members with a brief description of their duties (p. 18):

1. Producer – Converts materials (such as fabric) and/or component parts into products.
2. Distributor – Facilitates the distribution process by buying large quantities of goods from producers and reselling smaller quantities to other channel members.
3. Retailer – Sells the product and/or service.
4. Consumer – Individual who actually uses the product or derives personal benefit from the service.

The goal of the merchandising supply chain is to sell the product to the consumer. Without consumer support, companies would not flourish economically (Donnellan, 2002). Sustainable fashion concerns making a global environmental difference while focusing on the impact consumers have on the fashion industry when choosing environmentally friendly products. Corporations throughout the fashion industry have utilized different methods in their attempt to pursue a more sustainable organization (De Brito, Carbone, & Blanquart, 2008). Considering the many facets involved in supply chain dynamics, management of the supply chain is necessary for the coordination of production, inventory, location, transportation, and information among the various participants. The primary goals of supply chain management are to increase the sales of goods and services to consumers while reducing inventory and operating expenses (Hugos, 2011).

Sustainability within a supply chain should not only be measured by organizational profits, it should also encompass the impact of the supply chain on the environmental, social, and economic systems (Gladwin, Kennelly, & Krause, 1995; Jennings & Zandbergen, 2005; Starik &

Rands, 1995). Pagell and Wu (2009) administered 10 case studies of exemplar firms to build a testable model of the elements necessary to create a sustainable supply chain. In their research, exemplar firms were defined as organizations that are environmental leaders within their industry. Pagell and Wu (2009) stated that identifying the firms were complicated because rigorous environmental metrics are absent in many industries; therefore, they chose firms that they felt were most applicable to their study. The cases built on previous research that examined the social and environmental outcomes of the organizational supply chain. The objective of their study was to find out if these exemplar organizations were doing something unique in regards to managing their supply chain in a sustainable manner (Pagell & Wu, 2009).

Pagel and Wu (2009) followed a theoretical sampling approach (Eisenhart 1989; Matos & Hall, 2007; Miles & Huberman, 1994; Pagell, 2004) across several industries in order to assess the need for sustainability solutions. The authors requested interviews with these exemplar firms that they considered were ahead of their industry either on social and/or environmental performance while still maintaining economic viability. In order for the results of the interview to be meaningful, Pagel and Wu (2009) conducted interviews with a member of the top management team; top managers in charge of operations, research and development, purchasing, marketing, and logistics; one or more members of the product development team; and the person with responsibility for sustainability within the organization. The collection of data included multiple researchers, taped and transcribed recordings of conversations, multiple respondents, observation of production facilities, and archival research data. Overall, their analyses suggested that the practices that led to a more sustainable supply chain were a combination of best practices in the traditional supply chain with the addition of new behaviors and innovations. A common theme that existed across these exemplar firms was managerial cognition. The authors proposed

that those firms with a positive management orientation toward sustainability were successful. This orientation was evidenced by a business model that exhibited the economic goals running parallel to environmental goals. Managerial orientation to sustainability was evidenced by the sharing of social and environmental concerns across the organization. Managers of sustainable supply chains were noted to have collaborated with non-traditional members such as non-governmental organizations (NGO), regulators, the community, and competitors. The authors, Pagel and Wu (2009), also observed that these managers of sustainable supply chains focused on sourcing side activities, such as supplier certificates. Lastly, they noted that these managers developed measurement and reward systems that link employee behavior to sustainability outcomes (Pagell & Wu, 2009). Corporations that are transparent about the sustainable development practices throughout their supply chain could communicate their efforts to consumers about the importance of sustainability and the need to realize their purchasing effect on the environment.

C. Consumer Behavior

Sustainability within the apparel industry is dependent on consumer behavior. The consumer should be able to get all the information they need about a product, such as where and how it was produced, so that they can make wise purchasing decisions. By knowing this information, transparencies and accountability within the supply chain should be quite feasible. Organizations can benefit from the increase in consumer awareness and higher demand for involvement by generating higher loyalty and positive word-of-mouth communications, which may contribute to competitive advantages and maximization of sustainable profitability in the global apparel industry supply chain (Plunkett, 2014). According to Ha-Brookshire and Norum (2011), consumers, more than ever before, are demanding more socially responsible products.

Therefore, many corporations are responding positively and believe that there are profitable opportunities to be gained from investing in sustainable endeavors (p. 352).

In the research efforts of Ha-Brookshire and Norum (2011), the question was asked as to whether or not consumers would be willing to pay a premium for 3 different socially responsible products – organic cotton, sustainable cotton, and US-grown cotton shirts. Cotton was chosen as the research topic because it is a major natural fiber that is used in the apparel/textile industry. It is also an important cash crop in more than 80 countries and is an ideal fiber for a variety of consumer fashion goods (Kadolph, 2011). Besides being a natural fiber, cotton is renewable and recyclable. Despite this, cotton has been criticized for its excessive water consumption and use of pesticides and insecticides during the stages of production (Cotton Inc., 2016). There are 3 different options for consumers when choosing to buy cotton that has been responsibly produced. First, organic cotton is produced by following state certification standards with no synthetic commercial pesticides or fertilizers (Kadolph, 2011). The second option is to consume cotton that is produced from sustainable farming practices such as those focused on reducing the use of waters, pesticides, land, and energy from levels typical of conventional farming practices. These 2 options are centered on cotton production in relation to the natural environment. The third option for consumers looking to purchase cotton produced in a responsible way focuses on saving jobs and increasing economic activity in the US (Cotton Inc., 2016). There are currently more than 18,600 cotton farmers in the US with approximately 17 million bales produced annually (National Cotton Council, 2016).

Ha-Brookshire and Norum (2011) studied information which assessed the likelihood of consumers' willingness to pay for socially responsible organic cotton shirts. The data were collected from 500 individuals via random-digit-dialing obtained from telephone surveys. The

sample population consisted of mostly married White/Caucasian females with household incomes between $25,000 and $55,000. During the conversations, the respondents were asked, "If you were shopping for a long-sleeved, button-down shirt, made of 100 percent cotton, for yourself, and it was priced at $30, how much more would you expect to pay for a shirt that was made out of ____?" Then the 3 options (i.e., organic cotton, sustainable cotton, and US-grown cotton) were inserted into the blank. With each of the options, the respondents were given price ranges in 7 different brackets, ranging from $0 to $20. Their findings revealed that half of the sample were willing to pay extra for the 3 cotton shirt choices: an extra $5.59 for an organic tee shirt; $5.54 for a sustainable cotton tee shirt; and $5.19 for a US-grown cotton tee shirt. The respondents generally identified themselves as being socially responsible with strong views about the environment. Overall, it was noted that the willingness to pay for the organic cotton tee shirts was greater among younger consumers (Ha-Brookshire & Norum, 2011).

In another independent research marketing consulting firm, Ipsos (2013) conducted a survey comprised of 24 countries around the world via their Ipsos Online Panel system. An international sample comprised of 18,000 adults aged 16-64 were interviewed as to their views of large corporations. Overall, Ipsos reported that 89% of consumers were in agreement that companies need to do more to contribute to society and the betterment of the environment. The poll also revealed that 3 in 10 respondents stated that when forming a decision about the purchase of a product or service, that it was very important for that the corporation to show a high degree of social responsibility. Consumers in Mexico, Turkey, Brazil and Argentina were most likely to agree that companies should pay more attention to the environment while those respondents in Australia, the United States, Great Britain and Japan were least likely (Ipsos, 2013).

Another marketing agency, Reputation Institute (2013), reported in their CSR RepTrak study that 73% of consumers in the world's largest 15 markets would recommend companies that address CSR as part of their organization (Reputation Institute, 2013). The problem with this is that only 5% of companies are delivering on corporate social responsibility (Rogers, 2013). The issues that companies are facing support the lack of awareness by consumers as to what the companies are doing concerning citizenship, governance, and workplace. Citizenship refers to whether the corporation supports good causes and protects the environment; governance indicates whether the corporation behaves ethically and is transparent in their business operations; and workplace involves whether or not a corporation is an appealing place to work and if their workers are treated fairly (Reputation Intelligence, 2013). Rogers (2013) interviewed Kasper Nielson, Executive Partner at Reputation Institution, and he stated that this lack of consumer awareness was because: 1) companies did not communicate clearly about the steps being taken to promote CSR and 2) companies were performing tasks not relevant to their stakeholders. In addition, Rogers (2013) spoke to CB Bhattacharya, Professor in the European School of Management, and he stated that the biggest challenge for companies is to integrate CSR practices and not treat the concept as an add-on. Bhattacharya continued to state that most CSR professionals are located in communication and public relations departments, procurement, innovation, manufacturing, and human resources. Additionally, Bhattacharya stated that companies must realize that, in order to create business value in today's world, they must integrate corporate social responsibility (Rogers, 2013). Consumers are wanting more sustainable products and corporations need to adhere to their demands. If apparel retailing corporations want to be known as environmentally conscious institutions, they must communicate their sustainability initiatives to consumers as well as their stakeholders.

D. Retail

1. Nike, Inc.

Nike, Inc. is a corporation that has made the commitment to produce sustainable products. It was founded by Phil Knight and Bill Bowerman in 1964, originally as Blue Ribbon Sports, but became officially known as Nike, Inc. in 1971. This American multinational sportswear corporation is focused on design, development, manufacturing and worldwide sales of footwear, apparel, equipment, and services. Headquarters are located in Beaverton, Oregon. Worldwide, Nike, Inc. currently employs approximately 62,600 people. Nike, Inc. sells products in more than 180 countries around the world and, for the year ending 2015, reported revenues in excess of $30 billion. Nike products are manufactured in approximately 600 contracted factories in 46 countries around the globe (Nike, 2016a). Throughout the years, Nike, Inc. has continually improved its efforts toward sustainability and desires to be globally viewed for environmental contributions, actions and efforts. Within the organization, Nike has developed a value chain which is part of the lifecycle of every product (Nike, 2013). A value chain is a set of interrelated activities a company uses to create a competitive advantage. The primary activities associated with a value chain are inbound logistics, operations, outbound logistics, marketing and sales, and service (Porter, 1985). Nike's value chain (Nike, 2016a) consists of the following:

a. Plan - Nike formulates the business plan as to how the business should be run within the regulatory operational frameworks. Decisions are made about the shape and nature of the operations, organized structure, and working relationships. The corporation is defined by its actions and accomplishments.

b. Design - Nike products are designed with the goal to provide superior performance using the best materials. Designers specify the materials to use, based on a range of factors, including what is available.

c. Make - Nike sources from nearly 800 contract factories in the supply chain based on assessment of material performance in key areas. The Code of Conduct establishes labor and environmental practices consistent with their standards. Nike's Manufacturing Index allows for the evaluation of quality, cost, delivery and sustainability on an equal footing. Factories that meet or exceed these high standards are rewarded.

d. Move - Nike outsources most of the logistics, working with key partners to move hundreds of millions of products worldwide. Contracts and clear articulation of goals, including accelerated adoption of cleaner vehicles and fuel, influence the work ethics of Nike, Inc. Distribution centers are owned and operated around the world; the largest of which are located in the US, Japan, Belgium, and China.

e. Sell - As of the end of 2013, Nike operated more than 750 retail stores around the world. Beyond selling products, each location strives to offer rewarding consumer experiences and be a community asset. The stores are in leased spaces, ranging from free-standing locations to large shopping centers. Policies regarding energy, water, and waste vary among different property managers. Some practices, such as recycling, may also depend on the municipality or jurisdiction.

f. Use – Nike believes the best way to influence how consumers use and care for products over their useful life is to have a relationship with the consumer. Some impacts are greatest in this phase, such as the water used in laundering apparel.

g. Reuse - Impacts do not end when the product's useful life is over. In order to understand the full picture, Nike assessed impacts across the entire value chain, all the way to disposal.

The cost and value of these activities will determine whether or not best value products or services are being made that will satisfy the customer (Porter, 1985). According to Porter (1985), the value chain assists managers in identifying the activities of the organization that are important for competitiveness and for attaining the company's overall strategy. The key impact areas identified by Nike across the value chain in its progress toward reducing environmental impacts are waste, energy and climate, labor, chemistry, water, and community (Nike, 2013).

Sustainability for Nike is an opportunity to innovate. They seek to produce an assortment of products that deliver maximum performance with diminutive impacts on the environment. Nike has evaluated its operations from design to delivery and from materials to contract manufacturing to determine where actions have the greatest impact and where change can best be influenced. Self-reporting evidence of Nike's progress includes a reduction of carbon emissions of approximately 3% throughout the value chain from its 2011 baseline, while revenue grew 26% over the same time period. In addition, production grew while the company fulfilled its strategic aim to source from fewer, better-performing contract factories, with a 14% reduction in factories from 910 to 785 within a 2 year time span (Nike, 2013).

2. Levi Strauss & Co.

Another company that has provided some data and made the commitment to produce sustainable products is Levi Strauss & Co. (LS&Co.). Since its founding in 1853, LS&Co. has focused on the global goals of enriching the lives of people in their communities; enhancing the environment through sustainable efforts; and increasing profits. The values which this

corporation strongly supports include empathy, originality, integrity, and courage. Levi's promise toward building a better future is emphasized through the people who globally make their brand; customers who purchase the product; suppliers who abide by sustainable practices; and the act of informing consumers about their sustainable practices. LS&Co. is committed to the environment by upholding supplier factories to their own terms of engagement which is defined as the labor, health, safety and environmental guidelines that ensure worker safety. Production is a key component for profitability and guidelines are regulated. Lastly, LS&Co. is committed to the planet by reducing the use of energy, water, chemicals and other materials used throughout its manufacturing supply chain (Levi Strauss & Co., 2015).

One way in which LS&Co. is committed to sustainability is by using the Life Cycle Assessment tool (LCA). During the last few years, climate change and other environmental factors have come into focus. The challenges that occur as a result of these environmental considerations have to be met by both businesses, individuals, and policymakers (Nilsson & Eckerberg, 2007). Information on the environmental aspects of different systems is necessary and many tools, such as Life Cycle Assessment (LCA) have been developed to provide relevant data (Ness et al., 2007). Life Cycle Assessment is a technique used to assess environmental impacts and resources used throughout a product's lifecycle, from raw material extraction to disposal (ISO, 2006). The LCA is a comprehensive assessment and considers all environmental aspects or attributes and potential impacts associated with a product, process, or service, by compiling an inventory of relevant energy and material inputs and environmental releases; evaluating the potential environmental impacts associated with identified inputs and release; and interpreting the results to help make more informed decisions (EPA, 2015). An LCA can provide a measurement of the environmental profile of a product, process, or service for a corporation to

better understand where the largest environmental impacts occur during a garments life-cycle. The LCA can also be used to determine if environmental, social, and financial aspects of an organization are interrelated. (Kozlowski, Bardecki & Searcy, 2012).

In 2007, LS&Co. conducted the first lifecycle assessment study in the apparel industry to assess the lifecycle impact on a main set of products within their assortment. The LCA focused essentially on the US operations which revealed that the highest water and energy impact was in the areas of cotton cultivation and consumer care. Due to the LCA findings in 2013, LS&Co. narrowed its product focus to the top sellers within the company: Levi's 501 blue jeans, Levi's women's jeans, and Dockers signature khakis. The findings from this "top sellers" assessment also revealed that consumer care and cotton cultivation remained the most significant impact areas. For the purposes of this discussion, only the results of Levi's 501 blue jeans will be discussed. The general findings of this research revealed that fiber production, predominately cotton, contributed significantly to water consumption. Consumer care and fabric production were the most significant phases of climate change impact and energy. In addition, by expanding the scope of the assessment to include the leading cotton-producing countries of China, India, and the US, LS&Co. has seen water consumption from cotton cultivation increase to 68% of the total impact. Figure 1 illustrates the lifecycle of a pair of Levi's 501 jeans with the highest impact area being consumer care (37%). Also, the carbon emissions are listed by category from cradle to grave (Levi Strauss & Co., 2015).

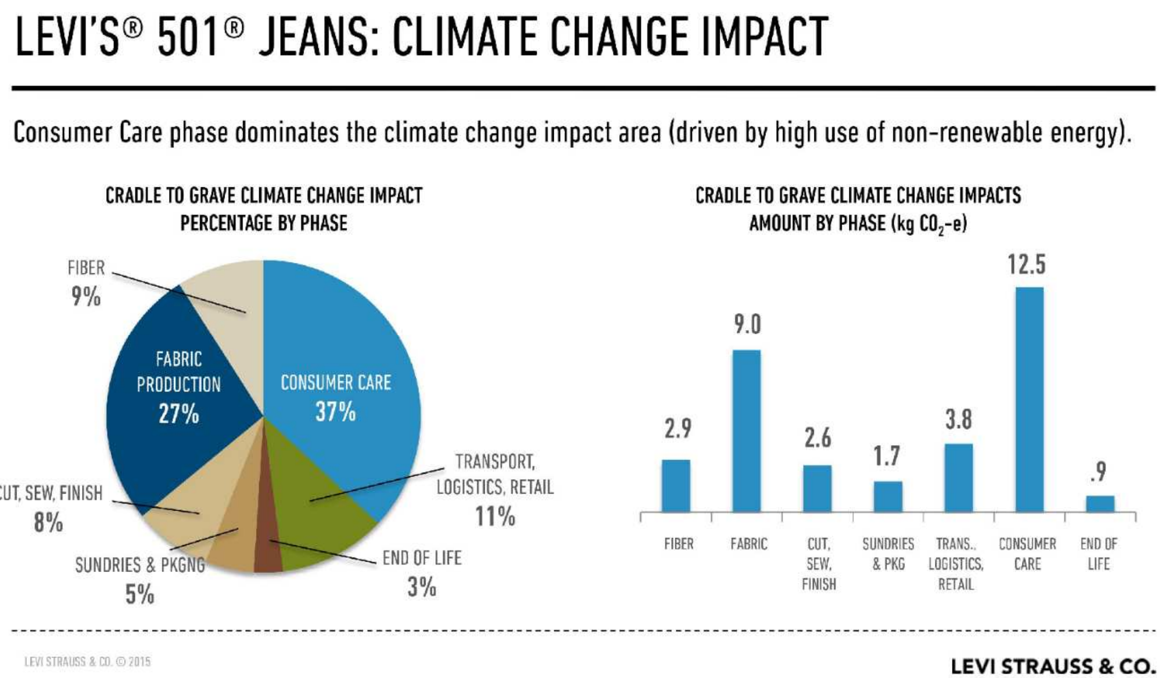

Figure 1
Climate Change Impact, Levi Strauss & Co., 2015

In addition to these findings, LS&Co. was able to determine the climate change impact from 1 year of care for 1 pair of 501 blue jeans worn by the average American consumer. Figure 2 is an illustration of the carbon emissions released into the atmosphere by a comparison of the use of conventional and efficient washing machines as well as line drying. The goal of utilizing the LCA was to optimize the benefits of findings for LS&Co. and others in the apparel industry for which more effective and holistic approaches to environmental impacts could be taken. As a result of the life cycle research, LS&Co. developed a waterless technique that reduces the amount of water used in the garment finishing stage for jeans. Since initiating this process, LS&Co. has saved over 1 billion liters of water in the lifecycle of their products. The goal of the company is to make 80% of their products using a waterless method by 2020 (Levi Strauss & Co., 2015).

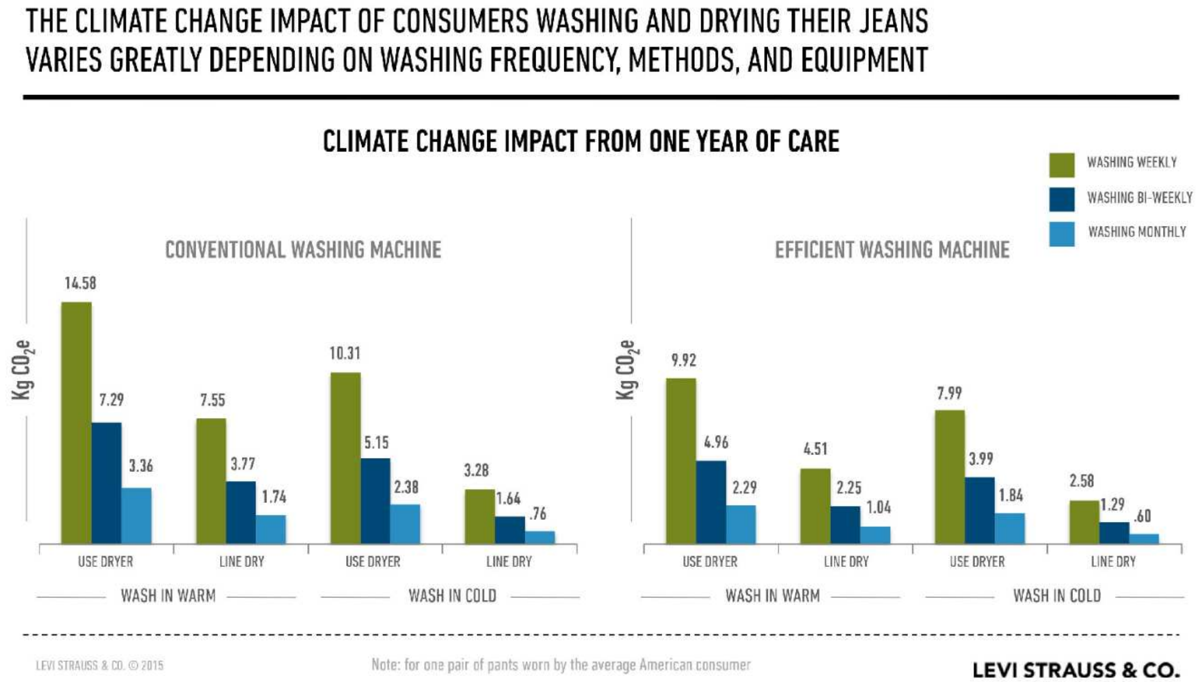

Figure 2
Climate Change Impact from 1 Year of Care, Levi Strauss & Co., 2015

The efforts made by LS&Co. in obtaining and sharing information with its competitors and customers have made them one of the sustainable brand leaders in the marketplace. Essentially, the Levi Corporation can be used as a role model for others in the apparel/textile industry, providing that these other companies are willing to contribute to the global effort of reducing the carbon footprint throughout their own supply chain (Dickson, Loker & Eckman, 2009). Businesses that embrace sustainability benefit from 1) innovation of new products; 2) cost-savings, such as less energy usage; 3) brand differentiation; 4) long-term thinking pertaining to future generations; and 5) employee engagement by implementing such activities as community involvement projects (Reeves, 2012). Corporations concerned about future environmental conditions and are good stewards of natural resources are likely to improve their profitability and competitive advantage now and in the future (Larson, 2013).

