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ANALYSIS OF THE EFFECT OF CEO POLITICAL IDEOLOGY ON CORPORATE
SUSTAINABILITY AND OTHER EXTRA-FINANCIAL APPROACHES

DANIEL LIAM CAVANAUGH
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Reviewed and approved* by the following:

John Fulton
Associate Teaching Professor of Sociology
Thesis Supervisor

Brian Davis
Clinical Associate Professor of Finance
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

This research hypothesizes that CEO political ideology will have an impact on corporate sustainability and other aspects of extra-financial corporate decision-making. In particular, CEOs higher on liberalism will on average have companies that more highly embrace the environment than companies with more conservative executives.

This paper proposes that differences in political orientation will affect corporate sustainability against all companies in the sample, against a company's historical performance, and against industry peers. It also measures whether ideology influences standing with sustainability investors. This thesis analyzes metrics that also include social and governance-related aspects in addition to sustainability and postulates that organizations with more liberal CEOs are more transparent in their disclosure of extra-financial performance. To test these theories, it draws political donor information on CEOs from the top 187 organizations in the Fortune 500 to establish political orientation on a scale from 0 to 1, 0 being completely conservative and 1 being completely liberal.

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Chapter 1

Introduction

In recent years, sustainability has become an almost essential option for companies all over the world, not just those in the Global 500. Over the 10-year period between October 10, 2008 and October 10, 2018, the Dow Jones Sustainability North America Composite Total Return Index price climbed from 99.49 million to 311.18 million, an approximate 213% increase with steady growth throughout the decade (Bloomberg). Over the decade between October 8, 2008 and October 8, 2018, the Dow Jones Sustainability World Composite Index price rose from 855.51 million to 1494.43 million, an approximate 75% increase with similar yet more volatile growth over the period (Bloomberg).

Along with benefiting the environment, company-wide sustainability approaches have supported the bottom line as a result of the average consumer becoming more environmentally aware and selective. A 2012 McKinsey study that surveyed 1,000 Americans and Europeans found that 70% said they would pay a 5% premium for more sustainable products of equal quality (Miremedi et al.).

In addition to consumer preference, other non-environmental reasons to pursue sustainability include marketing concerns, compliance with laws, cost cutting, attractiveness to potential employees and sustainability investors, and employee morale, among other related factors. Together, these factors lead to corporate pride and the conclusion that prioritizing the environment is typically a benefit for company performance, not a cost.

As the global middle class expands and the population continues to grow at about 1.09% per year, the human race faces the challenge of sustaining development in a world with a limited amount of natural resources (Worldometers). The World Wildlife Fund estimated in 2012 that humanity used resources as if had been living in 1.5 earths, a number predicted to double by 2050 (Hadley). Experts have even projected certain fossil fuels to enter production decline within the next fifty years, starting with gas in 2023 (Valero and Valero).

The public agrees that the world is overusing its limited resources. It does not tend to agree, however, on certain aspects of global warming and climate change, two terms that many people confuse. Global warming refers to the rise in average global temperatures caused by an increase in greenhouse gases in the atmosphere that damage the earth's ozone layer and melt the polar ice caps, which causes global sea levels to rise. Climate change is similar but encompasses a broader range of phenomena, including shifts in plant blooming and extreme weather events (NASA). Public awareness of climate change and global warming have consistently been on the rise in recent memory. However, only certain segments of the U.S. population are responsive to initiatives that target them due in part to the socialization process of political ideology.

Controversies around climate change and global warming concern whether they exist, what their causes are, whether humanity should change its behavior to combat them, when their effects will occur, and what their effects will be. The major two are whether they exist and whether they are mainly anthropogenic, or human-caused. Such controversies do not exist in the scientific community, however. At least 97% of climate experts agree that climate change exists and that human activity is a major cause (Cook et al.).

Expert opinions contrast with the general response of those who are on the conservative side of the political spectrum. A 2016 Yale study concluded that 50% of Republicans believe

global warming is happening, compared to 82% of Democrats (McCarthy). Moreover, 31% of Republicans believe human activities to be mainly responsible for global warming, less than half the Democrat estimate at 65% (McCarthy). G.O.P. values of liberty and independence clash with the notion and threat of climate change, leading some to rationalize that the mass media is just sensationalizing it.