Levi Strauss and Co. also has made the commitment toward social effects that the company has on its stakeholders. This commitment includes being accountable to the people within the company, within the supply chain, and the community in which it resides (Uddin, Hassan, & Tarique, 2008). The following are key social aspects of LS&Co.:

a. Commitment to Apparel Workers –LS&Co. implemented a program focusing on workers within their supply chain in 2011. The initiative is titled Worker Well-being (WWB) and it involves LS&Co. partnering with its suppliers and local organizations to implement programs focusing on worker needs, such as financial empowerment, health and family well-being, and equality and acceptance. Suppliers of LS&Co. surveyed factory workers to determine their concerns related to being healthy and productive employees. Once these issues were identified, LS&Co. and their suppliers partnered with local and national non-profits and NGO's to address employee concerns and discuss possible program implementation. The WWB program was launched in the year 2011 in Bangladesh, Cambodia, Egypt, Haiti, and Pakistan. Since 2016, it has expanded to China, India, Sri Lanka, Turkey, and Vietnam. By 2025, LS&Co. plans to implement the Worker Well-being program with all of its strategic vendors. The result will have LS&Co. products being produced in 80% of well-being factories (Levi Strauss & Co., 2015).
b. Commitment to HIV Aids programs –LS&Co. believes that people affected by HIV/AIDS should be treated with dignity and respect. They believe that the HIV/AIDs pandemic is more than just a medical condition. It is a matter of eliminating discrimination against people living with and affected by HIV/AIDS. Their corporate response to this issue involves community partners, supply chain partners, LS&Co. employees and their families, and the consumers that purchase the product. LS&Co.

offers a comprehensive Employee HIV/Aids Program with a mission of educating their stakeholders about the contraction, prevention, and any related issues dealing with HIV/AIDS. Thus far, LS&Co. has contributed more than $60 million in grants to support HIV/AIDS organizations in more than 40 countries (Levi Strauss & Co., 2015).

c. Commitment to the Community –LS&Co. has a culture of employee giving. Throughout their organization, employees have formed Community Involvement Teams (CITs). These company-sponsored teams partner with local charitable organizations to plan activities, identify needs, and create volunteer opportunities. LS&Co. offers full-time employees up to 5 hours /month paid time off to volunteer at charitable organizations of their preference. In addition, the Levi Strauss Foundation matches employee contributions to qualifying charitable organizations and provides grants to non-profit organizations preferred by employees (Levi Strauss & Co., 2015).

Levi Strauss & Company has made tremendous efforts throughout the years in building their company as a sustainable brand leader in the marketplace. Their ongoing global efforts in raising awareness about their product and sustainability practices are inspirational. Therefore, it is crucial for apparel corporations to incorporate sustainability into their supply chains (Li et al., 2014). One issue, such as environmental pollution, is a problem and the demand to minimize it is advocated by some consumers. The production process by some corporations in the apparel industry is infiltrated with the use of unsafe chemical products, substantial water waste, unsafe working conditions, and the use of pesticides. All of these are involved in the manufacture of goods, beginning with fabric production all the way to the end of the line when dyeing and finishing occur (Lo, Yeung, & Cheng, 2012).

3. H&M

Swedish multinational fast fashion retail clothing company H&M has embraced sustainability throughout its entire supply chain. H&M has constructed its sustainable supply chain by developing eco-materials, monitoring sustainable manufacturing, reducing carbon emission in distribution, and promoting eco-fashion. Shen (2014) conducted a case study which encompassed several aspects of H&M's supply chain in an effort to promote sustainability across the organization and appeal to its consumer base. Data were obtained from the company's website, H&M's annual sustainability reports from 2010-2013, news media, and government statistics. The areas of eco-material production, sustainable manufacturing, green distribution, and green retailing were analyzed because they represented the flow of goods from the point of production to the point of consumption throughout the supply chain (Shen, 2014).

For a corporation to be truly sustainable, it must address all sustainability issues involved in the production, manufacturing, distribution, and retailing of goods and services. The production stage involves the processes and methods used to transform raw materials and knowledge into goods or services. Manufacturing typically involves a man-machine operation with a division of labor in large scale production. Distribution is the movement of goods or services from the point to which a finished good is moved to a retail establishment. Retailing is a commercial transaction in which a consumer intends to buy a product or service. Lastly, the consumer is the end user in the distribution of the product (BD, 2016). If a company does not address sustainability throughout the entire supply chain, then it cannot claim to be totally sustainable throughout its operations. According to Hall (2011), the supply chain sustainability is the management of environmental, social, and economic impacts throughout the lifecycle of a product. The objective of supply chain sustainability is to generate, protect and produce enduring

environmental, social, and economic value for all stakeholders involved in bringing products to market (Hall, 2011).

H&M's commitment to sustainability throughout the years has focused on being economically, socially, and environmentally sustainable in all accomplishments during operations. The future growth of H&M relies on making sustainability the business core. Currently, H&M is in the process of setting their vision to become 100% circular. The circular approach is resource oriented and takes into account all of the inputs and outputs of production with an emphasis on waste. In contrast, the linear approach mainly focuses on the downstream processes of production and consumption (Sauve, Bernard, & Sloan, 2015). Their goal is to transition from a linear production model to one that includes only recycled or other sustainably sourced materials in the production of goods. In the short term, this will help keep textiles out of landfills. In the long term, this transition can change the way that fashion is constructed, produced and used while reducing the need for extracting natural resources in the process. H&M still has much to implement and accomplish, but practices are being developed that will aid in making progress toward their goal of selling fully sustainable products to consumers (H&M, 2015). The current procedures used by H&M towards sustainability include:

Eco-material Preparation. H&M uses organic cotton in the production of most of their garments and has contributed to the development of sustainable cotton production. Some goals of H&M are to use 100% organic cotton from sustainable sources and to send zero waste from their organization to landfills by 2020. In addition, they are actively involved with the Better Cotton Initiative (BCI) which is a global non-profit organization that provides better farming techniques to the cotton industry. The recycling of material is also a fundamental value of this organization. Approximately 20% of recycled materials, such as cotton, polyester, recycled polyamide,

recycled plastic, and recycled wool, have been utilized in the production of several product lines. The business value of using recycled materials includes saving energy and water, as well as lowering carbon emissions (H&M, 2015). In support of consumer information, care labels identify the percent of recycled material used in retail garments (FTC, 2016).

According to a study from the Neilson Company (2013), approximately 55% of global customers were willing to pay for products from companies that implement programs that give back to society. Thirty thousand internet respondents from 60 different countries were polled and it was observed that both males and females were likely to pay more for goods and services produced from companies that are committed to positive social and environmental impacts. The results of the survey indicated that the participants cared about social impacts and the key factors were how much and how to appeal to them. The responsibility of product generating companies is not only how to produce their brands, but also how to market these sustainable brands to consumer's worldwide. Corporate social responsibility is about making a positive social or environmental impact on a society. Consumers expect corporations to be either social or environmental or a combination of both. The expectation of the consumer is to either be informed about a corporation's use of recycled materials in their products or hear about the plans a corporation has for protecting the environment (Neilson, 2013).

Sustainable Manufacturing. H&M is an advocate for fair working conditions and environmental performance as measured by its SIPP program (Sustainable Impact Partnership Programme). SIPP assessed the sustainability performance of H&M suppliers. The HIGG index served as the basis for the survey which included key performance indicators developed exclusively by H&M. Information about suppliers was readily available within their Sustainability Report. H&M has several initiatives to reduce the negative impact on

manufacturing, including factory monitoring and worker training. H&M has approximately 1058 suppliers throughout 23 different countries. Local sourcing takes place in Asia and Europe with Bangladesh, China, and Turkey being the main countries for its manufacturing. A benefit of this local sourcing was the reduction of lead time, enabling a quick response that matched supply and demand. Overall, the business value obtained from this strategy ensured timely inventory supply, a reduction of product left-overs, and a decrease of carbon emissions in the production and distribution process (H&M, 2015).

Green Distribution. Globally, the transport sector accounts for roughly 23% of carbon emissions from fossil fuel combustion (International Transport Forum, 2010). According to H&M (2015), more than half of the carbon emission released by the corporation have been due to transportation factors. To reduce the negative effects of transportation, H&M has incorporated cleaner modes of transport that are less detrimental to the environment. Currently, sea or railway is the main mode of transport from supplier to distribution center. These methods allow for a decrease in carbon emissions of over 700 tons a year, as opposed to road transport. Training courses for truck drivers are implemented if road transport is to be used. Also, in an effort to further decrease carbon emission, no trucks over 10 years old are used. In an effort to increase their business value, H&M has enhanced their transportation system for direct shipments which avoids intermediate warehouses and increased rail shipments. Also, the volumes of goods shipped by water and air have decreased by 40% (H&M, 2015).

Green Retailing. In 2013, H&M launched a clothing collection initiative which promoted sustainability in its retail establishments. The basic premise of the concept was that consumers could return any brand of their older apparel items to any H&M store throughout the world and receive a 15% off coupon on their next H&M purchase. H&M customers responded

and brought in approximately 3047 tons of used apparel. Some of these apparel and textiles items were repurposed to create commercial products. Information related to this endeavor was made transparent to the consumers via the H&M website. In addition, revenue generated from this initiative was used to fund consumer coupons, to donate to local charities, and to reinvest in H&M sustainability programs. All in all, this was a win-win business value whereby H&M, the consumer, and the environment benefited (H&M, 2015).

This case study examined the structure of H&M's supply chain and revealed operations within each stage. Shen (2014) stated that H&M is a corporate role model for sustainability within its own supply chain. However, due to the complexity and dynamics of supply chain management, H&M cannot expect to represent the entire apparel/textile industry (Shen, 2014). Collaboration among partners, namely the Sustainable Apparel Coalition (SAC), the International Labour Organization (ILO), the United Nations Global Compact, the World Wildlife Fund for Nature, and Solidaridad, will be required for successful implementation of sustainability programs at the global level (H&M, 2015).

On the other hand, in an industry confronted by issues pertaining to sustainability, some corporations struggle to implement practices that are feasible and guarantee the sustainability of their supply chains. Apparel corporations that integrate eco-material production plus a sustainable supply chain may have an advantage over their competitors (Shen, 2014). These 5 socially responsible integrations into the supply chain are defined as follows:

1) Eco-material production includes the use of organic fabrics that are manufactured with less water and chemical usage (De Brito, Carbone, & Blanquart, 2008). Eco-materials are designed to enhance environmental improvement throughout the life cycle of a garment,

thereby improving the recyclability of the fabric. The term “sustainable production” may also be used interchangeably (Halada & Yamamoto, 2001).

2) Sustainable manufacturing - According to the Environmental Protection Agency (EPA, 2016), “sustainable manufacturing is the creation of manufactured products through economically-sound processes that minimize negative environmental impacts while conserving energy and natural resources. Sustainable manufacturing also enhances employee, community and product safety” (p. 1). The process of sustainable manufacturing enforces environmental assurance and human rights. More and more consumers envision the effect their purchase may have on promoting the modern day slave trade (Dickson, 1999). The concept of “environmentally responsible manufacturing” may be used interchangeably with “sustainability manufacturing” (Melnyk, Sroufe, & Montabon, 2001).

3) Green distribution presents a challenge to apparel/textile corporations because of the complexity and rate of speed it takes for garments to be produced (Deloitte, 2013). According to Nagurney and Yu (2012), the efficient performance of a supply chain is contingent upon the adoption of technologies that enhance pollution reduction in the distribution process. The control of carbon emissions is crucial in this stage and transportation is a huge factor to consider. Therefore, the mitigation of its negative effect on the environment is essential for sustainable development (Nagurney & Yu, 2012). “Environmentally responsible logistics” may be used interchangeably with “green distribution” (Wu & Dunn, 1995).

4) Green retailing is an environmental approach towards managing a retail business that encourages sustainability practices. Some retailers recognize that consumers are

interested in making environmentally conscious buying decisions. For instance, a consumer may choose to purchase a product that has eliminated wasteful and excessive packaging over another that uses excess materials. Also, a consumer may choose to shop at a store that advertises the use of technological advances that reduce energy consumption (Green Retailing, 2016). In addition, Chan and Wong (2012) stated that the consumer's perception of sustainability may increase if recycling options are available in stores that they frequent. According to Jones, Hiller, Comfort and Eastwood (2005), "sustainable retailing" may be used interchangeably with "green retailing."

5) Ethical consumer practices – According to Beard (2008), ethical consumers are interested in the sustainability of products they use and tend to prefer to purchase from corporations that are eco-friendly and are transparent about their supply chains. According to Fraj and Martinez (2006), consumers are interested in purchasing sustainable products but need information from all corporations pertaining to an organization's use of eco-materials, sustainable manufacturing, green distribution, and green retailing practices. "Environmentally responsible consumers" may be used interchangeably with "ethical consumer practices" (Stone, Barnes, & Montgomery, 1995).

According to Konietzko, Van Woersem, & Simpson(2014), in the Rank A Brand report, there is a lack of accessible data hindering efforts to drive sustainability in the fashion industry. Rank A Brand is an independent brand-comparison website that ranks consumer brands in several industries according to their sustainability performance (Konietzko, Van Woersem, & Simpson, 2014). According to Konietzko, Van Woersem, & Simpson (2014), less than 10% of fashion brands are performing at high levels pertaining to sustainability. Of the 368 fashion brands surveyed, only 34 were leading by example in this field. For instance, 50% of the brands

reported on the implementation of a climate protection measure, while only 4% could show a significant reduction in carbon emissions. In the area of environmental protection measures, many brands reported on the use of raw materials such as organic cotton. However, only a small percentage were clear on the overall share of materials in their production processes. Consequently, it was found that only 3% of the fashion brands manufactured their apparel from 100% environmentally preferred raw materials (Konietzko, Van Woersem, & Simpson, 2014). Two of the brands mentioned previously, H&M and Nike, Inc. were in the top 34 corporations, and Levi Straus & Co. was in the top 76 corporations. Corporate involvement in sustainability organizations is one way that apparel retailers can stay informed of industry trends in relation to environmental issues.

E. Sustainability Organizations

1. Retail Industry Leaders Association (RILA)

The Retail Industry Leaders Association (RILA) has had a tremendous effect on the retail industry with regards to sustainability. RILA is a trade association consisting of the world's largest and most innovative retail establishments. This association involves over 200 retailers, manufacturers, and suppliers, accounting for over $1.5 trillion in sales plus millions of American jobs. As part of its core mission, RILA has instigated a Retail Sustainability Initiative (RSI). This initiative encourages retail sustainability executives to share CSR practices and communicate their efforts to industry stakeholders (RILA, 2015).

To assist its members in learning and developing sustainability initiatives, RILA conducts an annual conference and provides research data pertaining to sustainability in the retail industry. One tool that RILA uses to determine best practices within the retail industry is the utilization of the Retail Sustainability Management Maturity Model that incorporates case studies. A report is

generated that summarizes a retailer's current and future progress towards sustainability practices. The most recent report was initiated through an online survey administered in 2015. This survey was disseminated to 42 retail corporations which represented 50,000 locations with $620 billion in global revenue. Three retail categories - small, medium, and large retail formats - composed the survey. This breakdown allowed the characteristics of similarly sized retailers to be easily compared. The first set of questions asked the retailer about their sustainability department and budgets to get a context of what sustainability management means at a national level. Afterward, retailers were asked to evaluate their progress in 27 dimensions of sustainability management. Categories included 7 sections: strategy and commitment, people and tools, visibility, retail operations, supply chain, products, and environmental impacts. Information gathered from the survey afforded retailers the ability to identify the maturity of their respective programs; facilitate internal conversations about sustainability; access more funding for sustainability programs; train employees with sustainability duties; obtain buy-in from corporate leaders; and much more. According to RILA (2015), a retailer's sustainability program begins with an internal operations focus on energy and waste reduction followed by product and supply chain impacts. RILA (2015) continues to engage retailers in topics of sustainability to build business cases for the importance of CSR.

2. Sustainable Apparel Coalition (SAC)

Sustainability in the apparel/textile industry may be best tackled through the formation of “joint action” groups that bring firms together with a common goal. Formed in 2009, the Sustainable Apparel Coalition (SAC), is the apparel, footwear, and home textile industry’s foremost alliance for sustainable production. The SAC, along with its members in the apparel industry, has made major progress towards creating a global sustainability index. The SAC’s

main focus is the Higg Index. This index is a suite of self-assessment tools designed to empower brands, retailers, and facilities at every stage in their sustainability journey and to measure their environmental and social impacts. By using the Higg Index, companies gain an overall perspective on their sustainability performance. When apparel organizations enter data about their business' impact areas, a performance score is generated that can be shared with merchandising supply chain members around the world. By evaluating their sustainability performance, apparel/textile corporations can resolve inefficiencies, correct any destructive practices, and provide transparency to their stakeholders. The HIGG index is comprised of qualitative questions for corporations to address. Questions such as "Does your corporation track and measure, at least annually, energy use from all sources, including energy used on-site and purchased energy?"; "Does your manufacturing site have industrial water waste?"; and "Do you maintain a current list of emissions to air and their sources at this manufacturing site?" are used within each module. Corporations are given points for each question answered, thereby giving them an overall quantitative rating as to their performance (Sustainable Apparel Coalition, 2016).

3. The Sustainability Consortium (TSC)

The Sustainability Consortium (TSC) is a global organization cooperatively managed by Arizona State University and the University of Arkansas, with offices at Wageningen University in the Netherlands and in China. The mission is to improve the sustainability of consumer products. It is a collaborative initiative between retailers and manufacturers for the purpose of collecting data relative to the apparel industry. Members of the consortium are manufacturers, retailers, suppliers, academicians, and governmental agencies. These members work in partnership to build science-based decision tools that address sustainability concerns throughout the merchandising supply chain (TSC, 2016a).

TSC has key performance indicators (KPI's) that allow companies to track their supplier performance against many issues that relate to environmental and social impacts throughout their supply chain. The Sustainability Consortium has broad impacts across markets and supply chains; thus, driving consistent and standardized sustainability assessment throughout an organization and the value chain. For instance, Wrangler is one of TSC's members that uses KPI's to engage suppliers and to guide their own leadership concerning how to address their environmental impacts. Wrangler's goal is to assist suppliers in understanding their key sustainability issues, learning to track and measure environmental impacts, and improve working conditions (The Sustainability Consortium, 2016b).

Walmart is another organization that uses the TSC to capitalize on the production of sustainable products for its customers. The Walmart Sustainability Index was launched in 2009 in collaboration with TSC. Utilization of this index allowed for the evaluation of sustainability performance for over 1700 suppliers. According to TSC (2016b), Walmart enables retailers and their suppliers to: improve the sustainability of the products their customers want and use; integrate sustainability into the business of buying and selling merchandise; reduce cost, improve product quality, create a more resilient supply chain; and strengthen customers' trust in Walmart and the brands they carry (The Sustainability Consortium, 2016b).

In the TSC 2017 Impact report, "The Call for Collective Action Across Supply Chains", TSC invites its members, partners and others globally who are working on or caring about sustainability to create real impacts through collective action around more sustainable consumer goods. TSC is focused on the following collective action areas towards sustainability:

a) Collective action in the numbers – Increasing the participation rates of supplier responding to surveys and impact reports.

b) Collective action in their words – Collective action in what suppliers state that they will do to improve their performance scores.

c) Collective action in consumer demands – Providing transparent information to consumers about where products were sourced.

d) Collective action at the company level – Taking action by developing corporate strategies involving sustainability.

This $1 trillion US dollar goal which is meant to cover $1 trillion US dollars in retail sales over the next 4 years remains a TSC commitment. This emergent collective action involving suppliers and corporations ensures that consumers receive relevant information about the goods they are purchasing (The Sustainability Consortium, 2017).

4. The Carbon Disclosure Project (CDP)

The Carbon Disclosure Project (CDP) was founded in the United Kingdom during 2000 by Paul Dickinson. His intention was to develop a global system for companies and cities so that measurements, manage styles, and environmental data could be shared. The CDP is a non-profit organization whose goal is to reduce the effects of climate change on our natural resources by providing pertinent information to businesses, investors and policy makers. Currently, there are over 4100 companies and 73 cities globally that have been using the CDP to report environmental data with respect to climate change (Dickinson, Rhodes, & Stickler, 2017).

The effects of climate change due to weather conditions, such as droughts, floods, and storms, presents a risk to a corporation's growth, productivity and supply chains. Long-term dangerous environmental effects are expected to occur if the global temperature rises above 2°C by the year 2020. A substantial reduction in emissions is required if nations expect to achieve the goal of not crossing the 2°C warming level (Pachauri and Reisinger, 2008).

Environmentally conscious corporations use innovation to persist through business and global challenges. But, can business profit their way through the effects of climate change? The World Wildlife Fund (WWF), along with the CDP, commissioned “The 3% solution: Driving Profits through Carbon Reduction” report (Tcholak-Antitch et al., 2013). For this report organizations were asked how they might gain substantial profits by reducing their carbon emissions, thus avoiding the vulnerabilities of global climate change (p. 6). The intent of this joint report was to explore if the corporate sector in the US could profitably reduce carbon emissions between now and the year 2020. The CDP and the WWF commissioned this study (Tcholak-Antitch et al., 2013) to address 3 main questions:

a) How big is the gap between the level of emissions the US corporate sector is likely to reach by 2020 and the level of emissions required to avoid the 2°C increase threshold?

b) How much of that gap can be closed profitably by the US corporate sector?

c) What other actions are needed for the US corporate sector to help stabilize the climate in the longer term?

Within this report, innovative approaches for the private sector to take in order to net billions of dollars in savings and create new business opportunities by addressing climate change as part of their sustainability mission were identified. Overall, the research reported in this report encompassed more than a decade of experience from leading organizations that have been addressing issues related to climate change. Initially, early efforts made by these corporations were to quantify and track emissions or ameliorate internal efficiency. Additionally, more current efforts have included tackling emissions and efficiency in their products and supply chains. The initiatives made by these corporations resulted in significant returns on investment and environmentally reputational benefits (Tcholak-Antitch et al., 2013). According to these authors,

2 main conclusions of the CDP and WWF research study were established: (1) business faces a gigatonne challenge, and (2) the 3% solution can drive $190 billion of net savings in 2020. In order to stay below 2°C by 2020, the corporate sector in the US must reduce total greenhouse gas emissions by 1.2 gigatonnes of CO2 from 2010 levels. This is approximately a 3% reduction per year across the US corporate sector. In addition, the 3% solution can drive a value of net savings of approximately $190 billion (USD) in 2020 across the US corporate sector based on the gigatonne challenge analysis. These savings can be realized if businesses improved energy efficiency through behavioral, management changes, or through technology improvements. Additionally, the deployment of low-carbon energy, particularly rooftop solar photovoltaics (solar PV) would also assist in a savings potential (Tcholak-Antitch et al., 2013). Figure 3 shows that the 3% Solution is profitable and there are opportunities for profit across the various sectors.