Governments and corporations have limited power in changing conservative perception, but they are the most powerful entities in the world in terms of combatting climate change. In ethics-centered debates, many would argue that it is their moral duty to protect the environment and by extension the interests and potentially even the existence of future generations. National governments have the ability to regulate the sustainability of large corporations, but corporate management still has many options, including whether to outperform regulations or move operations to countries with looser regulations.

With that in mind, this thesis investigates the effect of CEOs' political ideology, namely liberalism and conservatism, on their corporate decision-making regarding sustainability and other extra-financial matters. Through an analysis of political donations in juxtaposition with historical records of sustainability measures, this examination predicts that there is a causal link between liberalism and a corporate strategy more inclined toward sustainability.

Chapter 2

Literature Review Part 1: Environmentalism

Early History of Environmentalism

Environmentalism is a relatively new term. Prior to the 1960s, people only used the word to refer to home or work settings, as opposed to nature, natural ecosystems, the earth, its climate, or its atmosphere (Dauvergne). It took about two centuries after the start of the industrial revolution in the eighteenth century for mankind to recognize that energy consumption and modern lifestyles come with a cost. Before environmentalism became prevalent, however, there were instances in which people attempted to mitigate their effects on the environment.

Mitigation attempts, though, were very rare. The industrial revolution afforded humanity access to resources unparalleled in its history. People understandably did not grasp the ramifications of their use of resources. Oceans, rivers, and other bodies of water seemed as though they were unlimited. People were not worried about their impact on them. A sharp rise in resource usage sparked the significance of the tragedy of the commons globally.

The tragedy of the commons is a term in economics that refers to the problem in which individuals act rationally according to self-interest to reap the greatest benefit from a given resource, regardless of the consequences (Kenton). The problem arises from an individual's cost-benefit analysis, in which the personal benefit outweighs the individual share of the costs that are spread out, or "communized," among the public. The tragedy of the commons has been present throughout human history, but drastic increases in global population and improvements

in technology have magnified the effects. A classic example of the issue concerns the Amazon rainforest, where deforestation has spurred economic success at the cost of natural habitats, biodiversity, and global oxygen supply, among others.

As early as the 1600s, government officials in multiple countries began combatting the issue by calling for a more responsible, efficient use of natural resources (Dauvergne). Such initiatives included a sustainable approach to timber production to ensure steady yield. In this same period, people also began noticing degradation in air quality around industrial areas like cities and production sites, though their efforts to solve the problem were limited. In a comparatively more successful effort to preserve nature, various governments established national parks to set aside plots of land for their scenic beauty and ecosystems.

Although environmentalism did not officially become a public movement until the 1960s, its awareness in the public eye began growing in the period spanning about 110 years beforehand (Reynolds). It started in the period between 1850 and 1900 with writers whose focus was nature. Important to note is that books were the most powerful medium of persuasion until the fairly recent rise of technology. Henry David Thoreau's 1854 book *Walden* detailed his experience living in the woods near Walden Pond, Massachusetts. This novel created a literary genre that expressed a certain respect for and harmony with nature.

Thoreau's philosophy of harmony with nature influenced writer John Muir, a conservationist who was instrumental in the nascent years of environmentalism. Muir believed that the wilderness was a spiritual outlet for humanity, which notably contrasts with the popular reason today for environmentalism, which is to sustain humanity. Born in Scotland, Muir founded the Sierra Club, a U.S.-based conservation organization. The Sierra Club and its

founder, through his writing, became powerful in their protection of natural settings against parties with economic interests like politicians and loggers.

The Sierra Club was able to convince opposing parties to set aside plots of land, though only under the agreement that they would be preserved for future use by extractive industries. These agreements protected thousands of acres of land in time for humanity to discover the scientific need to protect it. In this time period, governments of developed countries like the U.S., Canada, Australia, and New Zealand started creating national parks. After many observed the Sierra Club's success, leading conservationists internationally began forming their own organizations with similar goals.

With the formation of these organizations, awareness spread throughout the first half of the twentieth century. In the 1910s, the public's attention turned from the spirituality of the wilderness to the plight of endangered species, largely due to William Hornaday's book *Our Vanishing Wildlife: Its Extermination and Preservation*, which he wrote after news of the death of the world's last passenger pigeon in the Cincinnati zoo.