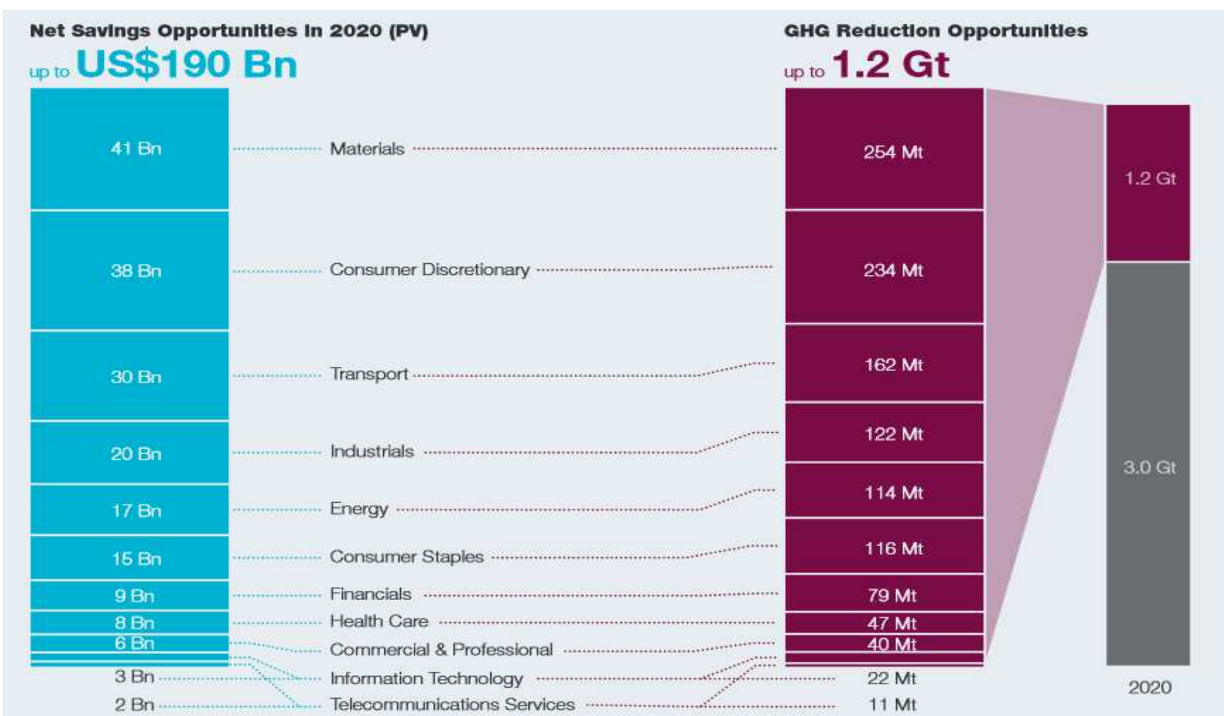

Figure 3
The 3% Solution: Driving Profits through Carbon Reduction, Tcholak-Antitch et al., 2013

Tcholak-Antitch et al. (2013) also analyzed whether or not the US corporate sector can profitably reduce emissions between now and 2020. Three key findings were prevalent in their research: low-carbon investments produce higher returns, the 3% solution allocates financial benefits, not environmental burdens, and increased capital expenditures are needed. According to Tcholak-Antitch et al. (2013), 79% of US corporations in the Standard & Poor's (S&P) 500 index report a higher return on their carbon-reduction investments than on their overall corporate capital investments. Figure 3 illustrates that some sectors have an opportunity to acquire substantial savings in proportion to their share of the potential S$190 billion (USD) savings. If corporations devoted 3-4% of their capital expenditures to emission reduction investments the opportunities would be even more significant (Tcholak-Antitch et al., 2013).

According to the Lubin and Esty (2010), many corporations do not have a plan or vision for sustainability because they are facing an unprecedented journey, which they believe has no roadmap. The reality is that sustainability is an emerging megatrend. Examples of a megatrend can be referred to as incipient societal and economic shifts, such as globalization; the rise of the information society; and the move from hierarchical organizations to networks. Lubin and Esty's (2010) research focused on business megatrends, which were influenced by important and perpetual shifts in how companies competed against one another. Megatrends in business can emerge from things such as a financial crisis, shifts in social realities, or conflict over resources. Based on research results presented by Lubin and Esty (2010), sustainability has qualified as a megatrend because environmental issues have encroached on businesses' capacity to create value for customers, shareholders, and other stakeholders over several years.

Globalized workforces and different types of supply chains, not just merchandising, have created environmental pressures and liabilities. Externalities, such as the release of carbon

dioxide emissions, water conservation, and safety are coming to the forefront as corporations consider corporate social responsibility. Investors consider these types of topics central to a firm's performance with emphasis on sustainability. These forces are magnified by escalating public and government concern about climate change, industrial pollution, food safety, and natural resource depletion. Consumers in many countries are seeking out sustainable products and services or pressuring companies to improve sustainability to create a better environment for themselves as well as the next generation (Lubin & Esty, 2010).

According to Lubin and Esty (2010), the sustainability landscape will continue to shift as more and more organizations buy in to the concept of sustainability. As this occurs, corporations will start to have a clear sense of what it means to manage sustainability as a megatrend. Resultantly, best CSR practices will emerge and the use of sustainability scorecards will allow corporations to track cost and risk reduction more effectively. Additionally, as environmental data become more precise, corporations will be able to chart their sustainability impacts in financial terms. Those corporations that are able to develop a clear vision of this sustainable megatrend will be forerunners in the corporate environmental landscape (Lubin & Esty, 2010).

F. Corporate Social Responsibility

CSR is an emergent trend and the lack of research related literature has created a void in understanding this topic as related to sustainability. Aguinis and Glavas (2012) canvassed the literature pertaining to CSR and discovered several areas where more information is needed in order to adequately evaluate corporate sustainability initiatives. This literature overview revealed that studies involving CSR mainly focused on 2 separate conceptual streams involving the individual and the corporation. Research on the individual level of analysis drew upon psychological theories and focused on normative motives, such as alignment to personal values

and awareness of CSR. Secondly, studies at the corporate level focused on institutional theory, stakeholder theory, and the resources accrued by a firm (Aguinis & Glavas, 2012).

Institutional theory examines organizational procedures and explains the causes for having similar characteristics or forms in organizations which are within a similar "organizational field" (Fernando & Lawrence, 2014). According to Dimaggio and Powell (1983), an organizational field is defined as "those organizations that constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (p. 147). Once an organizational field is regulated, various prevailing forces develop within society which cause corporations within the field to become more comparable to each other (DiMaggio & Powell, 1983). Deegan (2009) stated that institutional theory links organizational practices, such as CSR, to the values and norms of society. The current voluntary method of CSR disclosure and voluntary engagement in CSR are an institutional practice (Deegan, 2009). The stakeholder theory concerns the relationship between the corporation and its stakeholders (Ansoff, 1965). Freeman (1984) defined a stakeholder as "any group or individual who can affect or is affected by the achievements of the firm's objectives" (p. 49). This theory proposes that the management of a corporation is expected to be accountable to its stakeholders by undertaking activities deemed important to its stakeholders, and then reporting the information (Smith, 2008). By disclosing CSR information, a corporation accepts stakeholders rights to know about their operations. CSR information, therefore, reduces information asymmetry and places different categories of stakeholders on the same level. Benefits gained by a corporation participating in CSR may include improving its image/reputation; attracting investors; lowering the cost of capital; improving the retention of existing employees; attracting prospective employees; and improving

the relationship with stakeholders in order to gain their support and approval (Deegan 2009; Gray et al., 1996).

Based on the findings of Aguinis and Glavas (2012), there is a knowledge gap that needs to be evaluated in order to produce multilevel research for the incorporation of these separate conceptual streams. These authors determined that there was a lack of understanding to link CSR with outcomes, particularly mediation effects. The literature involving CSR was more focused on predictors, outcomes, and moderators than on mediators. Aguinis and Glavas (2012) grouped mediators into 2 categories: relationships and values. Relationships were viewed as associations between an organization's internal and external stakeholders or between an employee and their supervisor. Values were deemed as principles held by individuals, firms, or the internal and external stakeholders. In addition, the authors stated that moderators are classified into the “four Ps”: people (top management, supervisors, or employees); price (moderators that focus on the perceived cost of CSR); place (moderators that focus on location); and profile (moderators that focus on organizational and contextual characteristics). Therefore, results showed that information existed as to why organizations engage in CSR, but more research efforts are needed to support the understanding of the process and underlying mechanisms by which CSR actions and policies lead to specific outcomes. Another void discovered by Aguinis and Glavas (2012) in their literature review concerned the lack of information related to the perspective by the individual. A better understanding of the predictors that influence individual CSR activities is needed. CSR takes place within an organization, but the individuals strategize, make decisions and execute CSR initiatives. Also, Aguinis and Glavas (2012) revealed the lack of congruence between CSR constructs and many research designs, measurements, and data analytic tools used to empirically study CSR. Their study supported the need for novel methodologies that would

improve the moderating effect of the organization and its relationship between the psychological need of managers and employees. More qualitative studies are needed to provide a better understanding of the underlying mechanisms of CSR (Aguinis & Glavas, 2012). This research project provides a predominantly qualitative study focusing on sustainability issues in the apparel industry. CSR reporting, which includes sustainability, is essential for firms to promote transparency within their organizations currently and in the forthcoming future.

G. The Relationship between Sustainability and CSR

Corporate Social Responsibility is an important issue that corporations must embrace in order to be relevant both now and in the future. According to Aras and Crowther (2007a), environmental sustainability is central to CSR and is crucial for a corporation’s long-term survival even in financial terms. However, the concept of CSR can be challenging in that it is often perceived in regards to there being a difference between CSR activity and financial performance. In effect, one can be more damaging to the other and corporations are obligated to pursue shareholder value. In addition, there is no standard definition of CSR and no consistent standard as to how it is measured in relation to corporate performance (Ortiz-Martinez and Crowther, 2005). Therefore, it is necessary for consistent methods to be developed in order to analyze and measure sustainable CSR activity in a way that is it universally understood (Aras and Crowther, 2007a).

According to Aras and Crowther (2008), some corporations believe that sustainability is not only achievable, but that sustainable development is a real probability. But, is there a difference between sustainability and sustainable development? There are many definitions of sustainable development, but the most common definition was defined by the Brundtland Commission in 1987 as “Sustainable development is development that meets the needs of the

present without compromising the ability of future generations to meet their own needs" (United Nations General Assembly - Brundtland Commission, 1987). This definition implies that we need to protect our planet, people and resources to ensure the livelihood of future generations. Sustainability takes that definition further by emphasizing that we must balance economic, environmental, and social factors in equal harmony. In essence, sustainable development is the pathway to sustainability (Jones, 2018).

According to Aras and Crowther (2007b), there are 4 aspects of sustainability which corporations need to recognize and analyze:

- Societal influence, which they define as a measure of the impact that society makes upon the corporation in terms of the social contract and stakeholder influence;
- Environmental impact, which they define as the effect of the actions of the corporation upon its geophysical environment;
- Organizational culture, which they define as the relationship between the corporation and its internal stakeholders, particularly employees, and all aspects of that relationship and
- Finance, which they define in terms of an adequate return for the level of risk undertaken.

All 4 are equally important and must be considered as key dimensions of sustainability. Corporations that include CSR as part of their business practices recognize its benefits. Likewise, those that include sustainability recognize its importance and feature it prominently in their reports (Aras and Crowther, 2007b).

H. Punctuated Equilibrium Theory

According to Baumgartner and Jones (1993), the theory of Punctuated Equilibrium seeks to explain the simple observation of stability and incrementalism. In the case of sustainability, issues such as energy efficiency, environmental protection, and the reduction of carbon emissions have been driving the need for change. Some corporations have voiced their opinions concerning a low-carbon society and it is time for the government to take notice and provide support. Within the PET model, political processes occasionally produce significant departures from the past. Most policy areas are characterized by stasis, but crisis also can occur at times. As the public becomes more aware of sustainable issues within their environments, more demands will be expected from American politicians to make necessary changes to policy and regulations. As a result, governmental programs can be drastically changed or remain the same as in previous years. Punctuated Equilibrium Theory (PET) encompasses both stability and change, which are important elements of the policy process (Baumgartner & Jones, 1993).

Baumgartner and Jones (1993) argue that policy areas resemble a punctuated equilibrium in that political systems often see little change over a period of decades, and then equilibrium is abruptly terminated by short periods of rapid change. The concept of corporate social responsibility (CSR) reporting has a long history without government intervention. CSR essentially started in the 1950's where the primary focus was on philanthropy and an organization's responsibility to society. The social changes that took place in the 1960's were instrumental in influencing corporations. Organizations perceived that the expectations being communicated by stakeholders would have to be addressed by the firm. The relationship between CSR and the financial performance of the firm were also matters of discussion. In the 1970's, traditional management functions were applied by business managers to address CSR. This

mainly involved corporate self-interest. In the 1980's, business and social interests were main topics of concern and organizations became more responsive to their stakeholders. During the 1990's, the idea of CSR became more prevalent and more corporations started to take some form of social responsibility. In the 2000's, CSR became an important strategic issue whereby institutional changes began to take shape which made social and environmental issues an important source of corporate legitimacy (Moura-Leite & Padgett, 2011).

Baumgartner (2006) used the Punctuated Equilibrium Theory to research public awareness of environmental issues and government's response. The response from the government has typically included addressing issues which, therefore, has led to increased spending in the development of agency, programs, and policies. For example, the developments leading to the creation of the EPA in the 1970's can be traced by federal spending on environmental activities and congressional attention to the environment. The tracking of federal spending over time is available through the Policy Agendas Project for 62 categories of spending as defined by the Office of Management and Budget (OMB). The categories most indicative of environmental issues are Subfunction 272 (Energy Conservation) and 304 (Pollution Control) (Baumgartner, 2006).

According to Baumgartner (2006), federal spending on energy conservation was $0 until 1977 when $575 million was budgeted to the EPA and then moved rather quickly to $1.2 million in 1978. Clearly, this is an example of a policy not being considered relevant to the government until the price of oil went up in the mid-seventies. Federal spending on pollution was started earlier with spending initially established at $3.8 billion in 1970 and rising to $25 billion by 1973. The 'alarmed discovery" of these 2 policy areas prompted the move from no policy to spending a substantial amount within just a few years. As illustrated in Figures 4 and 5, both

energy conservation and pollution show a dramatic increase and then a leveling off soon afterwards (p. 32).

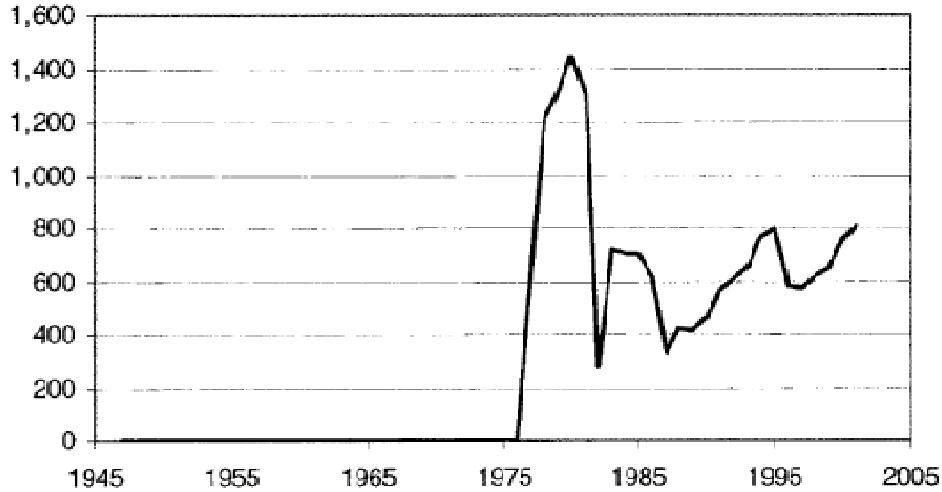

Figure 4
Federal spending on energy conservation, 1947-2001
Note: The data reflect constant FY 2000 dollars, in millions; OMB category 272, Energy Conservation. Source: Policy Agendas Project, 2006 (a).

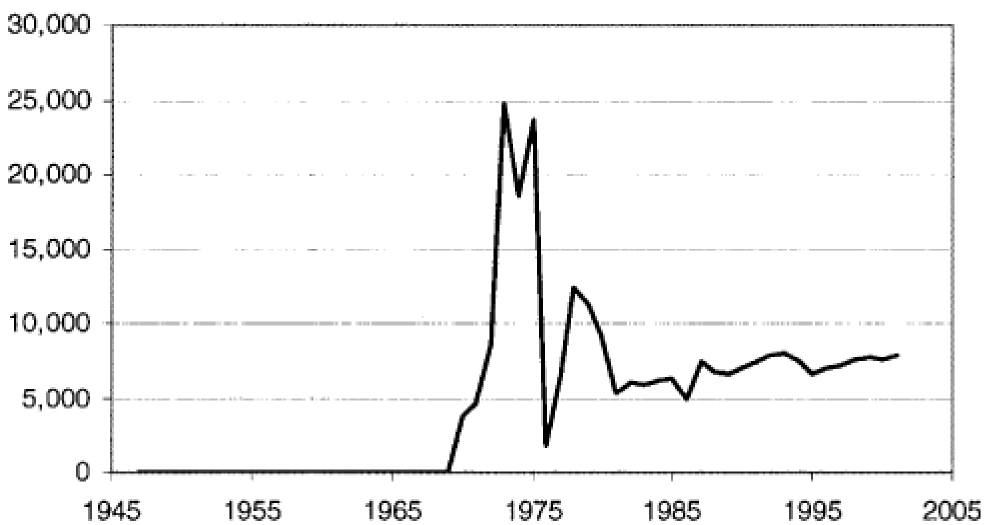

Figure 5
Federal spending on pollution control, 1947-2001
Note: The data reflect constant FY 2000 dollars, in millions; OMB category 304, Pollution Control. Source: Policy Agendas Project, 2006 (b).

To illustrate the increased federal attention to environmental matters as compared from 1945 to 2005, see Figure 6. Beyond the data on spending, these hearings included concerns pertaining to air and water pollution, protection to hazardous waste, and indoor air quality. Congressional attention to the environment more than doubled with 60 hearings being held between 1968 and 1969. As noted in Figure 6, environmental issues never faded from the congressional agenda; however, the topics of concern shifted with the times. A rise in attention in the late 1980s, nearly 3 times that of those in 1969, can be observed in this graph. The agendas of many congressional committees were focused on an enormous number of environmental issues being directed from different angles and perspectives during the peak of interest (Baumgartner, 2006).

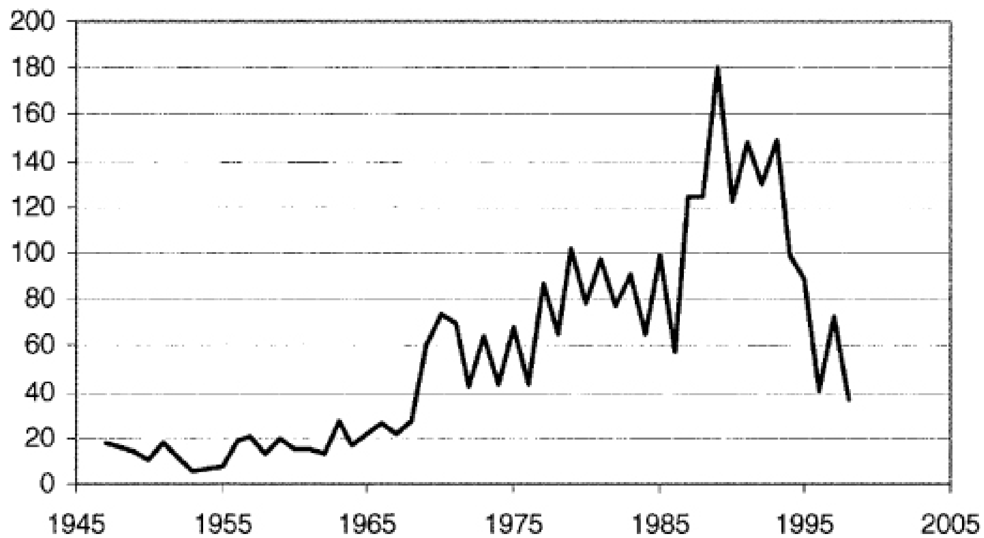

Figure 6
Congressional hearings on the environment, 1947-1998
Note: Source: Policy Agendas Project, 2006 (c).

Environmental policies are new and their histories are more recent as compared to the range of policies across the entire federal government. The initial establishment of major landmark environmental policies and major policy revisions occurred between 1970 and about

1985 (Baumgartner, 2006). For example, the Clean Air Act was established in 1970 and major policy revisions occurred in 1977 and 1990 in order to accommodate issues such as acid rain and damage to the ozone. The premise of this legislation was to protect public health and welfare from a variety of air pollutants caused from various pollution sources (EPA, 2017b). In addition, the Safe Drinking Water Act (SWDA) was passed by Congress in 1974 and amended in 1986 and 1996. The SWDA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and manufactured contaminants that may occur in drinking water (EPA, 2017c). The examples listed above have occurred in the area of environmental policy because of public outcry, interest groups, etc. which then led to change or revision.

A number of high profile policy initiatives have existed in the area of environmental policy that are not so radically different from the dynamics of the political system. Hence, the time may be right to search for positive-feedback mechanisms that can support the creation of new policy dynamics. An example of a positive feedback mechanism would be when political leaders sense that an important issue is of concern to the public or an interest group. The public may even become more concerned about the issue as the leaders speak out about it. This cycle can last for a long time depending on how much attention the issue is given. Baumgartner (2006) stated that “Significant battles surround many environmental policies, and powerful images on the side of environmental cleanup and regulation coexist with powerful free enterprise and economic growth images that often justify policies diametrically opposed to those sought by environmentalists” (p. 35). According to Baumgartner (2006), environmentalism is an area where shifting policy images can assist in explaining policy changes.