Then, in 1949, conservationist Aldo Leopold published the cornerstone of books on environmental protection, titled *A Sand County Almanac*. The novel employs detailed observations of nature to delve into philosophical or historical arguments. Leopold's major arguments were that mankind had become detached from nature and that the onus was on people to familiarize themselves with the environment in order to preserve the balance of its ecosystems, which is necessary for human survival. In addition to spreading public awareness, this work influenced hundreds of others and led to the formation of more national parks and conservation-based organization (Reynolds).

Environmentalism Becomes a Recognized Movement

Despite *A Sand County Almanac*'s success, environmentalism did not gain widespread traction until the 1960s because of its initial lack of advocacy by the general public and lobbying groups that used their power to influence political policy, corporations, and consumer preferences. Before the 1960s, few people championed the cause. After conservationist Rachel Carson released her novel *Silent Spring* in 1962, public interest in environmentalism precipitously climbed. Carson's book informed the public of the harmful effects of pesticides and insecticides like dichlorodiphenyltrichloroethane (DDT), namely that they were poisoning wildlife and contaminating the environment (Dauvergne).

Silent Spring was so influential that the insecticide industry made various attempts to ban it from bookshelves. Its title concerns humanity's effect on the food chain (Reynolds). With insects dying, birds would not have sustenance to live, thus the name *Silent Spring*. The part in particular that alerted the public was her finding that DDT enters the food chain through insects and eventually humans consume it in the fatty tissues of animals. Although her other points were salient, this one scared people into now questioning the food they were putting on their tables.

It even seemed to scare President John F. Kennedy, who ordered an investigation into her claims. After verifying each of them, the federal government banned DDT while many pesticides and other insecticides faced widespread backlash. *Silent Springs* was successful in advancing the issue of the environment beyond those who sought to protect it; it now became an issue for those trying to protect themselves. This was the evidence necessary to spark a political movement on the scale of environmentalism.

In the 1960s, environmentalism was an understated political movement. Today, it is a global force that only appears to be on the rise. Figure 1 tracks the historical popularity of the term.