According to the EPA (2016), sustainability has emerged as a result of significant concerns about the unintended social, environmental, and economic consequences of rapid population growth, economic growth and consumption of our natural resources. In its early years, EPA acted primarily as the nation's environmental watchdog, striving to ensure that industries met legal requirements to control pollution. In subsequent years, EPA began to develop theory, tools, and practices that enabled it to move from controlling pollution to preventing it. This will be accomplished by drawing on advances in science and technology to protect human health and the environment, plus promoting innovative green business practices (EPA, 2016).

I. Global Sustainability Initiatives

COP21, otherwise known as the Paris Climate Conference, was the 21st annual meeting of all nation participants of the United Nations Framework on Climate Change and was held in December 2015. The purpose of the meeting was to assess the nation's progress in dealing with climate change and to set goals of reducing greenhouse gasses. The goal of the COP21, which was met, led to a legally binding agreement with all nation participants to keep global warming below the critical threshold of 2°C of warming. According to the 2014 Intergovernmental Panel on Climate Change (IPCC), the planet already has been warmed by .85°C since 1880. In addition, many scientists agree that the gases that corporations have already emitted into the atmosphere will accumulate to approximately 2°C of warming. Therefore, a significant amount of carbon emissions will need to be reduced in the near future, especially from large emitting countries such as the US and China. Sustainable development is also a necessity for all countries in order to reduce carbon emissions (Miller, 2015).

The Sustainable Development Goals (SDGs) were adopted at the United Nations Sustainable Development Summit held in September 2015. Seventeen goals were adopted that aim to end poverty, hunger, and inequality; improve access to health and education; build strong institutions and partnerships; and take action on climate change and the environment by 2030. According to Helen Clark (UNDP, 2015), Administrator of the United Nations Development Program, “Ours is the last generation which can head off the worst effects of climate change and the first generation with the wealth and knowledge to eradicate poverty. For this, fearless leadership from us all is needed.” The 17 Sustainable Development Goals include the following: 1) no poverty; 2) zero hunger; 3) good health and well-being; 4) quality education; 5) gender equality; 6) clean water and sanitation; 7) affordable and clean energy; 8) decent work and economic growth; 9): industry, innovation, and infrastructure; 10) reduced inequalities; 11) sustainable cities and communities; 12) responsible consumption and production; 13) climate action; 14) life below water; 15) life on land; 16) peace, justice and strong institutions; and 17) partnerships for the goals (UNDP, 2015).

A symbiotic relationship between the SDGs and COP21 exists. The SDGs clarify the connection between climate change and fundamental human rights such as life, health, security, food and water, housing, and self-determination. COP21 provides an opportunity to enhance this connection. The unification of global agendas will provide opportunities for policy makers to negotiate sound climate agreements. The movement away from a parochial world view where the economy, environment, and development are seen as separate issues will result in progress; therefore, halting further destruction of human rights and the environment. Climate change affects human health and human rights through weather events, flooding, food insecurity, and

poor air and water quality. Those likely to suffer are vulnerable and resource deficient communities.

The SDGs support the goals of the COP21 in various ways. For instance, SDG #7 focuses on “affordable and clean energy”. COP21 can reinforce this goal by applying MRV plans to achieve access to energy sources for the advancement of living standards within poorer nations. Another example is SDG #13 which concerns climate action. In this case, COP21 has an ideal opportunity to apply MRV plans that meet this goal and to further acknowledge that a rise of 2°C is an environmental threat to our planet. Therefore, SDGs and COP21 are mutually enforcing and beneficial to our existence by sustaining and creating a better quality of life (Sorensen & Lemery, 2015).

In June 2016, The Chicago Council on Global Affairs surveyed 2,061 Americans and found that the majority of Americans supported the COP 21 Paris Climate Agreement. In general, this was a notable finding on a haphazard topic. According to Figure 7, the following question was asked concerning the Paris Climate Agreement on climate change (Martin, 2016): Based on what you know, do you think the US should or should not participate in the following treaty and agreement: the Paris Climate Agreement that calls for countries to collectively reduce their emissions of greenhouse gases? (Martin, 2016). As is depicted in Figure 7, the survey conducted by The Chicago Council illustrates strong bipartisan support for the US participation in the Paris Climate Agreement. Seven in 10 US citizens (71%) agree that the US should participate in the agreement, which included the majority of Republicans (57%), Democrats (87%) and Independents (68%).

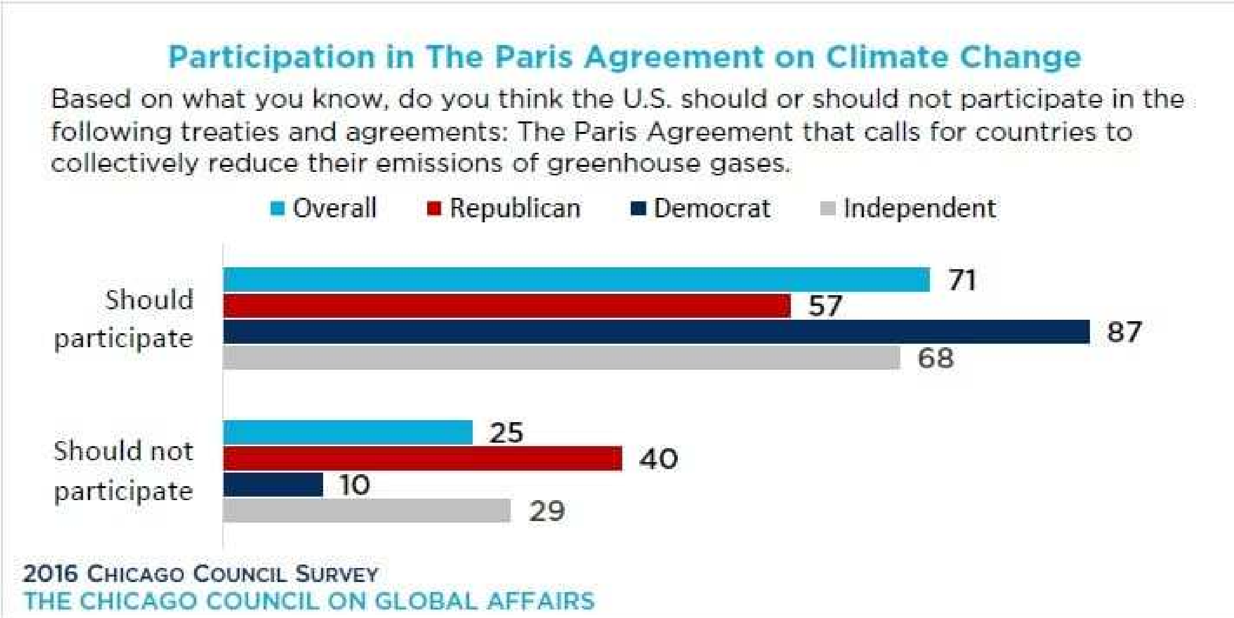

Figure 7
Participation in the Paris Agreement on Climate Change
Note: 2016 Chicago Council on Global Affairs

According to Figure 8, 41% of American people agreed that climate change is a serious and pressing problem. They thought that the US should begin taking steps to address this issue even if significant costs are involved. From previous surveys, this concern about climate change has increased 12 percentage points from 6 years ago. In the past, Americans have not been as concerned with climate as they are today (Martin, 2016).

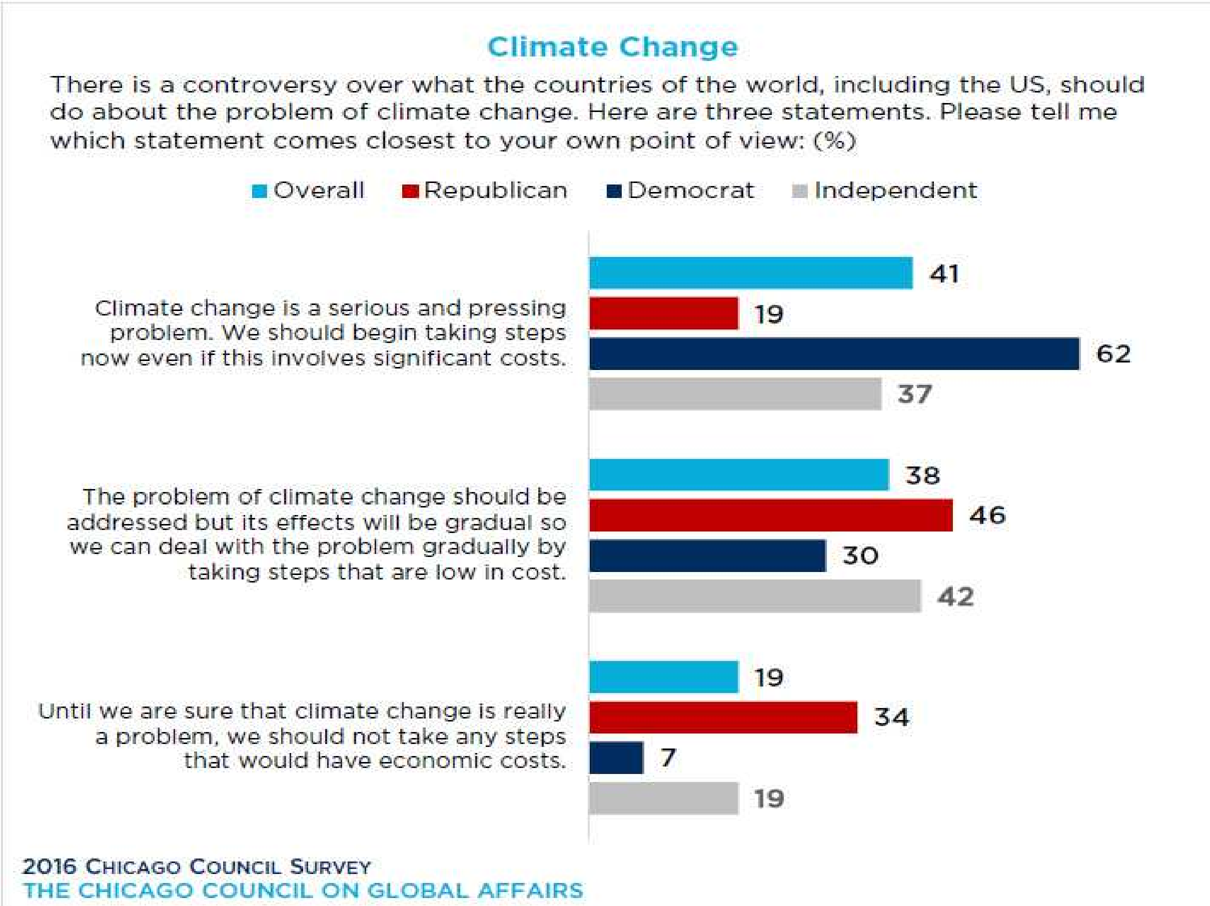

Figure 8
Climate Change Statements
Note: 2016 Chicago Council on Global Affairs

As illustrated in Figure 9, the US is currently the second largest emitter of greenhouse gases in the world, with China in the lead (Milman, Smith, & Carrington, 2017). As of the year 2016, the largest carbon emitters in the world were China, US, and India. The US Energy Information Administration projects that by 2040 carbon emissions will continue to increase by 46% worldwide. Possible measures to reduce carbon emissions could include policy pertaining to reforestation, introduction of a price for carbon, and a deduction in the use of fossil fuels (Burck, Marten, & Bals, 2016). While environmental laws do exist, they compose only a part of the legal framework being used to achieve sustainability. The urgency of this task requires research to provide information, tools, and ideas that policymakers, both state and federal, and

corporations can use to address the challenges and opportunities of sustainability (Dernbach & Mintz, 2011).

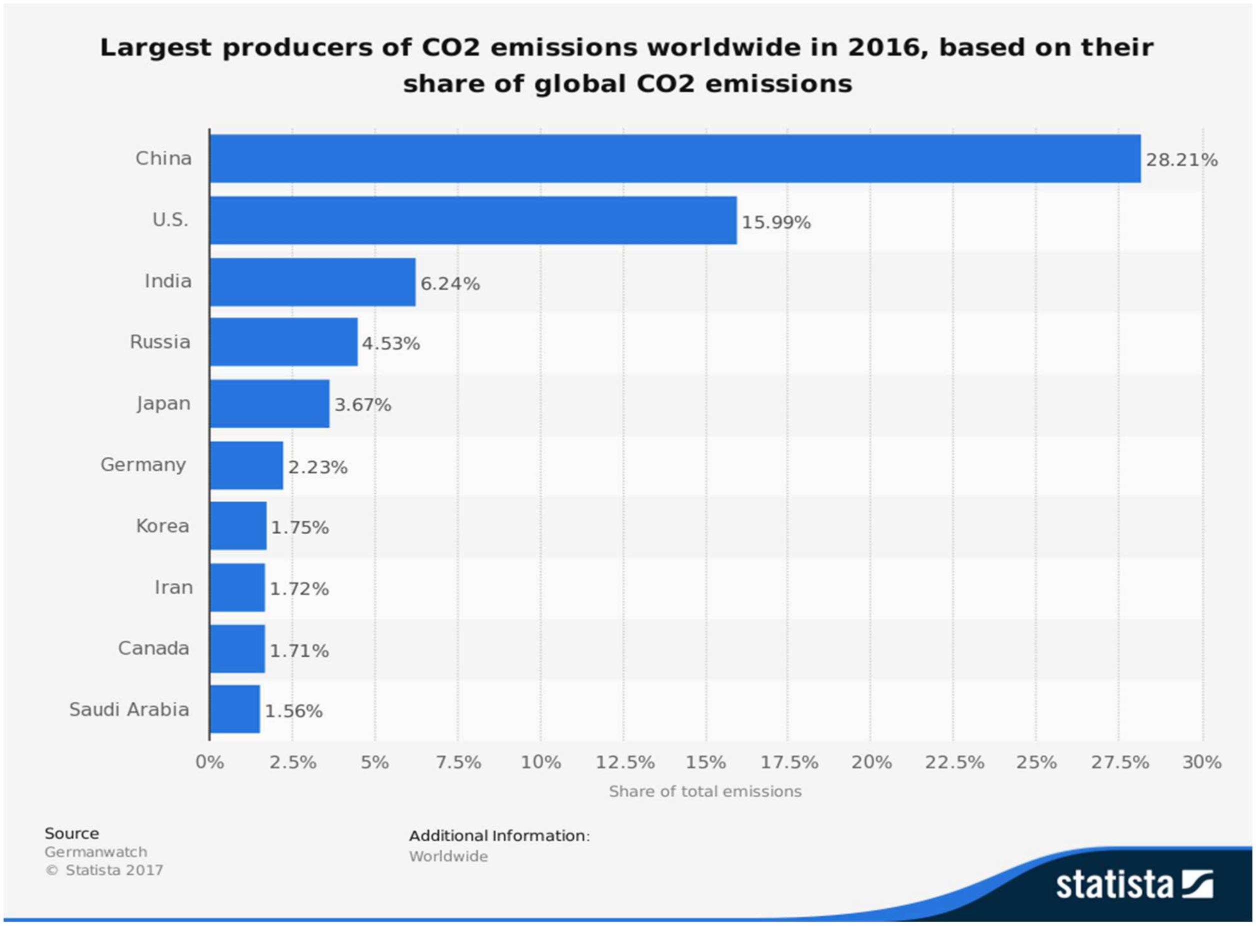

Figure 9
Largest Producers of CO2 emissions worldwide in 2016
Note: CO2 Emissions by Country, 2017: Statista

In June 2017, President Trump announced his intention to pull the US out of the Paris agreement. He stated that the Paris agreement enacted unfair environmental standards on US businesses and that American employees in the coal, steel and other manufacturing industries would lose their jobs. However, some US corporations in the oil, power, retail, transportation and technology industries voiced their opposition and claimed that their companies were going to pursue a lower-emission strategy. Currently, over 1,000 US companies and investors with over

1.2 trillion USD in annual revenue have now signed the Business Backs Low-Carbon USA statement, which requests continued support for low-carbon policies. Additionally, expectations from investors, activists, and customers are advocating the need for a low-carbon economy. (Smith, 2017). Furthermore, some corporations are taking advantage of the SDG's and utilizing them into their sustainability initiatives.

The SDG's provide an opportunity for corporations to codify the global community's commitment to end poverty, ensure prosperity, and to protect the planet. According to the GreenBiz report, "From 'My World' to 'Our World' – What the Sustainable Development Goals (SDGs) Mean for Business," there are 5 activities that corporations can do to realize the full potential of utilizing the SDG's within their establishment.

1. Companies can line up the SDGs and assess the implications for their business and consider how their existing policies, processes and programs align with the goals, and identify any gaps. A rigorous assessment can identify risks and tangible opportunities.
2. The SDGs can be the stimulus for action in things such as launching a new community program or refreshing their sustainability strategy.
3. The SDGs can be a tool for setting targets. With a high level of buy-in from so many global organizations, the goals should be part of setting new objectives, or reviewing existing ones.
4. The SDGs can be used as a framework for impact measurement. It brings up some fascinating challenges around measurement and opens up opportunities to develop better metrics.

5. The SDG's can be utilized in corporate external communications, such as reporting. Other possibilities may be for corporations to decide to produce stand-alone SDG Reports on their contribution to the goals (Hardyment, 2015).

The SDGs offer an inspiring opportunity for corporations to attain substantial gains in reducing poverty and securing a more sustainable future for humankind and the world. While CSR is a voluntary activity to businesses, the fulfilment of incorporating the SDGS into business activities might overall rely on corporate social obligation (Dahlsrud, 2008; Kolk, 2005). According to Scheyvens, Banks, & Hughes (2016), government should create a supporting environment for corporations to address the SDG's by enacting legislation to indulge organizations to be more environmentally responsible. Gore (2015) states that "achieving new global goals will require new global rules" (p. 728).

J. Conclusion

Over the past decade, environmental issues have posed tough challenges in the apparel industry. These issues include climate change, protecting nature and biodiversity, and resource and waste management. The development of these problems typically takes a long time to accrue. Many of them are camouflaged by corporate acceptance of common sustainable practices. With thousands of apparel corporations operating on a global scale, consumer interest in corporate sustainability practices has become evident over the last 10 years. Some corporations have spent money and time on social and environmental responsibilities that result in the improvement of both environmental and economic performances of their organizations. Issues, such as climate change, diminishing petroleum resources, shortages of water, pollution, and contamination of air, land, and water are all environmental factors that need addressing (Kunz & Garner, 2011). Only through the collaboration of such organizations as the Sustainable

Apparel Coalition, The Sustainability Consortium, CDP, and the government, will apparel corporations be able to make a positive impact throughout their organizations on present and future sustainability issues with emphases on society, the environment, and consumer behavior. The understanding of how to utilize the sustainable development goals within a corporation would accentuate their global efforts toward building a sustainable future. In addition, the efforts by some apparel retailing corporation towards the avocation of environmental issues illustrate their concern for legislation that will further support sustainability policy as would be indicated through the Punctuated Equilibrium Theory. This mixed methods research study focuses on sustainability reporting in the apparel retailing industry by analyzing information from CDP's Climate Change Information Request form, online sustainability survey, and the sustainability reports of apparel retailing corporations. In lieu of the research project, possible policy could be created that will benefit apparel retail corporations and motivate others to follow in their footsteps.

III. Research Methodology

A. Introduction

Some apparel retail corporations have made the commitment to implement sustainability policies and programs, while others have not. Why has this occurred? Part of the answer lies in the lack of current sustainability policy within the apparel industry. This research study has focused on determining the need for apparel industry sustainability policy, plus standardizing the sustainability reports for all corporations.

This research utilized a mixed methods approach with the primary focus being the evaluation of emission reduction, governmental influence, sustainability reporting, and climate change initiatives. According to Creswell and Plano-Clark (2018), a mixed methods approach allows the researcher to rigorously collect and analyze both quantitative and qualitative data in a single study either concurrently or sequentially. The researcher combines the 2 forms of data to interpret their results, organizes the information into a specific research design that is logical to the study, and frames the data collected within theory and philosophy (Creswell and Plano-Clark, 2018).

In regards to the use of both qualitative and quantitative methods in the same study, much debate has ensued particularly arguing that these 2 paradigms differ epistemologically and ontologically (Hunt, 1991). According to Hinds (1989), when these methods are combined together there is a great chance that any flaws of one method will neutralize and strengthen the benefits of the other. He also stated that by combining both methods "increases the ability to rule out rival explanations of observed change and reduces skepticism of change-related findings" (p. 442).

One of the issues that researches are faced with when dealing with the use of both qualitative and quantitative methods is how to combine them into the same study. Morse (1991) suggests the following 2 ways to triangulate both quantitative and qualitative methods:

1. Qualitative methods used as preliminary inquiries in a quantitative study; whereby, qualitative methods are regarded as supplementary methods.
2. Quantitative methods precede as preliminary inquiry in a qualitative study in the sense that quantitative methods are regarded as auxiliary methods. (p. 120).

All of the significant features of quantitative and qualitative research need to be considered for a researcher to mix research methods in an effective manner. The researcher must have some understanding of the major characteristics of both qualitative and quantitative methods in order to make an assessment about his/her research. Traditionally, quantitative research focuses on deduction, confirmation, hypothesis testing, explanation, prediction, standardized data collection, and statistical analysis. On the other hand, qualitative methods traditionally focus on induction, discovery, exploration, hypothesis generation, and the researcher as being the primary instrument of data collection and qualitative analysis (Johnson & Onwuegbuzie, 2004).

Overall, wherever qualitative and quantitative methods are used in the same study, it is assumed that the researcher has a clear understanding of the ontological and epistemological position of the phenomenon prior to the investigation (Denzin & Lincoln, 1994). Mixed method research can incorporate the strength of both quantitative and qualitative techniques if understood properly. It has the potential to promote a shared responsibility in attaining accountability in research quality. A strength of mixed method research is that it can provide stronger confirmation for a conclusion through convergence and validation of findings (Johnson

& Onwuegbuzie, 2004). The following contains information pertaining to the research design, data collection methods, instruments and data, and data analysis.

B. Research Design

The concurrent nested/embedded research design was utilized in this research. This research design can be identified by the use of one data collection phase during which quantitative data and qualitative data are both collected at the same time. This design entails a dominate method, either quantitative or qualitative, that guides the project. Either the quantitative or qualitative method is given less priority and is therefore embedded within the predominate method. In this case, the embedded method typically addresses a question different from that addressed by the dominant method. The collected data obtained from the 2 methods are mixed during the analysis phase of the project and may or may not have a guiding theoretical perspective (Plano-Clark and Creswell, 2008). Figure 10 illustrates the concept of the concurrent nested/embedded design. This research project utilized a predominately qualitative method embedded with quantitative research.