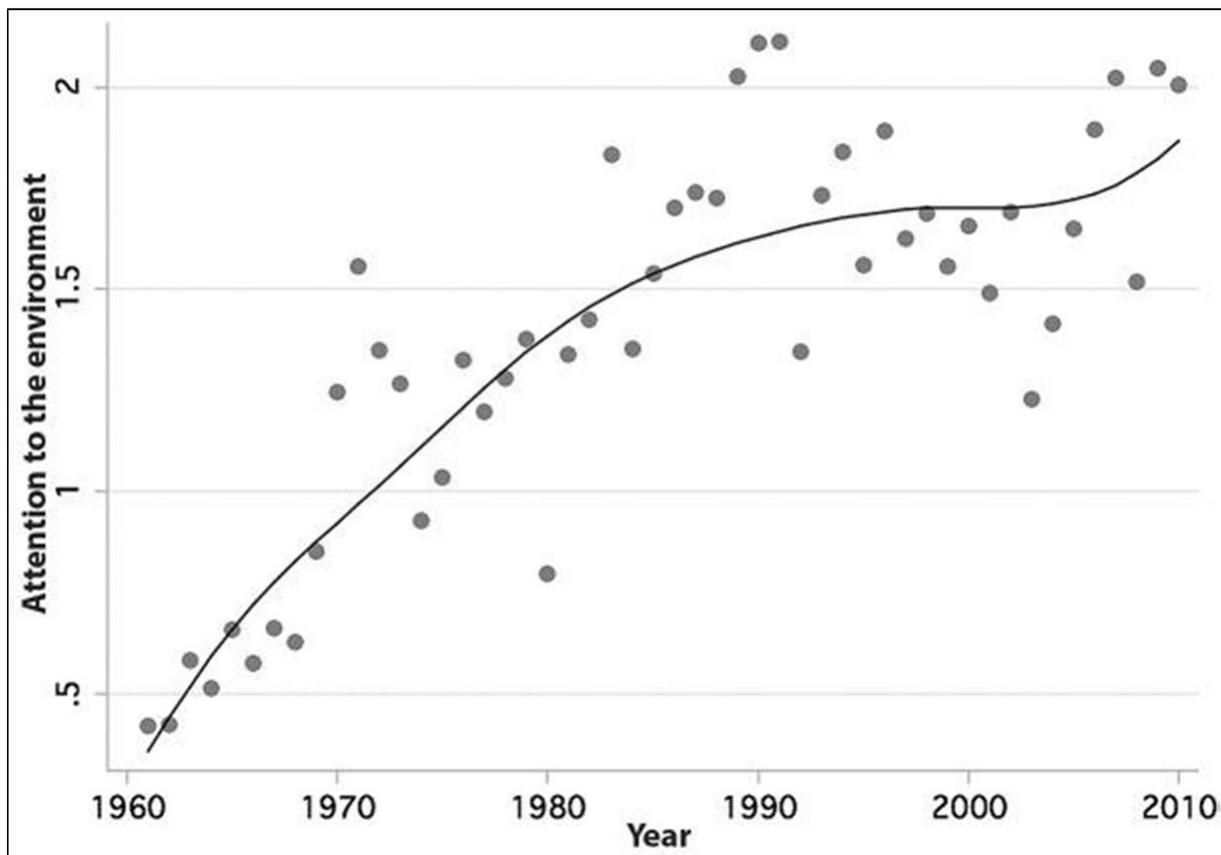


Figure 1. Historical Popularity of the Term “Environmentalism”

Source: Cairn International Edition

As shown in the Figure 1, what started as a counter-cultural movement has steeply risen in importance in the international political sphere. Though it does not include the past 9 years, it is important to note that environmentalism is noticeably more prevalent today than it was in 2010.

The 1970s saw a rise in international cooperation to combat environmental threats. In 1971, the establishment of international, environmentally focused groups Greenpeace and

Friends of the Earth International substantially affected the upward slope of the curve above (Reynolds). Their campaigns alerted the public of the trade in elephant ivory, seal fur, and rhino horns. They also did well to inform the masses of the threat of extinction to species like tigers and pandas. Unlike the case of Carson's novel, it now became popular to start worrying about environmental issues that did not directly affect people.

A year later in 1972, international cooperation progressed as 113 of the world's most economically developed countries joined the inaugural Earth Summit that would convene every 10 years thereafter (Reynolds). The Earth Summit, officially named the United Nations Conference on the Human Environment, met in Stockholm, Sweden with the goal of addressing environmental issues that industrialization causes.

The initial conference concentrated on concerns such as acid rain, industrial waste in oceans and seas, and the spilling of cargoes by oil tankers. The end result was the creation of various international organizations and agreements to solve these problems. Because this assembly officially legitimized environmental issues, many consider it to be the defining moment for environmentalism.

During the 1970s, three conservationist books in particular stood out: *The Limits to Growth* by Donella Meadows, Dennis Meadows, Jørgen Randers, and William Behrens III, *Small is Beautiful* by E.F. Schumacher, and *Steady-State Economics* by Herman Daly (Dauvergne). The findings of *The Limits to Growth* were especially frightening and persuasive. Its authors used cutting-edge simulation technology to examine the impact of global resource usage and found that the world's nations would one day deplete all of its natural resources. The findings led many to question whether the proper authorities should monitor and slow down the pace of worldwide economic growth.

The Limits to Growth merely presented the problem; *Small is Beautiful* built on the literature by providing possible solutions. In his book, Schumacher proposed Democratic reforms to the global economy that would ensure consumption of resources was at a more responsible level. Similarly, *Steady-State Economics* presented a plan to scale back consumption to a more sustainable level. Together, these novels popularized the idea of sustainable practices worldwide and were foundational in facilitating the emergence of the field of ecological economics, which is an interdisciplinary study that prioritizes sustainability, justice, and human well-being in the decision-making of those in positions to govern economic activity (Howarth and Baumgärtner).

Although Figure 1 displays a clear upward trend in the 1980s, the environmentalist movement did not make much progress in the decade. The second Earth Summit, held in Nairobi, Kenya, was largely unproductive because of the effect of the Cold War (Reynolds). Additionally, new problems kept surfacing. Examples included raw sewage aggravating nautical sports hobbyists, light pollution thwarting astronomers, and noise pollution from motor vehicles obstructing the sonar navigation of marine animals. The only problems the public attempted to solve were the ones that affected the most people.