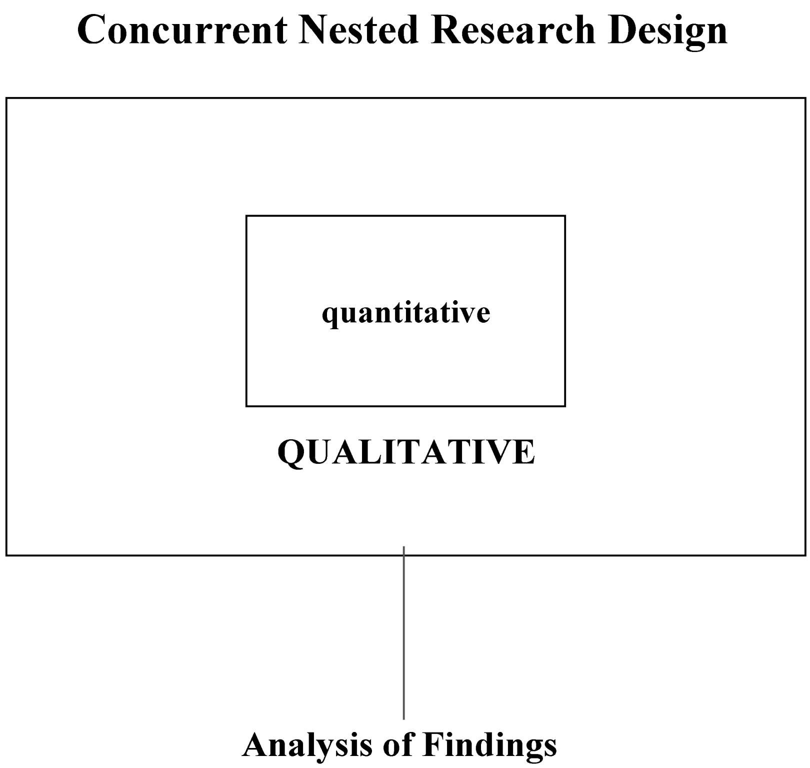

Figure 10
Concurrent Nested Research Design
Note: Creswell, Plano-Clark, Gutmann, & Hanson, 2003

According to Morse (1991), a largely qualitative design could embed some quantitative data to supplement the description of the sample participants. In addition, the same would be valid for the embedding of qualitative data in a primarily quantitative design. By using this concurrent nested/embedded research design, a researcher is able to simultaneously collect information during one data collection phase. A researcher can also gain different perspectives by observing the different types of data collected within the study (Plano-Clark and Creswell, 2008).

C. Data Collection

For this study, 14 apparel retailing corporation were chosen as samples. Convenient sampling technique was implemented to collect data from these samples. IRB approval

(Appendix A) was obtained prior to data collection. A brief description of the 14 corporations being studied is as follows:

1. Abercrombie & Fitch Co. - Abercrombie & Fitch Co. (A&F), was incorporated in Delaware in 1996. They are a specialty retailer who primarily sells its products through store and direct-to-consumer operations, as well as through various wholesale, franchise and licensing arrangements. The Company offers a broad array of apparel products, including knit tops, woven shirts, graphic t-shirts, fleece, sweaters, jeans, woven pants, shorts, outerwear, dresses, intimates and swimwear; and personal care products and accessories for men, women and kids under the Abercrombie & Fitch, Abercrombie Kids, Hollister and Gilly Hicks brands. The Company has operations in North America, Europe, Asia and the Middle East. Currently, A&F operates 709 stores in the US and 189 stores outside of the US. They employ approximately 43,000 associates, of which approximately 35,000 are part-time associates. Their 2016 overall revenue was 3.32 billion (Abercrombie & Fitch, 2016).
2. Gap, Inc. - Gap is one of the world's most iconic apparel and accessories brands anchored in optimistic, casual, American style. Founded in San Francisco in 1969, the brand's collections continue to build the foundation of modern wardrobes - all things denim, tees, button-downs, and khakis, along with must-have trends. Gap is designed to build the foundation of modern wardrobes through every stage of life with apparel and accessories for adult men and women under the Gap name, in addition to GapKids, BabyGap, GapMaternity, GapBody, and GapFit collections. Beginning in 1987 with the opening of the first store outside North America in London, Gap continues to connect with customers around the world through specialty stores, online, and franchise stores. In

addition, they bring their brand to value-conscious customers, with exclusively designed collections for Gap Outlet and Gap Factory stores and websites. Gap has a workforce of approximately 135,000 employees, which includes a combination of part-time and full-time employees. They also hire seasonal employees, primarily during the peak holiday selling season. Their 2016 overall revenue was $16.1 billion (Gap, Inc., 2016).

3. Hanesbrands Inc. - Founded in 1901, Hanesbrands was organized as a Maryland corporation in 2005 and spun off from Sara Lee Corporation in 2006. They primarily sell bras, panties, shapewear, hosiery, men’s underwear, children’s underwear, socks, T-shirts and other activewear in the Americas, Europe, Australia and Asia. In the US, Hanes sells more units of intimate apparel, male underwear and children’s underwear than any other brand. Unlike most apparel companies, Hanesbrands primarily operates its own manufacturing facilities. More than 70% of the apparel units that they sell are manufactured in their own plants or those of dedicated contractors. Currently, they have approximately 67,800 employees, approximately 7,800 of whom are located in the United States. Their 2016 overall revenue was $6.03 billion (Hanesbrands, Inc., 2016).
4. JCPenney - Founded by James Cash Penney in 1902, the company has grown to be a major retailer, operating 1,013 department stores in 49 states and Puerto Rico. The business consists of selling merchandise and services to consumers’ throughout department stores and their website at jcpenney.com, which utilizes fully optimized applications for desktop, mobile and tablet devices. The department stores and website generally serve the same type of customers. The website offers virtually the same mix of merchandise as their store assortment plus other extended categories that are not offered in-store. Online customer purchases are fulfilled by direct shipment to the customer from

distribution facilities and stores or from their suppliers' warehouses and by in-store customer pick up. Family apparel and footwear, accessories, fine and fashion jewelry, beauty products through Sephora inside JCPenney (JCP) stores, home furnishings and large appliances are sold. In addition, these department stores provide their customers with services such as a styling salon, optical sales, portrait photography and custom decorating. JCP employs approximately 106,000 full-time and part-time employees. Their 2016 overall revenue was $12.5 billion (JCPenney, 2016).

5. Kohls Corporation - Kohl’s Corporation was organized in 1988 and is a Wisconsin based corporation. Kohl’s operates 1,154 Kohl's department stores, a website (www.Kohls.com), 12 FILA outlets, and three Off-Aisle clearance centers. Kohl's stores and website sell moderately-priced private label, exclusive and national brand apparel, footwear, accessories, beauty and home products. Kohl's stores generally carry a consistent merchandise assortment with some differences attributable to local preferences. The Kohl’s website includes merchandise that is available in their stores, as well as merchandise that is available only on-line. The merchandise mix includes both national brands and private and exclusive brands that are available only at Kohl's. Most of the private brands are well-known established brands such as Apt. 9, Croft & Barrow, Jumping Beans, SO and Sonoma Goods for Life. Examples of exclusive brands include Food Network, Jennifer Lopez, Marc Anthony, Rock & Republic and Simply Vera - Vera Wang. Kohl’s employs approximately 138,000 associates, including approximately 32,000 fulltime and 106,000 part-time. The 2016 overall revenue was $18.7 billion (Kohl’s Corporation, 2016).

6. L Brands, Inc. - L Brands, Inc. operates in the highly competitive specialty retail business. Founded in 1963 in Columbus, Ohio, this retailer has evolved from an apparel-based specialty retailer to a segment leader focused on women's intimate and other apparel, personal care, beauty and home fragrance categories. Merchandise is sold through company-owned specialty retail stores in the US, Canada, United Kingdom (UK) and Greater China (China and Hong Kong), which are primarily mall-based; through websites; and through international franchise, license and wholesale partners. The brand portfolio consists of nationally and internationally recognized brand names, including Victoria's Secret, Bath & Body Works, La Senza, and Henri Bendel. More than 88,000 associates are employed with approximately 3,005 retail operations being owned. The 2016 overall revenue was 12.6 billion (L Brands, Inc., 2016).
7. Levis Strauss & Co. - From its California Gold Rush beginnings, Levi Strauss & Co. has grown into one of the world's largest brand-name apparel companies. The corporation includes Levi's, Dockers, Signature by Levi Strauss & Co., and Denizen brands. The company designs, markets, and sells globally - directly or through third parties and licensees – products that include jeans, casual and dress pants, tops, shorts, skirts, jackets, footwear, and related accessories for men, women and children. The Levi's brand has become one of the most widely recognized brands in the history of the apparel industry. Its broad distribution reflects the brand's appeal across consumers of all ages and lifestyles. Its merchandising and marketing reflect the brand's core attributes: authentic, courageous, confident, effortless, connected and purposeful. Levi Straus & Co. employs approximately 13,200 people, approximately 6,200 of whom are located in the Americas, 3,800 in Europe, and 3,200 in Asia. Approximately 1,900 employees are associated with

the manufacturing and procurement of products; 6,600 work in retail, including seasonal employees; 1,300 work in distribution; and 3,400 are classified as being other non-production employees. The 2016 overall revenue was $4.6 billion (Levi Strauss & Co., 2016).

8. Macy's, Inc. - Macy's, Inc. is one of the nation's premier retailers. With fiscal 2016 sales of $25.778 billion and approximately 140,000 employees, the company operates more than 700 department stores under the nameplates Macy's and Bloomingdale's, and approximately 125 specialty stores that include Bloomingdale's The Outlet, Bluemercury and Macy's Backstage. Macy's, Inc. operates stores in 45 states, the District of Columbia, Guam and Puerto Rico, as well as macys.com, bloomingdales.com and bluemercury.com. Bloomingdale's stores in Dubai and Kuwait are operated by the Al Tayer Group LLC under license agreements. Macy's, Inc. has corporate offices in Cincinnati, Ohio and New York, New York (Macy's, Inc., 2016).
9. Nike, Inc. - Nike was incorporated in 1967 under the laws of the State of Oregon. The principal business activity is the design, development and worldwide marketing and selling of athletic footwear, apparel, equipment, accessories and services. Nike is the largest seller of athletic footwear and apparel in the world. Its products are sold to retail accounts through Nike -owned retail stores and internet websites plus a mix of independent distributors and licensees throughout the world. Virtually all Nike products are manufactured by independent contractors. Nearly all footwear and apparel products are produced outside the US, while equipment products are produced both in the US and abroad. The focus of the Nike brand product offerings falls into 9 key categories: Running, Basketball, the Jordan Brand, Football (Soccer), Men's Training, Women's

Training, Action Sports, Sportswear (sports-inspired lifestyle products) and Golf. Also, marketed are products designed for kids, as well as for other athletic and recreational uses such as cricket, lacrosse, tennis, volleyball, wrestling, walking and outdoor activities. Nike has approximately 70,700 employees worldwide, including retail and part-time employees. The 2016 overall revenue was $32.4 billion (Nike, 2016b).

10. Nordstrom, Inc. - Founded in 1901 as a retail shoe business in Seattle, Nordstrom later went on to become one of the leading fashion specialty retailers based in the US. Nordstrom operates 344 US stores located in 40 states as well as a robust ecommerce business through Nordstrom.com, Nordstromrack.com/HauteLook and TrunkClub.com. Five Nordstrom full-line stores are operated in Canada. The west and east coasts of the US are the areas in which there is the largest presence. Nordstrom employs approximately 72,500 employees on a full- or part-time basis. The 2016 overall revenue was $14.2 billion (Nordstrom, Inc., 2016).
11. PVH Corporation - One of the largest apparel companies in the world, with a history going back over 135 years. It has over 30,000 associates operating in over 40 countries. The brand portfolio consists of nationally and internationally recognized brand names, including the global designer lifestyle brands Calvin Klein and Tommy Hilfiger, as well as Van Heusen, Izod, Arrow, Warner's, Olga and Eagle, which are owned brands. Speedo, Geoffrey Beene, Kenneth Cole New York, Kenneth Cole Reaction, Sean John, MICHAEL Michael Kors, Michael Kors Collection and Chaps, which are licensed, as well as various other owned, licensed and private label brands also are part of the brand portfolio. The 2016 revenue was $8 billion (PVH Corporation, 2016).

12. Target Corporation - Target Corporation was incorporated in Minnesota in 1902. This retailer offers customers, referred to as "guests," everyday essentials and fashionable, differentiated merchandise at discounted prices. Approximately 323,000 full-time, part-time and seasonal employees, referred to as "team members" are employed in the 1802 stores. Competition is with traditional and internet retailers, including off-price general merchandise retailers, apparel retailers, wholesale clubs, category specific retailers, drug stores, supermarkets, and other forms of retail commerce. The 2016 overall revenue was $69 billion (Target Corporation, 2016).
13. TJX Companies, Inc. - The TJX Companies, Inc. (TJX) are the leading off-price apparel and home fashions retailers in the US and worldwide. There are over 3,800 stores that offer on a daily basis a rapidly changing assortment of quality, fashionable, brand name and designer merchandise at prices generally 20% to 60% below department and specialty store regular retail prices on comparable merchandise. These stores are known for value proposition of brand, fashion, price and quality. Opportunistic buying strategies and a flexible business model differentiate this retailer from traditional ones. There are approximately 235,000 employees, many of whom work less than 40 hour per week. The 2016 overall revenue was $33 billion (TJX Companies, Inc., 2016).
14. VF Corporation - VF Corporation, organized in 1899, is a global leader in the design, production, procurement, marketing and distribution of branded lifestyle apparel, footwear and related products. VF is diversified across brands, product categories, channels of distribution, geographies and consumer demographics. A broad portfolio of brands in the outerwear, footwear, denim, backpack, luggage, accessory, sportswear, occupational and performance apparel categories is owned. The largest brands are Vans,

The North Face, Timberland, Wrangler, Lee, Majestic, Nautica and Kipling. VF has approximately 69,000 employees of which approximately 31,000 are located in the US The 2016 overall revenue was $12 billion (VF Corporation, 2016).

D. Instruments and Data

This research project utilized 3 different methods for data collection in relation to sustainability practices within apparel retailing corporations. The methods used are as follows:

1. **Online Sustainability Survey**

An online survey that focused on sustainability reporting and governmental influence was administered to sustainability executives within each corporation. A collection of qualitative and quantitative data was obtained via this survey. A convenient sampling strategy was used in regards to asking the same questions to the personnel holding a sustainability position at the 14 different apparel retailers. The survey was broken down into asking the participants questions in the categories of sustainability reporting, the Carbon Disclosure Project (CDP), and public policy. See Appendix B for the full survey that was distributed to these organizations.

Overall, 19 questions were asked to the corporate executives for the purposes of obtaining information on their stance concerning if there should be policy and/or policy changes issued from the US government with respect to the sustainability practices of apparel retailing corporations. Additionally, the survey was used to gain insight as to what type of current sustainability reporting methods are being used by apparel retailers and their suppliers in the apparel industry and if CDP was an adequate external source of corporate sustainability reporting.

2. CDP Climate Change Request Form

The CDP, a not-for-profit organization, has created a global disclosure system used to work with corporations to manage the reduction in greenhouse gas emissions and mitigate climate change risk through self-reporting. CDP predominately requests information from corporations in 3 different areas of focus – climate, water, and forests. The program that was utilized throughout this research focused on CDP's Climate Change Request form as an instrument for secondary data pertaining to apparel retailing corporations. The Climate Change Request form focuses on CO_2 emissions, climate change initiatives, as well as public policy and legislation (CDP, 2017).

Information pertaining to Scope 1 and Scope 2 Greenhouse gas (GHG) emissions from 10 apparel retailers out of the 14 was assessed for the years 2012-2017. The reason for choosing only 10 corporations was because of their longevity in association with CDP. Scope 1 emissions refers to Direct Greenhouse Gas emissions produced from sources that are owned or controlled by an organization. Scope 2 emissions refer to Energy Indirect GHG emissions from the generation of purchased electricity, heat, or other sources of energy consumed by a company (Boles, 2015).

CDP provided an adequate source of collective quantitative data pertaining to each corporation's emission usage. An analysis of each corporation's Scope 1 and 2 emissions provided insight as to whether or not there was a significant impact on the environment due to the sustainability practices followed by apparel retailing organizations. In addition, the CDP form provided information as to the type of legislative issues that these 14 apparel retailers are focusing on with policy makers.

3. Sustainability Reporting

To gather more information and to analyze the sustainability reporting procedure, corporate published sustainability reports were used to explore the sustainability initiatives pertaining to the 14 corporations. All of these sustainability reports consisted of publicly published information about each corporation's economic, environmental and social impacts through either a CSR report, website, or sustainability report, etc. The reporting methods represented each corporation's values, sustainability strategy and commitments to a sustainable global economy. Information about each individual organization's sustainability initiatives was explored and analyzed to observe the corporations sustainability policies, method of reporting, governmental policy advocacy, affiliations, and environmental concerns. By obtaining this information, commonalities between corporations were identified and themes became apparent.

E. Data Analysis

The data obtained from the above mentioned methods were analyzed to answer the following research questions by using the Concurrent Nested Research Design Method:

Research Question 1. What are the methods being followed for sustainability reporting in the apparel industry? What policies pertaining to sustainability are observed on the organizations sustainability report and what are the legislative issues most important to apparel retailers according to their CDP input?

Research question 1 focused on the methods being followed for sustainability reporting in the apparel retailing industry. The intent of this question was to explore if there was an inconsistency in reporting terminology and also to observe what type of information was being reported according to topics covered. Content analysis was utilized to determine theme identification from the sustainability reports representative of each corporation. Governmental

policies pertaining to sustainability were also observed from each organizations sustainability report as well as the issues most important to apparel retailers according to their survey response. Collectively, part of the sustainability survey, part of CDP report, and each corporation's sustainability report was utilized to address research Question 1. The overall primary focus of this question was the qualitative data.

Research Question 2. Is there a significant impact on the environment due to the sustainability practices followed by apparel organizations?

Information obtained from the CDP Climate Change Request form was used to answer the question of whether or not there is an impact on the environment due to the sustainability practices followed by apparel retailing organizations. It is evident that some apparel retail corporations have made the commitment to implement sustainability policies and programs. However, the degree of success of these efforts in addressing the environmental concerns longitudinally has not been determined. This question was designed to address the sustainability efforts implemented and followed by major apparel retailing corporations during the periods between 2013 and 2017. Although 14 apparel retailers were chosen for this project, only 10 have been reporting data to CDP for the past consecutive 5 years. Quantitative data were analyzed by observing CO_2 emissions. Repeated measure ANOVA was performed using SPSS 24.

Research Question 3. What type of policy changes should the US government implement in regards to the sustainability initiatives of apparel corporations?

The focus of research question 3 pertained to the type of policy changes that the US government should implement towards the sustainability initiatives of apparel retailing corporations. Policy questions were asked on the survey and responses were recorded. In

addition, Likert type questions were asked and corporations responded by replying with Strongly Agree (SA) to Strongly Disagree (SD). For this question, qualitative data and quantitative data (Descriptive Statistics) from the online survey were analyzed.

Research Question 4. Can the Punctuated Equilibrium Theory be used to explain the current scenario of apparel retailing corporation's efforts towards securing governmental support in the regulation of sustainability practices and reporting?

Qualitative and quantitative data were both used to explain the current situation of apparel retailing corporations' efforts toward securing governmental support in the regulation of sustainability practices and reporting. Currently, the apparel retailing corporations, interest groups, consumers, and/or stakeholders are currently reaching out to legislators for change. Some of the issues with which these groups are concerned with include reducing carbon emissions; energy efficiency; environmental protection; and clean energy utilization (CDP, 2017). The IPCC (2014) states that the continued release of greenhouse gas emissions will result in continued warming and ongoing fluctuations in the climate system. Substantial and sustained reductions in greenhouse gas emissions is needed to limit climate change disasters (IPCC, 2014). Ongoing threats to the environment should be enough to warrant governmental support that will, in effect, create new sustainability policy that will ensure the needed support for apparel retailing corporations to do their part in making a difference for our planet.

The external changes related to sustainability policy can be explained by the Punctuated Equilibrium Model. Some of the sustainability issues that corporations are currently focused on with legislators are the reduction of carbon emissions, energy efficiency, environmental protection, clean energy. These are all forces that are punctuating a system to drive change in environmental policy. Policy makers have been made aware of the consequences of disastrous

events that could disrupt the environment by interest groups, consumer advocacy groups, stake-holders and corporations. The on-going push for change by the aforementioned groups will drive policy makers into examining the consequences and creating new sustainability policy.

IV. Analysis and Presentation of Data

A. Introduction

The purpose of this study was to analyze US apparel retail corporations that publish sustainability reports in order to determine if there is a need for governmental support. Fourteen total apparel retailing corporations were studied and evaluated. This research utilized a mixed methods approach with the primary focus being the evaluation of emission reduction, governmental influence, and sustainability initiatives. Specifically, the concurrent nested research design was utilized in this project. This research design is identified by its use of one data collection phase whereby both quantitative and qualitative data are collected at the same time. In this research design, one method guides the study and the other method is given less priority (Creswell et al., 2003). Throughout this study, qualitative data collection was the dominate method and quantitative data collection was embedded accordingly. In the concurrent nested research design, the embedded data address a different question from that addressed by the dominant method (Creswell et al., 2003). This particular research design was used so that a broader perspective could be gained and not hampered by only using the predominant method. By utilizing this particular mixed method design, data were collected simultaneously. In addition, these 2 different methods allowed the researcher to gain different perspectives from the data analysis.

B. Instruments and Data

In order to collect data related to sustainability practices within apparel retailing corporations, the following 3 different research tools were utilized:

1. **Online Sustainability Survey**

A survey that focused on sustainability reporting and governmental influence was administed to a sustainability executive within each corporation. Both qualitative and

quantitative data were collected via this survey. The same questions were asked of the personnel holding a sustainability position at the 14 different apparel retailers as part of a convenient sampling strategy. The survey was divided into 3 different areas and the respective executives were asked several questions.

A total of 19 questions were asked for the purposes of determining if there should be sustainability policy and/or policy changes issued from the US government. In addition, the online sustainability survey was used to gain insight as to what types of current sustainability reporting methods are being used by apparel retailers and their suppliers in the apparel industry and if CDP was an acceptable third party source of corporate sustainability reporting. Overall, 4 out of the 14 apparel retailers completed the survey and an analysis of their responses is detailed throughout this section. See Appendix 1 for the full online sustainability survey. Table 1 contains the 3 different research tools used in this study.