It was in the '80s that the public became aware of issues with the ozone layer. In May of 1985, British physicist Joe Farman and fellow researchers Brian Gardener and Jon Shanklin shocked the public when they published their findings in the peer-review journal *Nature* (Childs). They found that human activity was creating a hole in the ozone layer that diminished the earth's protection from the sun. In particular, a 40% decrease in the makeup of the ozone layer above the Antarctic occurred in the short time period between 1975 and 1984. The main specific cause was chlorofluorocarbons (CFCs) that people used in their refrigerants, spray-can

solvents, and propellants like deodorant. These findings and the threat of skin cancer pushed the public to root out these pollutants from worldwide production.

The '80s also marked the beginning of the environmentalism buzz-word "sustainability" (Reynolds). In 1983, the UN created the World Commission on Environment and Development and appointed Norwegian Prime Minister Dr. Gro Harlem Brundtland as chairperson. As chairperson, she published the 1987 report titled *Our Common Future*, in which she famously defined the term: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Dauvergne; International Institute for Sustainable Development). This definition notably holds that environmentalism does not necessarily mean sacrificing all the benefits of economic prosperity, which most people are reasonably hesitant to do. Today, this definition continues to guide many governmental and non-governmental organizations worldwide in their conservationist efforts.

In the 1990s, global warming rose to the forefront of publicly perceived issues facing the planet (Reynolds). Global warming, as mentioned in Chapter 1, refers to the rise in average global temperatures caused by an increase in greenhouse gases in the atmosphere that damage the earth's ozone layer and melt the polar ice caps, which causes global sea levels to rise. At the 1992 Earth Summit in Rio Brazil, the discussion became how to address it.

National representatives also now recognized that anthropogenic environmental problems had consequences on the global economy and peoples and countries of low socio-economic statuses. The three key outcomes of the conference were a termination of the use of harmful poisons and agreements to protect biodiversity and fight global warming. In comparison to the previous summit, this one was a major success.

The conference in Rio introduced the Kyoto Protocol, which mandated that all signatory countries decrease their carbon emissions by 5% between 2008 and 2012 (Reynolds). Many countries, however, refused to sign or in the end did not reach their deadlines. Countries like the United States and Saudi Arabia declined due to their dependence on oil while emerging economies like China and India did not believe they could reasonably comply considering their remarkably high growth rates.

Perhaps one of the greatest victories for environmentalism during the '90s was the introduction of recycling bins, which became a pressing need as landfill space tightened. In combination with the emergence of green – or environmentally friendly – products, consumers started to display a preference for sustainability. Similar to the sense of prestige consumers feel while purchasing Starbucks products, people could feel green while purchasing certified products. Here, conservation became a marketing tactic that financially incentivized corporate decision-makers regardless of their stances on environmental issues.

In the same decade, a subset of consumers also began to choose green in their travel preferences as ecotourism, which originated in the '80s, became more popular. Ecotourism, or nature tourism, is a broad term that applies to various types of travel, but generally it is “the practice of touring natural habitats in a manner meant to minimize ecological impact” (Merriam-Webster). With an estimate of 1.245 billion people traveling internationally in 2016, up about 138% from the 524 million people estimate in 1995, the tourism industry is largely detrimental to the environment (The World Bank).

However, the ecotourism industry offers an alternative that minimizes damages or even produces a net positive result, and environmentalists have taken notice. A 1993 report estimated that ecotourism generated 7% of all tourism spending (Sproule and Lindberg). A study that same

year found 4% growth in traditional tourism, in contrast with an estimate of 10% to 30% growth in ecotourism (The International Ecotourism Society). As mentioned earlier, ecotourism is a broad term, which has caused it to elude many statisticians. Nevertheless, these findings display a sharp rise in the practice during the '90s that has continued to present day.

Sustainability in the 21st Century

The Johannesburg Earth Summit in August of 2002 certainly supported the upward trend in environmentalism (Reynolds). The summit, also called the Rio +10, included about 10,000 delegates from 180 countries, in addition to numerous non-governmental organizations and members of the media (Dauvergne). National representatives at the conference focused their attention on five major issues facing the world: water and sanitation, health, biodiversity, energy, and agriculture (Reynolds).

A major shift took place at the assembly. In the past, powerful economies like the European Union and United States controlled the proceedings. At this meeting, however, developing nations began to have more pull, an important progression considering much of the world's production takes place in developing countries due to their competitively cheap labor. As a result, the summit member nations agreed to decrease the number of people who did not have access to basic sanitation by half by 2015, an especially difficult goal considering worldwide population growth over that period.