Table 1
Sample Survey Questions

Section	**Sample Questions**
Sustainability Reporting	1.Your stakeholders are informed of your sustainability efforts and performance through such methods as a Sustainability Report, Corporate Social Responsibility Report, Integrated Report, etc. or an equivalent. 2. Your organization follows internationally recognized standards for your sustainability reporting. a. If No, What standards do you follow, if any?

Table 1 (Cont.)
Sample Survey Questions

Section	Sample Questions
CDP	1. The sustainability initiatives that you report to such organizations as the CDP and others are adequate to address environmental issues. 2. What would you add, if anything, that CPD does not demand, to better emphasize your corporation's environmental concern?
Policy	1. The United States (US) government should require all US apparel corporations to administer sustainability reports through regulation. 2. Do you think sustainability reporting could be improved if it were regulated?

2. CDP Climate Change Request Form

The Carbon Disclosure Project (CDP) operates the global disclosure system that assists companies in measuring and managing their environmental impacts. Their mission is to aid companies to generate long-term prosperity that preserves the natural world. The global disclosure system allows companies to recognize the business benefits of disclosure and take meaningful steps to address climate change, deforestation, and water security. The program that was utilized throughout this research focused on CDP's Climate Change Request form as an instrument for secondary data pertaining to apparel retailing corporations. The Climate Change Request form focuses on CO2 emissions, climate change initiatives, as well as public policy and legislation (CDP, 2017). Information pertaining to Scope 1 and Scope 2 greenhouse gas (GHG)

emissions from 10 apparel retailers out of the 14 were assessed for the years 2012-2017 because of their longevity in association with CDP. Scope 1 refers to Direct Greenhouse Gas emissions produced from sources that are owned or controlled by an organization. Examples of Scope 1 GHG emissions are as follows:

- Stationary Combustion: from the combustion of fossil fuels (e.g. natural gas, fuel oil, propane, etc.) for comfort heating or other industrial applications.
- Mobile Combustion: from the combustion of fossil fuels (e.g. gasoline, diesel) used in the operation of vehicles or other forms of mobile transportation.
- Process Emissions: emissions released during the manufacturing process in specific industry sectors (e.g. cement, iron and steel, ammonia).
- Fugitive Emissions: unintentional release of GHG from sources including refrigerant systems and natural gas distribution.

Scope 2 refers to Energy Indirect GHG emissions from the generation of purchased electricity, heat, or other sources of energy consumed by a company (Boles, 2015).

CDP was utilized in this regard was because it proved to be an adequate source of collective data pertaining to each corporation's emission usage. An analysis of each corporations' Scope 1 and 2 emissions provided insight as to whether or not there is a significant impact on the environment due to the sustainability practices followed by apparel retailing organizations. Additionally, the CDP report provided information as to the type of legislative issues that these 14 apparel retailers are focusing on with policy makers.

3. Sustainability Reporting

A CSR report, corporate website, or sustainability report was used to explore the sustainability initiatives of the 14 apparel retailing companies. Most of these reporting methods

were publicly published information about each corporation's economic, environmental and social impacts. In addition, these reporting methods represented each corporation's values, sustainability strategy and its commitments to a sustainable global economy. Information about each individual organizations sustainability initiatives were explored, but not limited to, analyzing the corporations sustainability policies, method of reporting, governmental policy advocacy, affiliations, and environmental concerns. By obtaining this information, the various reporting methods from each apparel retailer were collected and analyses of their commonalities were observed.

C. Research Questions

The data obtained from the above mentioned methods were statistically analyzed to answer the following research questions (RQ) by using the Concurrent Nested Research Design Method:

RQ1. What are the methods being followed for sustainability reporting in the apparel industry? What policies pertaining to sustainability are observed on the organizations sustainability report and what are the legislative issues most important to apparel retailers according to their CDP input?

RQ2. Is there a significant impact on the environment due to the sustainability practices followed by apparel organizations?

RQ3. What type of policy changes should the US government implement in regards to the sustainability initiatives of apparel corporations?

RQ4. Can the Punctuated Equilibrium Theory be used to explain the current scenario of apparel retailing corporations' efforts towards securing governmental support in the regulation of sustainability practices and reporting? (Chapter 5)

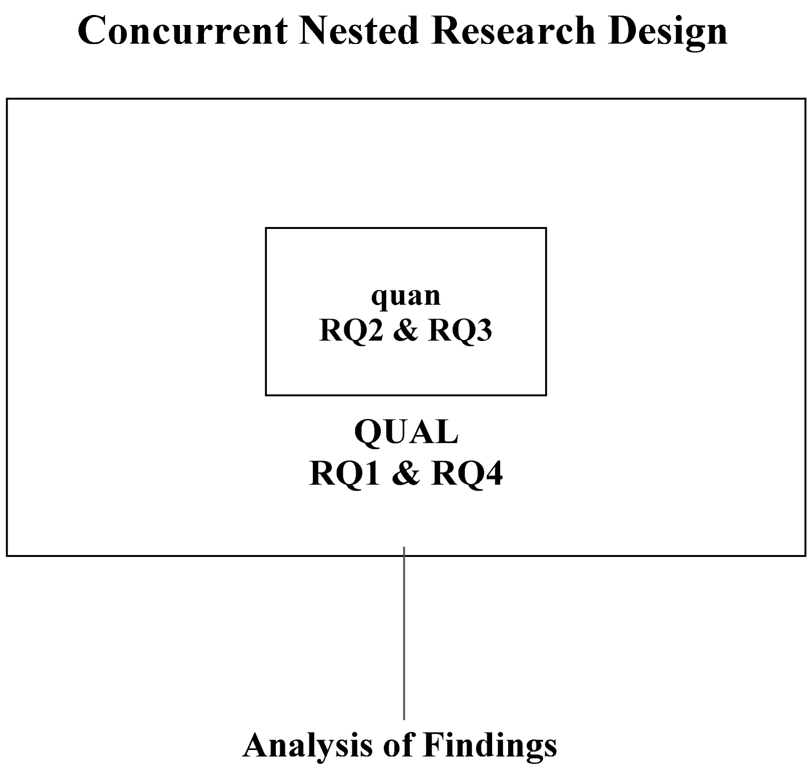

Figure 11
Concurrent Nested Research Design – Study Application
Note: Adapted from Creswell, Plano-Clark, Gutmann, & Hanson, 2003

The concurrent nested design research method (Figure 11) was utilized in this study and, according to the figure above, answers all 4 research questions (RQ1-RQ4). This research design is predominately qualitative with an embedded quantitative component. The research question along with an analysis of each component follows:

D. Research Question 1

Research question 1 focuses on sustainability reporting in the apparel industry. The purpose of this question was to explore if there was an inconsistency in sustainability reporting

terminology and to observe what is being reported according to topics covered per corporation. The sustainability reports from each corporation were also evaluated to identify common sustainability themes and what is being reported in each particular area. Also, governmental policies pertaining to sustainability were observed from each organizations sustainability report as well as the issues most important to apparel retailers according to their survey responses. Together, part of the sustainability survey, part of CDP report, and each corporation's sustainability report was used to address this research question. Table 2 illustrates the sustainability reporting method used by each organization.

Table 2
Sustainability Reporting Method

Corporation	**Reporting Method**
Abercrombie & Fitch Company	Corporate website and Third Party Disclosures
Gap, Inc.	Sustainability Report
Hanesbrands, Inc.	Corporate website and Third Party Disclosures
JCPenney	Corporate Social Responsibility Report
Kohl's Corporation	Corporate Social Responsibility Report
L Brands, Inc.	Corporate website and Third Party Disclosures
Levi Strauss Co.	Corporate website and Third Party Disclosures
Macy's, Inc.	Corporate Social Responsibility Report
Nike, Inc.	Sustainable Business Report
Nordstrom, Inc.	Corporate Social Responsibility Report
PVH Corporation	Corporate Responsibility Report
Target Corporation	Corporate Social Responsibility Report
TJX Companies, Inc.	Corporate Responsibility Report
VF Corporation	Sustainability & Responsibility Report

Each of these corporations provide information about sustainability initiatives to respective stakeholders by use of various methods (see Table 2). The content within each

reporting method was observed and only those areas focusing on the environment were analyzed. Data were analyzed for the purposes of finding the commonalities between the corporations and not to compare each for the sake of declaring one better than the other. Since there is no government recommended standard method of sustainability reporting, each apparel retailer followed their own procedure. Even though there is no cent percent consistency, analysis revealed 5 common themes among all the reports. Figure 12 illustrates the sustainability areas that are collectively identified in the reports.

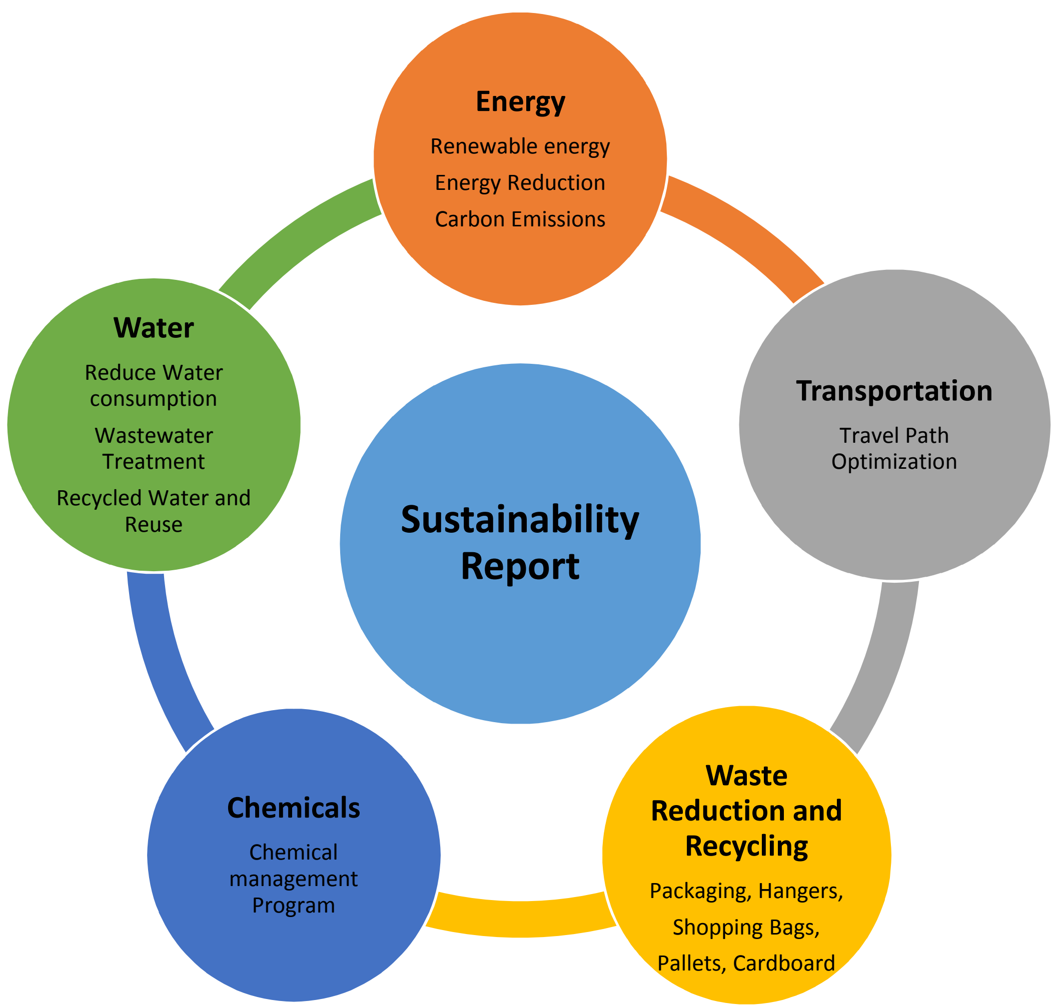

Figure 12
Commonalities/Themes in Sustainability Reporting

Overall, 5 sustainability areas were found to be common themes among the reports. The category of Energy was divided into several components that included renewable energy, energy reduction, and carbon emissions. Most of the apparel retailers are utilizing renewable energy in the form of solar panels or wind turbines at their facilities, corporate offices, and/or distribution centers to offset energy costs. In addition, energy reduction in the form of using LED lights and HVAC systems with timer upgrades are prevalent among the corporations. The reduction of carbon emissions is also a vital aspect for these corporations.

In the category of transportation, the majority of the corporations are engaged in improving transit efficiency by the use of advanced fuel-saving technologies, such as using compressed natural gas trucks or collaborating with the EPA via their SmartWay Program. The SmartWay program assists companies to advance sustainability throughout their supply chain by measuring, bench marking and improving freight transportation (EPA, 2017d).

The category of waste reduction and recycling encompassed many different topics of interest including the recycling of plastic hangers, cardboard, wooden pallets, metal, bottles and cans, electronics/batteries, lightbulbs, shopping bags, paper products, rubber, and plastic. In addition, the reduction in the amount of packaging within their products was also an area that was being addressed by most of the corporations.

In the category of chemicals, these corporations have a goal of zero discharge of hazardous chemicals. Most of these companies have a chemical management program and/or a restricted substance list (RSL) that is followed within their firms. The category of water represented conserving water by using such things as low flow faucets and toilets and irrigation controllers throughout their facilities. Additionally, most corporations use wastewater treatment throughout their manufacturing facilities where water is recycled and reused.

In reviewing all of the sustainability reports, it was evident that there was a lack of common terminology among the corporations. For instance, the category of water was divided into 3 different sectors. One of the sectors was termed reduce water consumption. Some of the corporations referred it as water use reduction, or conservation of water. Another example is the category of waste reduction and recycling in which some corporations refer to it as reduce water to landfills or recycling water and reusing. Both examples contain similar information but have different headings. In addition, there was inconsistency in how they referred to their sustainability reports. Another issue is that although they all referred to some of the same topics, the amount of information varied. For example, a few of them provided external links with detailed information on the topics. The information provided is very useful for stakeholders and for the consumers, but the amount of information furnished by some corporations may have been somewhat overwhelming and not easy to interpret. It is clear that there should be a fact sheet or infographics to simplify the information for easy understanding. If a standard procedure was created and followed, then the information could be better understood.

The types of governmental policies and programs pertaining to sustainability that corporations have taken action on were analyzed by reviewing the sustainability reports and the CDP Climate Change Request form. The prevalent policies currently followed by the apparel retailers obtained from their sustainability reports are shown in Table 3. It was noticed that each corporation is taking some sort of initiative towards minimizing their impact on the environment by following available public policies and/or programs. For instance, 7 corporations follow the EPA's Smartway Transport program and all 14 corporations follow Leadership in Energy and Environmental Design (LEED) certification programs. By utilizing the Smartway Transport Program, corporations can reduce their environmental impacts of freight transportation, both

home and abroad, through EPA regulations and voluntary programs (EPA, 2017d). The LEED is a widely used green building rating system that was devised by the United States Green Building Council (USGBC). LEED provides a framework to create healthy, highly efficient and cost-saving green buildings and encourages market transformation towards sustainable design. LEED certification is recognized throughout the world as a symbol of achievement (USGBC, 2018).

Table 3

Governmental Policies and Programs addressing Environmental Concerns

Corporation	**California Global Warming Solutions Act of 2006**	**EPA Energy Star**	**EPA Global Warming Potentials**	**EPA Green Power Partnership**	**EPA Smartway Transport**	**EPA WasteWise**	**LEED Certification**	**US Better Buildings Initiative**
Abercrombie & Fitch Co.								
Gap, Inc.								
Hanesbrands, Inc.								
JCPenney								
Kohl's Corporation								
L Brands, Inc.								
Levi Strauss & Co.								
Macy's, Inc.								
Nike, Inc.								
Nordstrom, Inc.								
PVH Corporation								
Target Corporation								
TJX Companies, Inc.								
VF Corporation								

Even though the observed corporations are following existing programs, there is a strong need for new sustainability policies/programs, and the corporations are making efforts to punctuate the government towards making policy changes. According to data obtained from the CDP, the sustainability issues that these corporations have been directly engaging with policy makers are listed in Table 4. The majority of the corporations listed below are actively involved in assisting policymakers by increasing the level of governmental involvement and support towards achieving stable and robust sustainability efforts which include: emission reduction requirements by enacting meaningful pricing of carbon; creating vigorous energy efficiency standards; renewable energy state and federal rebates; providing actionable incentives for an early transition to a low carbon future that will create new jobs and stimulate economic growth; and enhance existing instruments to improve transparency and accountability in monitoring climate action and sustainability initiatives (CDP, 2017).

Table 4
Public Policy Legislation

Corporation	**Focus of Legislation**
Abercrombie & Fitch Company	Emission Reduction Requirements, Energy Efficiency
Gap, Inc.	Energy Efficiency
Hanesbrands, Inc.	Energy Efficiency
JCPenney	Energy Efficiency
Kohl's Corporation	None
L Brands, Inc.	Energy Efficiency, Low Carbon Economy, Renewable Energy, Clean Energy Generation
Levi Strauss & Co.	Cap and Trade, Energy Efficiency, Clean Energy Generation, Adaptation Resiliency, Methane Emission Regulation
Macy's, Inc.	Environmental Protection
Nike, Inc.	Cap and Trade, Energy Efficiency, Clean Energy Generation, Carbon Tax, Emission Reduction Regulation
Nordstrom, Inc.	None
PVH Corporation	Clean Energy Generation, Emission Reduction Regulation

Table 4 (Cont.)
Public Policy Legislation

Corporation	Focus of Legislation
Target Corporation	Clean Energy Generation, Emission Reduction Regulation
TJX Companies, Inc.	None
VF Corporation	Renewable (solar) state and federal rebates

E. Research Question 2

The question of whether or not there is an impact on the environment due to the sustainability practices followed by apparel organizations was addressed from information obtained from the CDP Climate Change Request form. Some apparel retailing corporations have made the commitment to implement sustainability policies and programs. However, the degree of success of these efforts in addressing environmental concerns longitudinally has not been determined. This question was designed to analyze the sustainability efforts implemented and followed by major apparel retail corporations during the periods between 2013 and 2017. Although 14 apparel retailers were chosen for this project, only 10 have been reporting data to CDP for the past 5 consecutive years. These 10 corporations are:

- Abercrombie & Fitch Company
- Gap, Inc.
- Hanesbrands, Inc.
- JCPenney
- Kohl's Corporation
- L Brands, Inc.
- Levi Strauss & Co.
- Target Corporation
- TJX Companies, Inc.
- VF Corporation

The sustainability efforts of the retailers were statistically analyzed by using the carbon dioxide (CO2) emissions (in metric tonnes) reported as Scope 1 and Scope 2 emissions. One-way

repeated measures analysis of variance (ANOVA) was used to analyze the effect of the sustainability efforts carried out by the retailers. Figure 13 shows the trend of CO2 emissions (Scope 1) for the 5 years from 2013 to 2017.

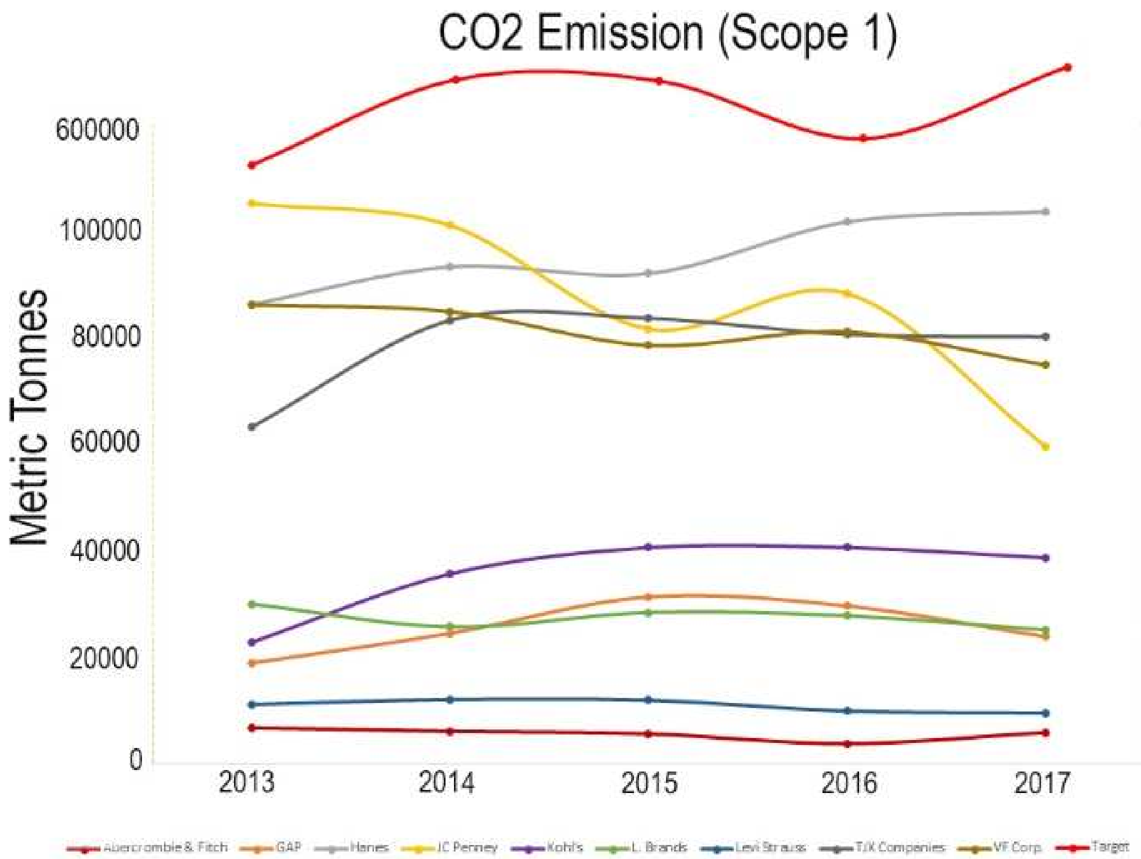

Figure 13
Scope 1 Emissions

1. Scope 1 Emissions.

Of the 10 corporations chosen, Hanes, JC Penney, TJX Companies, VF Corporation and Target reported CO2 emissions higher than 60,000 metric tonnes. The remaining 5 corporations emitted less than 40,000 metric tonnes CO2 emissions. Overall, Target reported the highest amount of CO2 emissions reaching over 600,000 metric tonnes CO2 emissions. Repeated

measure ANOVA with a greenhouse-geisser correction for Scope 1 showed no significant change (P-value: 0.349, $\alpha = 0.05$) in CO2 emissions over the 5 year period.