Developing countries were also frustrated with energy and agricultural subsidies that favored local production in developed economies. At the end of the Johannesburg Summit, developed countries had agreed to lower their subsidies, though these protectionist measures still

today do not typically favor economically disadvantaged countries. However, these concessions revealed that countries in power were becoming more willing to use it to benefit the environmental, social, and economic needs of those without.

Two notable documents that representatives drafted at the Rio +10 were the Johannesburg Declaration of Sustainable Development and the Johannesburg Plan of Implementation (Dauvergne). The former included challenges and commitments for its signatories while the latter set out specific timetables to address various environmental issues. Although the event was largely successful in furthering the progress of environmentalist ideals, environmentalists themselves criticized that oil companies and developed countries with conflicting economic interests like the U.S. and Japan pushed their agendas and contested initiatives that favored renewable energy (Reynolds). Overall, despite these concerns, this event was a landmark in the history of sustainability.

Since 2010, consumers have become much more conscious of environmental issues. This has led to the emergence of green companies, which are organizations that work to minimize their environmental footprints. Example of green companies includes popular outdoor apparel brand Patagonia and lesser-known internet search engine Ecosia. Executives at Patagonia have made it their company's mission to protect the environment and they pride themselves on their Ironclad Guarantee, which allows customers to return their products for free repairs so that they do less damage to the environment through buying less. Many of Patagonia's green initiatives like this one have recently helped the company gain competitive market share in its industry.

German company Ecosia similarly has gained market share through its green initiatives. The search engine uses the majority of its ad revenue to strategically plant trees in areas of the world that need them most. Currently, it has planted over 48 million trees, a number that is

constantly rising (Ecosia). Because of its philanthropic business model, Ecosia has roughly 7 million active users, another number that is rising as consumers become more environmentally conscious.

As the popularity of green companies rises, so does the amount of green jobs. In 2010, the Bureau of Labor Statistics calculated that green jobs account for 3.1 million jobs in the U.S., or 2.4% (Cohen). Researchers estimated that in 2011 that green products produced over \$40 billion in revenue (Neff). This supports the notion that despite the typically high prices of environmentally friendly products, consumers are more than willing to spend. The current state of environmentalism is unequivocally positive as the movement routinely gains more support from the public on a yearly basis. While the world's nations and most powerful companies still have room for improvement in this area, they certainly appear to be on the right track.

Chapter 3

Literature Review Part 2: CEO, Party, and Corporate Responsibility

This study is the first to examine the relationship between CEO political ideology and corporate sustainability in the United States. Available literature has examined political ideology, CEO decision-making, and sustainability from a multitude of perspectives. Researchers have separately analyzed sustainability to determine whether it produces shareholder value for companies. A number of studies have found that voluntary corporate sustainability produces higher returns for its stakeholders (Eccles et al. 1).

An analysis of 180 companies has linked corporate sustainability to better performance in the long run, in terms of performances in both accounting and the stock market (Eccles et al.). Furthermore, its findings indicate that companies with strong sustainability approaches are more likely to be focused on the long term, to more readily measure and disclose nonfinancial information, and to establish processes for stakeholder engagement.

An extensive array of similar studies has measured the effect of CEO political partiality on different areas of corporate decision-making. Such studies are very current in the field of corporate finance. Dependent variables range from financial considerations like corporate profit and tax avoidance to social matters like pay egalitarianism and employee benefits. The field of research dates back to 2013 when Chin et al. investigated the link between CEO political ideology and corporate social responsibility (CSR). Their findings conclude that causation does indeed exist, with companies under liberal management demonstrating more advanced CSR

profiles. Moreover, the research finds that businesses with liberal CEOs are more likely to engage in CSR regardless of swings in recent financial performance.

The study design of Chin et al. in regard to political ideology is binary. It includes 249 CEOs, listed as either Democrat or Republican based on their political contribution history before starting in their current roles. This thesis takes inspiration from the research methods of Chin et al., though only using its basic framework. The collection of studies that measures the impact of political preference on corporate output tends to utilize CEOs' history of political donations to measure political ideology, as Chin et al. do. Despite using similar data, each piece of literature delves into measurement from different perspectives and with different goals in mind.

The inspiration for this line of research stems from the idea that underlying personal values manifest themselves in one's political stances, or vice versa. A broad array of literature substantiates this claim. Research in political science verifies that, in contrast with liberals, conservatives typically are more risk averse, favor financial security, value self-reliance, have an inclination toward the familiar and are less open to experiences, are less tolerant of uncertainty, are more fearful of threats, and have a higher need for order, structure, and closure (Wilson et al.; Wilson; Glasgow et al.; Jost et al.; Lakoff).

Psychological research has even struck more specific levels, finding for example that conservatives prefer conventional as opposed to abstract art, have more anxiety about death, and are more intolerant of overweight people (Wilson et al.; Jost et al.; Crandall and Biernat). Relevant investigations support that political ideology typically has a far-reaching connection with the psychological disposition of an individual. It follows that political biases would affect the decision-making process of a CEO. In fact, multiple analyses have concluded that the

conservative-liberal spectrum is one of the most important markers of one's values (Feather; Schwartz).

As discussed by Chin et al., there are two mechanisms through which executives make their decisions: behavioral channeling and perceptual filtering. According to the former, an executive after carefully considering the context and details of a situation will decide through the lens of his or her values. The latter, which is more indirect, has a nearly identical definition to the confirmation bias. It states that executives will seek out information that confirms their beliefs, interpret it based on their values, and make decisions accordingly. Together, these mechanisms shed light on possible explanations of the role of values in decision-making at the executive level.

A key assumption in this thesis is that CEOs have an effect on corporate sustainability and, more broadly, on other factors of corporate decision-making. In the past, scholars have reasonably questioned the extent of power one person has in guiding a company. They have created many theories detailed below on the matter.

One who subscribes to neoclassical economics would believe that the extent of power is rather limited. It posits that the main determinant of corporate decisions is a collection of external forces like industry competitors, markets, and technologies (Augier and Teece). New institutional theory also supports the claim that executives have very limited power if any at all. It suggests that CEOs' companies are too resistant to change and are too tied to the organizational practices and processes of industry peers to allow their leaders to have significant power (DiMaggio and Powell).

Neoclassical economics and new institutional theory starkly contrast with agency theory, which concerns the difference in thought processes between owners and managers. Agency

theory maintains that CEOs, as agents, have substantial power to steer corporate decision-making and that shareholders, as principals, must act so as to align their goals (Jensen and Meckling). It is in the best interest of principals to do so because history has shown that CEOs are inclined toward potentially harmful behavior called agency costs. The job of CEOs is to please their shareholders, but CEO's personal incentives often stand in the way.

Examples of agency costs include empire building and nest feathering. Empire building is "the act of attempting to increase the size and scope of an individual or organization's power and influence," and nest feathering is a situation in which a manager takes advantage of his or her position to achieve personal financial goals (Kenton; Jensen and Meckling). Theorists mark monitoring and incentives strategies as the mechanisms through which owners can mitigate agency costs. Of course, mitigation strategies vary by company, which in turn makes it more difficult to assess the degree of CEO power of any given corporation.

Most relevant all theories to this thesis paper is upper echelons theory. This paper and the most similar literature investigate upper echelons theory from multiple perspectives. Like agency theory, upper echelons theory holds that CEOs indeed have significant pull within their organizations (Hambrick and Mason). It advances that a CEO's personal biases generally play a significant role in determining corporate direction.

According to upper echelons theory, CEOs and other executives perceive and interpret the situations their companies are facing through their own personal mental frameworks. One's unique collection of experiences, personality characteristics, and values form one's framework. Before Chin et al. conducted their study, most of the relevant literature focused on the role of experiences and personality in shaping corporate direction because of the high level of difficulty that it takes to measure values.

For example, one such study found that the top performing companies in terms of corporate social performance tended to have CEOs who had bachelor's degrees in humanities, many years of career experience, and were female (Manner). Similar to this thesis, one even studied the impact of CEO demographic characteristics on corporate sustainability and CSR and discovered that firms employing executives with Master's Degrees of Business Administration (MBA) and science (MSc) on average outperformed their peers (Huang).

Like the findings of Manner, Huang's results also favor longer tenure and female executives. In a broader sense, the findings indicate that executives have the ability to significantly affect sustainable performance, as this thesis hypothesizes. As a whole, the literature exploring upper echelon theory evinces that differences between firms largely stem from the unique decision-making processes of upper management.