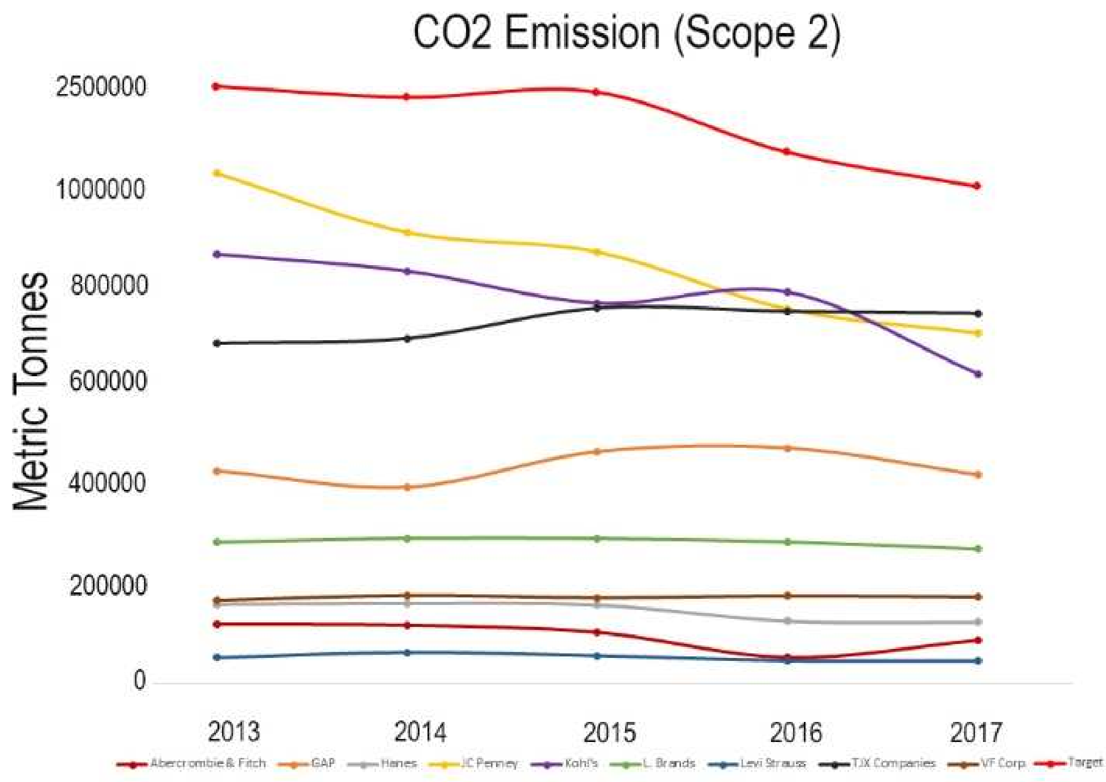

Figure 14
Scope 2 Emissions

2. Scope 2 Emissions.

For Scope 2 (Figure 14), Target, JC Penney, Kohl’s, and TJX Companies, reported CO2 emissions higher than 600,000 metric tonnes. The remaining 6 corporations emitted less than 400,000 metric tonnes CO2 emissions. Overall, Target reported the highest amount of CO2 emissions reaching over 2500,000 metric tonnes CO2 emissions but steadily started to decline from the years 2015-2017. Repeated measure ANOVA with a greenhouse-geisser correction for scope 2 showed no significant change (P-value: .076, $\alpha = 0.05$) in CO_2 emissions over the 5 year period.

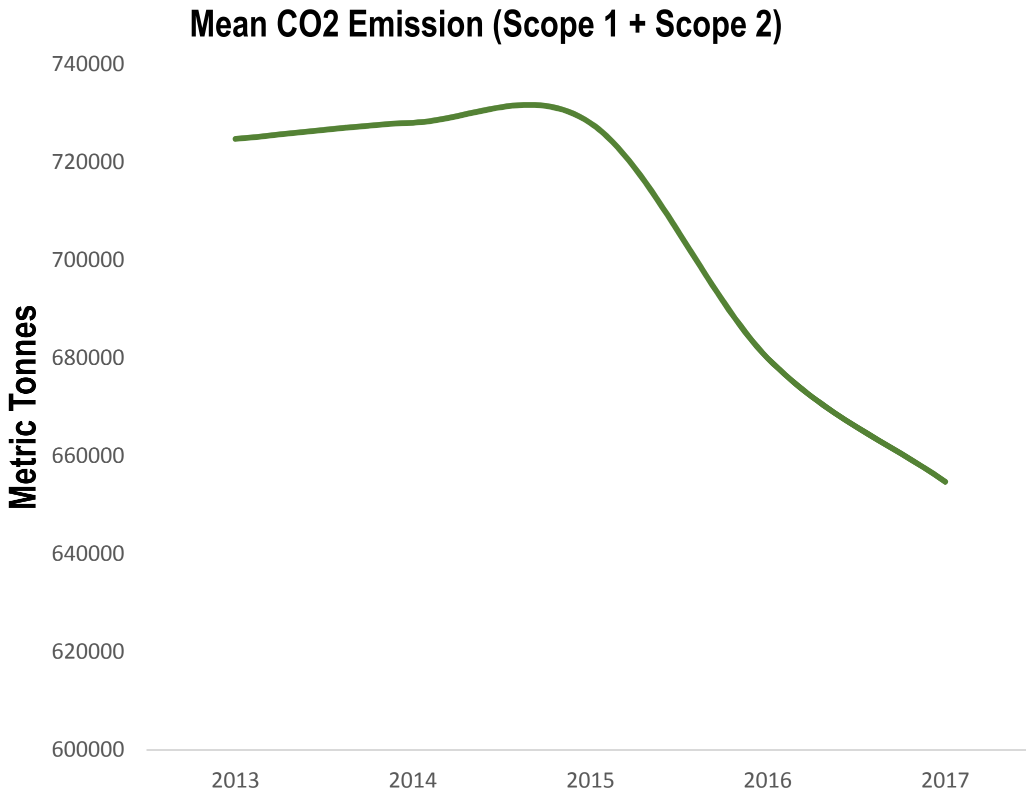

Figure 15
Mean CO2 Emission (Scope 1 + Scope 2 Emissions Combined)

3. Scope 1 + Scope 2 Emissions Combined.

Figure 15 is indicative of both Scope 1 and 2 emissions combined. Even though the graph shows a decreasing trend, repeated measure ANOVA with a greenhouse-geisser correction for combined emission data (Scope 1 + Scope 2) showed no significant change (P-value: 0.104, $\alpha = 0.05$) in CO_2 emission during the periods of 2013 to 2017. Since the ANOVA showed no significant change in the CO2 emission, post comparison tests were not possible to perform. However, the trend line showed a pattern of decrease in CO2 emission. To further investigate the trend, the CO2 emissions between the years 2016 and 2017 were compared for Scope 1, and Scope 2 using the Wilcoxon-Signed rank test. This non-parametric test was chosen due to the

normality violation of the data required for paired-t-test. Analyses were performed whether or not there was a significant decrease in CO2 emission between the year 2016 and 2017 (a. Scope1 and b. Scope 2). Results showed that there is a significant decrease in CO2 emissions based on the Wilcoxon-Signed rank test (P-value (One tail) = 0.014) for Scope 2. However, for Scope 1 there was no significant decrease in CO2 emissions (P-value (One tail) = 0.193). Based on this extended analysis, it is clear that the corporations' efforts toward sustainability is promising for Scope 2; however, it needs to be strengthened to have a continuous decrease in CO2 emissions for Scope 1.

F. Research Question 3

The focus of research question 3 concerned the type of policy changes that the US government should implement towards the sustainability initiatives of apparel retailing corporations. For this question, descriptive statistics were performed using the collected data obtained from the online survey. Table 5 shows the reported degree of agreement/disagreement in percentage and Table 6 summarizes the answers for the open-ended questions. The results show the mixed opinions of apparel retailing corporations related to US government's involvement towards sustainability reporting policies or standards. The following questions from the survey were asked to a sustainability executive within each corporation and primarily focused on governmental involvement and regulation:

A. The reporting of sustainability initiatives by apparel corporations should be left voluntary, as it is now.

B. The United States (US) government should require all US apparel corporations to administer sustainability reports through regulation.

C. Do you think sustainability reporting could be improved if it were regulated?

D. Do you think regulation would cause negative effects?

E. There should be a certain type of governmental incentive for US apparel corporations practicing sustainability.

F. What type of training by the government, if any, would be most beneficial to apparel corporations?

G. What type of incentives, if any, would be most beneficial to apparel corporations?

Table 5
Summary data pertaining to governmental involvement in sustainability reporting

	A. The reporting of sustainability initiatives by apparel corporations should be left voluntary, as it is now. (%)	**B. The United States (US) government should require all US apparel corporations to administer sustainability reports through regulation. (%)**	**C. Do you think sustainability reporting could be improved if it were regulated? (%)**	**D. Do you think regulation would cause negative effects? (%)**	**E. There should be a certain type of governmental incentive for US apparel corporations practicing sustainability. (%)**
SA				25	
SOA		25	50	25	50
ND	75	50	25	50	50
SOD	25	25	25		
SD					

SA = Strongly Agree
SOA = Somewhat Agree
ND = Neither Agree nor disagree
SOD = Somewhat disagree
SD = Strongly disagree

Table 6
Corporate responses pertaining to governmental involvement in sustainability reporting

F. What type of training by the government, if any, would be most beneficial to apparel corporations?	G. What type of incentives, if any, would be most beneficial to apparel corporations?
"In my view, the issue is not lack of training or understanding, it is the lack of clear standards, industry apathy, and limited resources for disclosure preventing more information from being available. Many companies are realizing it is a better business value to disclose than not to disclose. I think standardizing disclosures through regulation will force assumptions about what is most material. A textile manufacturer will have different environmental and social touchstones than an apparel company that is essentially only office buildings and third party suppliers."	"Any government effort to level the business playing field would be incentive enough"
"Consistent standards for reporting would support equal measurement"	"Consistent standards"
"I think there is a possibility for improved reporting if it were required - if it were simple, straightforward, and kept within certain boundaries that made sense for all corporations involved"	"It could be quite motivating if tariffs were lower on goods that are proved to be sourced from more sustainable/responsible factories and overall supply chains (growing, milling, tanning, dying, spinning, cut & sew... all stages). That could be very motivating"

These particular questions were asked to determine where these organizations stand on government involvement towards sustainability efforts and reporting. According to Table 5, results for Question A, regarding the reporting of sustainability initiatives by apparel corporations should be left voluntary, as it is now, 75% of the responding companies neither agree nor disagree and 25% somewhat disagree with this statement. In regards to Question B, that the US government should require all US apparel corporations to administer sustainability reports through regulation, 25% of the respondents somewhat agree, 50% neither agree nor disagree, and 25% somewhat disagree. Concerning Question C, as to whether or not

sustainability reporting could be improved if it were regulated, 50% of the respondents somewhat agree, 25% neither agree nor disagree, and 25% somewhat disagree. Question D regarding if regulation would cause negative effects, 25% of the respondents strongly agree, 25% somewhat agree, and 50% neither agree nor disagree. Lastly, in Question E concerning if there should be a certain type of governmental incentive for US apparel corporations practicing sustainability, 50% of the respondents somewhat agree, and 50% neither agree nor disagree. Overall, only 4 out of the 14 apparel retailers completed the survey. However, it is apparent that most of the corporations neither agree nor disagree with the majority of the questions. In Question C, half of the corporations somewhat agree that sustainability reporting would be improved if it were regulated acknowledging that there is an overall problem in the apparel industry pertaining to sustainability reporting. The most compelling information (Table 6) involves the qualitative data asked in question F (government training) and G (government incentives) pertaining to sustainability reporting. In both of these questions, the most notable response is that these corporation would accept governmental support and expressed the need for consistent standards that should be simple and straightforward; therefore, making the playing field level for everyone.

G. Research Question 4

Based on collected data, an attempt has been made as to whether the Punctuated Equilibrium Theory (PET) can be used to support government involvement in the regulation of sustainability reporting in the apparel industry. The discussion on this issue will be continued in Chapter 5.

H. Summary

In order to implement sustainability in a corporation, it must be embedded in the overall business strategy. Organizational support from top-management to bottom-up must agree that sustainability is essential for their stakeholders and performance data need to be tracked to ensure efficiency (Seidel, Recker, Pimmer, and vom Brocke, 2010). It is recommended that a sustainability report should include the disclosure of initiatives associated with the consumption of natural resources and the release of emissions which should be below a rate that ensures a healthy eco-system (Dylick and Hockerts, 2002). This research project has made an attempt to analyze sustainability reporting methods and also to evaluate the current state of CO2 emission controls as a part of sustainable practice. Also, a needs assessment of government involvement in regulations and policies towards sustainability was performed. By utilizing the concurrent nested design, observations were made as to the case for standardized sustainability reporting. This research was primarily qualitative with a quantitative component. All 3 research questions collectively describe a situation where all of the analyzed corporations are making the effort to be transparent about their environmental pursuits. However, it is apparent that a consistent standard is not clearly defined. Research question 1 begins with the naming of the sustainability report. In this area, it was found that corporations have different terminology for describing how they report their sustainability initiatives. Even though the content of the reports were somewhat similar, the methods of relaying what they perceive to be important were collectively perplexed at times.

According to the CDP data pertaining to public policy legislation, it appears that the majority of these corporations want some sort of legislation on energy efficiency and emission reduction requirements. Since the majority of these corporation are already working with

legislators on sustainability issues it would appear that they would consider the thought of governmental intervention on other issues. Research question 2 was predominately quantitative and it pertained to carbon emissions. All of the corporations reported their Scope 1 and Scope 2 CO_2 emissions; however, only 10 of the 14 were used for this particular sample. These particular corporations had been reporting for the last 5 consecutive years through CDP. Although some corporations reported higher CO_2 emissions than others, there was no significant CO_2 decrease in the last 5 years when both Scope 1 and Scope 2 were combined. These corporations are all engaging in ways to reduce CO_2 emissions and should be commended for their efforts.

In research question 3, several questions were asked to the sustainability executives of the identified apparel retail corporations about governmental involvement. The question pertaining to the reporting of sustainability initiatives being left voluntarily resulted in 75% of those respondents answering neither agree nor disagree. Secondly, when asked if sustainability reporting could be improved through regulation, 50% somewhat agree. Currently, there are no standards for sustainability reporting. These corporate executives answered that they would also entertain government involvement if there were consistent standards for reporting allowing for equal measurement between organizations.

In summary, corporations are making an effort towards creating a sustainable impact in the apparel retailing industry. However, their efforts are not quite sufficient enough to produce a favorable outcome, especially in the reduction of CO_2 emissions. It appears that they are in favor of government support to ensure that consistent sustainability standards are met throughout the industry.

V. Discussion and Recommendations

A. Summary of the Study

The reporting of sustainability initiatives by a corporation is currently a voluntary act that is left to the discretion of what each organization chooses or does not choose to reveal about their individual practices. The objective of this research was to determine if there is a need for governmental support in the area of sustainability reporting in the apparel retailing industry that would require apparel corporations to report their sustainability initiatives, and also, to address environmental topics by using the same standards. In order to determine the need for governmental support, 14 apparel retailing corporations were analyzed and evaluated for their sustainability and public policy initiatives. This study employed a mixed methods concurrent nested research design which included the following data sets: an online self-administered sustainability survey, CDP's Climate Change Request form, and each apparel retailing corporation's sustainability report. All 3 data sets were used to collectively investigate whether or not these corporations would consider the idea of governmental support in regards to their current and future sustainability efforts.

The mixed methods concurrent nested research design was utilized to gain a broader perspective by analyzing both qualitative and quantitative data. In this research design, quantitative data were embedded within qualitative data to enrich the study (Morse, 1991). The strength of using this method is that an investigator can simultaneously collect both qualitative and quantitative data during the same period (Tashakkori and Teddlie, 2003).

The sustainability survey was developed by the researcher and IRB approval was secured before data collection. A total combination of 19 qualitative and quantitative questions pertaining to sustainability reporting, CDP, and public policy were asked of the respective corporations'

sustainability executive. Information from each area was useful in the project, but the questions regarding public policy were the most intriguing. In particular, the research questions regarding what type of policy changes the US government should implement in regards to the sustainability initiatives of apparel corporations were thought provoking. The corporations were given an opportunity to answer these questions on a Likert- type format from “Strongly Agree” to “Strongly Disagree” and were able to also explain their answers qualitatively.

The CDP provided information about each corporation through their CDP Climate Change Request form. The form provided insight from each corporations reported CO2 emissions, climate change initiatives, and their focus on legislation pertaining to sustainability and climate change. The researcher analyzed 10 of the 14 corporations due to their consistent reporting of CO2 emissions during the last 5 years. This was done to determine if there was a significant change in CO2 emissions from each corporations reported Scope 1 and 2 emission results. Both Scope 1 and 2 emissions were evaluated for a 5 year period and no significant change was detected. Both Scope 1 and 2 emissions were combined and, again, no significant change was detected. However, it was observed that there was a declining trend in motion. With the use of the CDP Climate change Request form, the researcher was also able to verify the methods being followed for sustainability reporting in the apparel industry and evaluate the legislative issues most important to apparel retailers pertaining to climate change and sustainability.

Each apparel corporation’s CSR report, corporate website, or sustainability report was used to observe corporate sustainability initiatives. It was detected that there was no consistency in how companies report. Upon further analysis, it was revealed that there were 5 common sustainability themes among the apparel retailers: Energy, Transportation, Waste Reduction and

Recycling, Chemicals, and Water. The terminology may not have been the same amongst all corporations, but the concept appeared similar. The governmental policies and programs addressing environmental concerns were also observed from the sustainability reports. In reference to the policies/programs pertaining to sustainability, each sustainability report revealed that all of the corporations were taking some sort of initiative towards minimizing their impact on the environment.

All 3 data sets revealed that these corporations are making an effort towards creating a sustainable environment. Although, their efforts are not sufficient enough to reduce CO2 emissions, a primary metric followed by the industries. Overall, by observing and analyzing these corporations, it became apparent that governmental support would be welcomed for consistent standards to be met.

B. Discussion/Findings

The United States (US) currently lacks federal policies that incorporate requirements for the reporting and publishing of sustainability information. Federal policy initiated by the government could be used to improve environmental issues such as water and air quality, energy usage, and reduction of carbon emissions. Even though environmental laws exist, they comprise only a part of the legal framework being used to achieve sustainability. Clear and concise reporting of sustainability information by apparel–retailing corporations would reduce information asymmetry and place different kinds of stakeholders on the same level. The benefits gained by a corporation participating in sustainability reporting could include improving the corporation's image/reputation; transparency of operations; attracting investors; lowering the cost of capital; and improving the relationship with stakeholders in order to gain their support and approval (Gray, Owen, & Adams, 1996; Deegan 2009).

The goal of this research project was to determine if governmental support was needed for corporations to adequately address environmental concerns particularly in the area of sustainability reporting. According to Larson (2013), corporations concerned about future environmental conditions and are good stewards of natural resources are likely to improve their profitability and competitive advantage now and in the future. The 14 corporations that were analyzed throughout this project were all conscious of the need for sustainability reporting and focused on what they perceived as important concerning their environmental impacts. However, within the on-line sustainability survey which included a section on “policy”, respondents reflected on their views pertaining to governmental support. Only 4 of the 14 corporations responded to the on-line sustainability survey but the information provided was beneficial. The majority of the participants responded that they neither agree nor disagree that the reporting of sustainability initiatives by apparel corporations should be left voluntary, as it is now. When asked if they thought that the US government should require all US apparel corporations to administer sustainability reports through legislation, 50% of the respondents neither agree nor disagree, but 25% somewhat agreed with this statement. In conjunction with the previous question, corporations were asked if they thought that sustainability reporting could be improved if it were regulated. In this case, 50% of the respondents somewhat agreed with this question furthering the support for governmental intervention. However, when asked if regulation would cause negative effects, 50% neither agreed nor disagreed, 25% somewhat agree, and 25% strongly agreed. The current state of the political environment may have been the reason for the mixed reviews. The corporations were also asked if there should be a certain type of governmental incentive for US apparel corporations practicing sustainability. Fifty percent of the respondents neither agreed nor disagreed and 50% somewhat agreed. When asked what type of

incentives, if any, would be most beneficial to apparel corporations, some of the responses were as follows:

- "Any government effort to level the business playing field would be incentive enough."
- "Consistent standards"
- "It could be quite motivating if tariffs were lower on goods that are proved to be sourced from more sustainable/responsible factories and overall supply chains (growing, milling, tanning, dying, spinning, cut & sew... all stages). That could be very motivating."

Consequently, the corporations were asked what type of training by the government, if any, would be most beneficial to apparel corporations. Some of the responses were as follows:

- "In my view, the issue is not lack of training or understanding, it is the lack of clear standards, industry apathy, and limited resources for disclosure preventing more information from being available. Many companies are realizing it is a better business value to disclose than not to disclose. I think standardizing disclosures through regulation will force assumptions about what is most material. A textile manufacturer will have different environmental and social touchstones than an apparel company that is essentially only office buildings and third party suppliers."
- "Consistent standards for reporting would support equal measurement."

- "I think there is a possibility for improved reporting if it were required - if it were simple, straightforward, and kept within certain boundaries that made sense for all corporations involved."

It is apparent that these corporations would be open to governmental support if clear, consistent standards were set forth that would require all corporations to report their sustainability measures in the same manner industry wide. If this were to be done, all stakeholders, investors, and consumers, etc. would be able to access transparent data that adequately address the environmental perspectives of each organization in a cohesive manner.

Throughout this research, the CDP Climate Change Request form, was a dominant source of secondary data, especially in regards to determining if there was a significant impact on the environment due to the sustainability practices followed by apparel organizations. The extent of impending climate change and subsequent impacts depend on the level of heat-trapping green-house gases in the atmosphere. Low emission levels of green-house gases will, in the long run, decrease the extent of climate change impacts. If the rate of emissions is not considerably reduced, climate change effects may become increasingly severe for more people and places, affecting the livelihood of future generations (Karl et al., 2009, pp 157-158). By utilizing the CDP Climate Change Request form, the researcher was able to assess the Scope 1 and 2 emissions from each corporation in order to evaluate if corporations are making a significant impact in the reduction of CO_2 emissions. Scope1 emissions refer to direct green- house gas emission produced from sources that are owned or controlled by an organization. Scope 2 emissions refers to energy indirect green-house gas emissions from the purchase of electricity, heat or others sources consumer by a corporation (Boles, 2015). One –way repeated measure analysis of variance (ANOVA) was used to analyze the effect of the sustainability efforts carried

out by the retailers by observing their reported CO2 emissions in metric tonnes. Only 10 of the 14 apparel retailers were evaluated because of their 5 year reporting record to CDP. Overall, repeated measure ANOVA with a greenhouse-geisser correction for Scope1 showed no significant change (P-value: 0.349, $\alpha = 0.05$) in CO_2 emissions over the 5 year period. Additionally, it was noticed that Target reported the highest level of CO2 emissions. This could be due to their carrying of both apparel and hardline items. Likewise, repeated measure ANOVA with a greenhouse-geisser correction for Scope 2 showed no significant change (P-value: .076, $\alpha = 0.05$) in CO2 emissions over the 5 year period. Similarly, Target reported the highest amount of CO2 emissions, but started steadily decline from the years 2015-2017. Lastly, repeated measure ANOVA with a greenhouse-geisser correction for combined emission data (Scope 1 + Scope 2) showed no significant change (P-value: 0.104, $\alpha = 0.05$) in CO2 emission during the periods of 2013 to 2017. Although no significant change was observed in all 3 scenarios, the corporations collectively showed signs of a decline in carbon emissions when Scope 1 and 2 emissions were evaluated. The CDP Climate Change Request form also contained information about the focus of legislation in which each corporation was fundamentally engaged in with legislators. It was apparent that these corporations want governmental support, particularly in the areas of energy efficiency, emission reduction regulation, and clean energy generation.

Additionally, the researcher reviewed all of the related sustainability reports from each corporation. Although collectively there were 5 different titles to each report, they reported similar concepts pertaining to sustainability. Overall, variations did occur in what was reported, but the following were observed to be 5 common themes – energy, transportation, waste reduction and recycling, chemicals, and water. Since Corporate Social Responsibility (CSR) or Sustainability Reporting is a voluntary act initiated by a corporation for the purposes of

monitoring their own activities (van Marrewijk & Verre, 2003), there was inconsistency in the reporting method itself. Some of the corporations reported an overwhelming amount of information about their sustainability initiatives which may make it difficult for their stakeholders and consumers to interpret. Others provided too little information in which shareholders might want more information. Overall, there were no clear and consistent standards that were easily deciphered. Throughout each sustainability report, the researcher detected several governmental policies and programs that addressed corporate environmental concerns. The 2 most common areas among the corporations involved the use of the EPA Smartway Transport program and LEED certification. Both of these government programs provide support in the area of reducing environmental impacts of freight transportations (EPA, 2017d) and encouraging market transformation towards sustainable building designs (USGBC, 2017).

Based on the findings, there is a need for governmental support. According to the sustainability survey, the corporations responded favorably to governmental intervention if regulation provided clear and consist methods of sustainability reporting. In addition, governmental incentives, such as a reduction of tariffs to corporations practicing sustainability throughout their supply chain, would be beneficial. All of the corporations involved in this study provided their CO2 emission to CDP and all have been making efforts to reduce their impacts on the environment. However, governmental support for the environmental issues with which these corporations are concerned could help reduce their emission impacts even further.

C. Punctuated Equilibrium Theory

Bearing in mind all that has been mentioned, can the Punctuated Equilibrium theory be used to explain the current scenario of apparel retailing corporations' efforts towards securing governmental support in the regulation of sustainability practices and reporting? It has been

noted that all of the apparel retailing corporations involved in this study have made the commitment towards implementing sustainability as part of their corporate initiatives. If the US were to make any progress toward a sustainable society, governmental regulation and support would be one of the strategies to increase sustainability practices. In order for corporate created environmental problems to be fully addressed, sustainability effort needs to be placed on the policy agenda for the preservation of future generations.

According to Baumgartner and Jones (1993), the Punctuated-Equilibrium Theory seeks to explain a simple observation: political processes are commonly characterized by stability and incrementalism but sometimes produce substantial departures from the past. Most policy areas are characterized as stable, however crisis does occur. Change constantly occurs in public policy and policy making as does the public's understanding of existing problems. Issues such as water usage, energy consumption, green-house gas emissions, and sustainability polices, should be addressed along with what corporations are doing about pollution and others facets of environmental degradation. The results of this study show that there is a need for new policy and efforts are being prompted towards that goal. Typically, most policy models have been designed to either explain the stability or change in an issue. However, Punctuated Equilibrium explains both stability and change (Jones & Baumgartner 2005).

In the case of sustainability reporting, some corporations may state that they are aware of environmental problems and are controlling such issues internally. However, the issue with CSR and sustainability reporting is that it is whatever companies want it to be, whenever it is most convenient. The problem with an approach that allows organizations to define corporate responsibility is that there is no established set of grounded principles (rules/regulations) concerning what it means to be a responsible business/industry. Corporate Social Responsibility

and, in essence, sustainability, suffers from 2 fundamental problems. First, business managers decide what counts as corporate responsibility and second, there is an over-reliance on civil regulation. Civil regulation is a code of conduct for businesses set by NGO's because of the lack of democratic governance. Because there are no clear standards for sustainability reporting, civil regulation may become dysfunctional. Ultimately, government intervention may be needed to create stability, as well as change, in order to generate binding regulations that hold companies accountable (Bauer, 2014).

Interestingly, only 4 of the 14 corporations responded to the sustainability survey after several attempts of communication within a 4 month time period. When asked the question "Do you think sustainability reporting could be improved if it were regulated?" 50% of the corporations responded favorably indicating that some sort of change needs to occur in the methods of sustainability reporting. By addressing sustainability issues and being transparent about their operations, corporations could reveal their responsibility to the public, shareholders, and advocacy groups. In addition, a standard method of what should be included in a sustainability report should be regulated as well.

The theory of Punctuated Equilibrium in policy studies applies to a particular situation where political conflict is expanded beyond the confines of expert-dominated policy subsystems to other policymaking venues. With the issue of sustainability practices and reporting, corporations and other various interests groups are reaching out to legislators for change and support. One component of the Punctuated Equilibrium Theory (PET) is that it relies on the mechanism of policy image—the manner in which a policy is characterized or understood and a system of partially independent institutional venues within which policy can be made. Images pertaining to air pollution, water pollution, hazardous materials use, land contamination, and

biodiversity and natural resources are all essential environmental factors that cannot be denied. Information from both corporations and interest groups are intentionally meant to engage policymakers concerning these issues. Pressure from these groups can cause a disruption/punctuation on the current system, which will entice policy makers to attend to the problem and alleviate it, if necessary (Jones & Baumgartner 2005). Additionally, Baumgartner and Jones (1993) argue that policy areas resemble a punctuated equilibrium in that political systems often see little change over a period of decades, and then equilibrium is abruptly terminated by short periods of rapid change. The concept of corporate social responsibility and sustainability reporting has a long history without government intervention (Moura-Leite & Padgett, 2011). Even though it is apparent that the sustainability focus of CSR has evolved due to environmental concerns expressed by individual corporations throughout the years, it is also apparent that the time is right for government intervention. This statement is supported by information gathered from CDP concerning each of the 14 company's stance on public policy legislation. In the past few years, most of these corporations have been working with legislators in the following areas:

- Emission Reduction Requirements
- Energy Efficiency
- Environmental Protection
- Clean Energy Generation

However, the conversion from issue to policy is not smooth because decision making activities are subject to decision and transaction costs. Policy makers need to overcome these costs in order to respond to signals from the situation at hand, which themselves are uncertain. There are 2 major sources of costs in translating inputs into policy outputs. The first are

cognitive costs where political actors recognize a signal, dedicate attention to the issue, frame the problem, and create a solution for it. Secondly, there are institutional costs whereby the rules for making policy act to maintain stability and incrementalism (Jones & Baumgartner 2005). Due to the current nature of policy pertaining to environmentalism, it may take a group effort for policy to be created and/or revised. Baumgartner and Jones (1993) describe a tightly coupled interdependent process and believe that interest groups have an important role in the agenda-setting process by formulating questions represented by advocacy coalitions that affect public opinions, define terms of debate, and determine policy outcomes. Corporate affiliations, coalitions, and interest groups, such as RILA, CDP, TSC, and SAC, are all additional forces that could prompt governmental influence in the form of policy regulation and procedures for sustainability reporting in the apparel retailing sector. Figure 16 depicts an illustration of the Punctuated Equilibrium Theory as it would apply to sustainability initiatives in the apparel retailing industry.

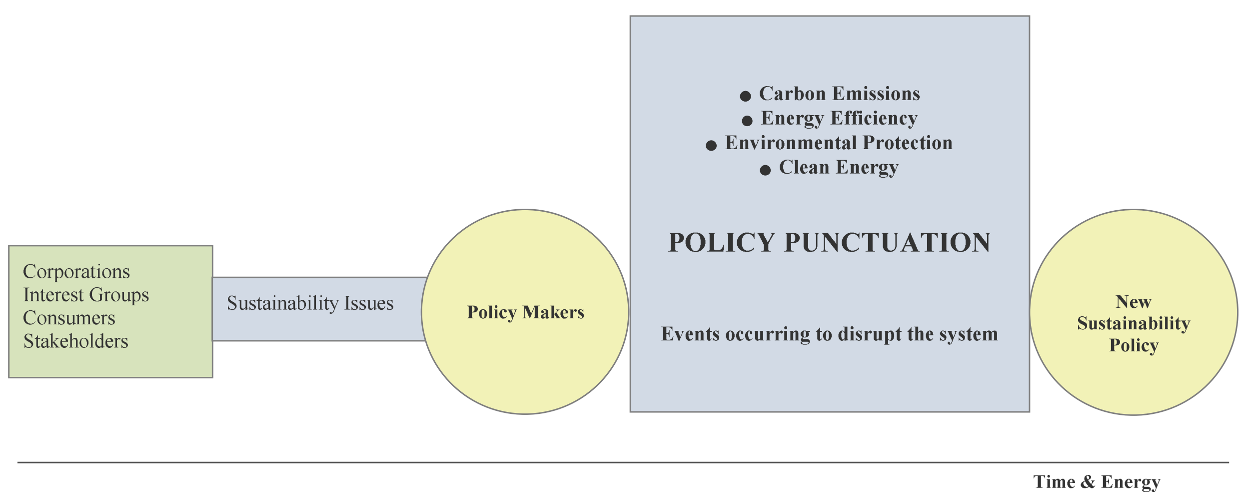

Figure 16
Punctuated Equilibrium Model
Note: Adapted from Baumgartner and Jones, 1993

In the case of the apparel industry, corporations, interest groups, consumers and/or stakeholders are reaching out to legislators for change. Issues facing these groups include reducing carbon emission, energy efficiency, environmental protection, and clean energy utilization (CDP, 2017). According to the IPCC (2014), continued release of greenhouse- gas emissions will result in continued warming and ongoing fluctuations in the climate system, which will in effect increase the probability of harsh, prevalent and inevitable impacts for the ecosystem. Substantial and sustained reductions in greenhouse gas emissions is needed to limit climate change disasters. Ongoing threats to the environment should be enough to warrant governmental support that will, in effect, create new sustainability policy. This policy will ensure the support of apparel retailing corporations need in order to do their part in making a difference for our planet.

The external changes related to sustainability policy can be explained by the Punctuated Equilibrium Model. Some of the sustainability issues that corporations are currently focused on with legislators are the reduction of carbon emissions, energy efficiency, environmental protection, and clean energy. These are all forces that are punctuating a system to drive change in environmental policy. Policy makers have been made aware of the consequences of disastrous events that could disrupt the environment by interest groups, consumer advocacy groups, stake holders and corporations. The on-going push for change by previously mentioned groups will drive policy makers into examining the consequences and creating new sustainability policy.

D. Implications and Recommendations

Sustainability reporting can assist corporations in measuring, understanding, and then communicating their economic, environmental, and social performances. It is the key platform for informing the stakeholders of corporate sustainability performance and impacts (GRI,

2013a). The reporting of sustainability practices can either excite corporations or incite them to entirely avoid the process. Some corporations see sustainability reporting as an opportunity to improve and benchmark their sustainability performance, while other organizations view it as a waste of money, time, effort, and resources, having no positive impact to their bottom-line. Some objectives of corporations producing sustainability reports are transparency to stakeholders; improvement of public perception and brand image; achievement of a competitive advantage; improvement of processes, systems and efficiency; and to stay up-to-date concerning best practices and benchmarking in sustainability management (Leavoy, 2015).

Government can provide support to develop clear and concise standards to shape CSR or sustainability reporting through partnerships with corporations (Moon and Willoughby, 1990; Moore, Richardson, & Moon, 1985, 1989). In this case, a mix of complementary resources can be brought into the partnership. For example, government can bring in fiscal and regulatory capacity while corporations can bring their networks, employees, and knowledge in to address existing problems (Fox, Ward, & Howard, 2002).

To fully and effectively address sustainability issues, corporations must advocate their concerns to policy makers. According to Scott (1983), advocacy can be utilized by organizations to influence leading actors in their environment to support and accept their policy positions. It is a way to exert power for the purposes of influencing the institutional rules that form an organization's functioning environment (Scott, 1983). Successful advocacy can cause important changes to occur so that an organization can improve its environment, safeguard funding streams, and/or alter key regulations (Mosley, 2010). It is then the task of policy makers to investigate the causes and consequences of issues for further determinations. It is only when

knowledge “of” is linked to knowledge “in” can the executive, legislative, and judicial bodies, along with the public, use the results to improve the policy-making process (Dunn, 1981). The support of governmental regulation in regards to sustainability reporting will ultimately lead to well-informed stakeholders.

In the long run, collaboration between governments and corporations is essential for sustainability to operate effectively. In the world today, it is not acceptable for a business entity to experience economic prosperity with disregard for its stakeholders and the environment by not advocating for policy. In addition to increasing its bottom line, a corporation must also focus on being a good corporate citizen. Corporations must keep informed of global trends and remain committed to their financial obligations for both private and public benefits. The corporations that are the most environmentally and socially conscious continue to revise their long and short term plans in order to stay ahead of rapidly changing challenges in the global arena (D’Amato, Henderson, & Florence, 2009).

Based on corporate responses for this study, there is a need for consistent and clear standards in sustainability reporting. The US government could devise a simple and straightforward program/policy that capitalizes on the main environmental concerns of corporations as they report their sustainability initiatives. In this regard, government support could be a motivation for all apparel retailing corporations to participate in sustainability reporting. In addition, the corporations referred to sustainability reporting by using several different terms. This indicates that the governmental program/policy should use the same verbiage for all reporting methods.

In review of the CDP Climate Change Request form, it has been noted that these corporations have started the process of communicating their environmental concerns to

legislators in regards to reducing carbon emission, energy efficiency, environmental protection, and clean energy. The Punctuated Equilibrium Model illustrates the beginning of this process whereby corporations need assistance in determining solutions. This continual movement towards working with policy makers and ongoing climate change risks, such as increased global temperatures and extreme weather patterns, are causing a disruption that legislators cannot afford to dismiss. Therefore, governmental support in the form of a new sustainability policy is required.

Lastly, carbon dioxide is the primary green-house gas produced through human activities which has been increasing since the industrial revolution. The combustion of fossil fuels for energy and transportation are the main human activities that emit CO_2 (EPA 2017a). The corporations observed in this study are currently reporting their Scope 1 and 2 emissions to CDP. However, after analysis, no significant change was detected after 5 years of data. When Scope 1 and 2 emissions were combined a trending decline was observed. Governmental support in devising a policy/program to reduce corporate carbon emissions may result in a decrease of emission over time. Perhaps incorporating a carbon tax or other regulatory changes that may necessitate the reduction of CO_2 emissions may be the solution. According to Metcalf (2008), a carbon tax is a fee imposed on the burning of carbon-based fuels (coal, oil, gas) (Metcalf, 2008).

E. Limitations

The details of this research project were carefully studied and analyzed, but there were limitations to consider.

1. The number of the corporations surveyed in the study were limited to the number of apparel retail corporations currently submitting data to CDP.

2. The response rate of the on-line sustainability survey included only 4 of the 14 corporations designated for the study.
3. Lack of prior studies on the topic in relation to public policy served as the impetus to identify new gaps in the literature and to describe the need for further research.
4. Self-reported data were used and only those corporations registered to CDP were included. Other sustainability groups were not prepared to divulge any type of corporate sustainability data.

F. Future Research Recommendations

The recommendations for future policy regarding the areas of sustainability reporting could include the following:

1. A focus group consisting of stakeholders, environmentally conscious consumers, legislators, and corporate sustainability executives could be conducted to discuss sustainability issues and government involvement.
2. A sustainability survey pertaining to public policy and sustainability reporting could include apparel retailing corporations from other countries and comparisons made on a global scale.

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Appendix A
IRB Protocol Approval Letter

UNIVERSITY OF ARKANSAS

To:	Lance M Cheramie HOEC 215
From:	Douglas James Adams, Chair IRB Committee
Date:	02/05/2018
Action:	**Exemption Granted**
Action Date:	02/05/2018
Protocol #:	1712091216
Study Title:	Mixed Method Analysis of Apparel Corporations for Future Policy Development

The above-referenced protocol has been determined to be exempt.

If you wish to make any modifications in the approved protocol that may affect the level of risk to your participants, you must seek approval prior to implementing those changes. All modifications must provide sufficient detail to assess the impact of the change.

If you have any questions or need any assistance from the IRB, please contact the IRB Coordinator at 109 MLKG Building, 5-2208, or irb@uark.edu.

cc: Patrick J Conge, Investigator

Appendix B
Sustainability Reporting Survey for Selected Apparel Organizations

INVITATION TO PARTICIPATE: Because you represent an apparel retail corporation/brand, you are being invited to participate in this doctoral research study that will focus on sustainability practices.

Purpose of research study is:

To better understand sustainability reporting and the role of government as viewed by apparel retailers.

Possible risks or discomforts:

There are no anticipated risks to participating in this study. If you feel uncomfortable at any time while completing the survey, you can omit an answer to a question or terminate your involvement. No sensitive information will be collected on this survey.

Time to complete online survey: Approximately 20 - 25 minutes.

Options for non-participation:

Participation is voluntary. If you do not want to be a participant, you may refuse the invitation. If you begin the online survey and decide to discontinue participation, you may do so at any time.

Confidentiality:

All information will be kept confidential to the extent allowed by applicable State and Federal law. Survey responses will be anonymous, meaning that no identifying information will be asked during the survey. Names or any other identifying information will, in no way, be connected to survey responses.

Distribution of results: At the conclusion of the survey, participants will have the right to request feedback about the results. Results will be distributed by the principle researcher, **Lance Cheramie**, cheramie@uark.edu.

What to do if questions arise about the online survey:

Participants may contact the principal researcher listed below about any concerns.

Investigator contact Information: Dr. Patrick Conge (Faculty Supervisor), Associate Professor, 479-575-6443, pconge@uark.edu and **Mr. Lance Cheramie**, Instructor, 479-575-6732, cheramie@uark.edu

IRB contact Information: If you have questions or concerns about your rights as a research participant, please contact Ro Windwalker, the University's Human Subjects Compliance Coordinator, at 479-575-2208 or irb@uark.edu.

Participant consent: I have read the above information and have been able to ask questions and express concerns, which have been satisfactorily responded to by the investigator. I understand the purpose of the study/online survey as well as the potential benefits and risks that are involved. I understand that participation is voluntary. I understand that significant new findings developed during this research will be shared with the participants, if requested. I understand that no rights have been waived by consenting to participate in this study.

I am consenting to participate in this study.

- O Yes
- O No

Dissertation Survey

Sustainability Reporting

Q1. Your stakeholders are informed of your sustainability efforts and performance through such methods as a Sustainability Report, Corporate Social Responsibility Report, Integrated Report, etc. or an equivalent.

- O Yes (1)
- O No (2)

Q2. Which method of reporting does your company use and why did they choose this method?

- O Sustainability Report (1)
- O Corporate Social Responsibility Report (2)
- O Integrated Report (3)
- O Other (4) ____

Q3. Your organization follows internationally recognized standards for your sustainability reporting

- O Yes (1)
- O No (2)

Q4. Your sustainability information is verified by an external organization

O Yes (1)

O No (2)

Q5. You require your suppliers to inform their stakeholders of their sustainability efforts and performance via a Sustainability Report, CSR Report, Integrated Report, etc. or an equivalent

O Yes (1)

O No (2)

Q6. Your Suppliers follows internationally recognized standards for your sustainability reporting

O Yes (1)

O No (2)

Carbon Disclosure Project (CDP)

Q7. The sustainability initiatives that you report to such organizations as the CDP and others are adequate to address environmental issues

O Strongly agree (1)

O Somewhat agree (2)

O Neither agree nor disagree (3)

O Somewhat disagree (4)

O Strongly disagree (5)

Q8.What would you add, if anything, that CPD does not demand, to better emphasize your corporation's environmental concern?

Q9. CDP is the only organization that you provide information to about your sustainability practices.

- O Yes (1)
- O No (2)

Policy

Q10. The reporting of sustainability initiatives by apparel corporations should be left as volunteer, as it is now.

- O Strongly agree (1)
- O Somewhat agree (2)
- O Neither agree nor disagree (3)
- O Somewhat disagree (4)
- O Strongly disagree (5)

Q11. Why should apparel corporations reveal what is being done about their sustainability initiatives?

Q12. The United States (US) government should require all US apparel corporations to administer sustainability reports through regulation

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q13. Do you think sustainability reporting could be improved if it were regulated?

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q14. Do you think regulation would cause negative effect?

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q15. The US government should provide training to apparel corporations to help them implement sustainability initiatives.

- O Strongly agree (1)
- O Somewhat agree (2)
- O Neither agree nor disagree (3)
- O Somewhat disagree (4)
- O Strongly disagree (5)

Q16. There should be a certain type of governmental incentive for US apparel corporations practicing sustainability.

- O Strongly agree (1)
- O Somewhat agree (2)
- O Neither agree nor disagree (3)
- O Somewhat disagree (4)
- O Strongly disagree (5)

Q17. More public recognition by the government should be given to apparel corporations in the area of sustainability.

- O Strongly agree (1)
- O Somewhat agree (2)
- O Neither agree nor disagree (3)
- O Somewhat disagree (4)
- O Strongly disagree (5)

Q18. What effort are you making or following towards public recognition?

Q19. What are your suggestions, if any, to improve on public recognition?