In addition to the assumption that CEOs have an effect on corporate decision-making, another key assumption this thesis paper makes is in its methodology, namely that taking office does not significantly affect the political contributions of CEOs. While CEOs may have more financial capital to influence politics, the research assumes that it will not impact their choice of parties to which they donate to the extent that one cannot accurately measure their political orientations.

Research, however, finds that in some circumstances it may be preferable for executives to cross party lines in their donations. A Brazilian study in 2008 concluded that companies with leaders who were active political donors on average outperformed their peers in terms of stock returns (Claessens et al.). The results suggest that building political connections through monetary contributions indirectly affects corporate performance through its impact on political

policy. For this reason, it is easy to understand that CEOs have the incentive to cast aside their political beliefs when deciding whom to donate to.

Important to note is that Claessens et al. drew from a sample size of Brazilian companies from 1998 to 2002. It is not clear whether their findings are internationally relevant, especially to the United States where corruption is much less prevalent. Regardless, research on the matter widely holds that desire for influence and corporate returns pales in comparison to the significance of personal ideology in driving one's political contributions (Ensley; Francia et al.). Thus, it is acceptable to include contributions made after taking office in the calculation of a CEO's political orientation.

At the same time that Chin et al. conducted their study, Hutton et al. (2013) more broadly examined the prediction that CEO political ideology drives corporate outcomes. Their research uses a variety of indicators to compare the financial success of companies with conservative CEOs to those with liberal executives. The study controls for industry and finds that on average, enterprises with conservative leaders hold less debt, less risky investments, and are more profitable. On the negative side, they spend less on capital and research and development. The findings beg the question as to whether companies with conservative CEOs are more profitable because they are less likely to engage in spending and risky behavior.

These differences in the decision-making process should become apparent when companies transition to new CEOs. Hutton et al. sought to answer whether leadership change results in noticeable policy changes when CEOs who are more conservative than their predecessors take office. When this power shift takes place, evidence of more conservative policies become apparent.

Hutton et al. also delve into real-world systematic shocks in an effort to further compare the ideologies. Their analysis concludes that firms with Republican CEOs became more conservative in their investments following shocks like the 9/11 terrorist attacks and the financial crisis of 2008. The conclusions demonstrate that exogenous factors have the ability to intensify the differences in decision-making between liberal and conservative executives.

Prior to the original investigations of Chin et al. and Hutton et al. in 2013, research on the effect of CEOs' personal values was very limited. Since their publications, however, researchers have conducted at least 12 similar studies. In 2014, the related literature expanded as two more scholarly articles assessed the impact of CEO political viewpoint on corporate risk strategies and social activism. One found that companies with Republican CEOs are less likely than those with Democratic CEOs to engage in tax avoidance (Christensen et al.).

The common perception here is that conservatives generally will pursue all legal measures to reduce their taxes. Examples of CEO turnovers further support that companies with conservative leaders are less likely to avoid taxes (Christensen et al.). The findings disproved the researchers' hypothesis and the generally expected result that firms with conservative CEOs would be more likely to engage in tax avoidance (Christensen et al.). The conclusions are especially significant in that they prove the expected result based on common perceptions will not always be correct when studying corporate management.

The findings disproving conservative tax avoidance become more ambiguous, however, when in juxtaposition with those of a 2016 study conducted by the Bank of Finland (Francis et al.). The study's findings indicate that companies with conservative CEOs are indeed more likely to participate in corporate tax sheltering regardless of confounding variables such as weak corporate governance and the level of financial incentives that influence management decisions.

The studies are not completely contradictory, though. Francis et al. also find that Democratic CEOs are more likely to engage in tax sheltering when they have personal economic incentives. Under the assumption that these findings are correct, boards of directors would need to be aware of their chief executive's political ideology in order to determine the proper incentives to drive strong financial performance with lower costs.

In comparison to the ambiguity around tax concerns, a 2014 study produced more predictable results. The study focuses on CEO social activism in regard to the treatment of lesbian, gay, bisexual, and transgender people (Briscoe et al.). It does so by studying the initiatives taken by CEOs from 1985 to 2004 when they were considerably riskier and finds that CEOs closer to the liberal side of the political spectrum were more likely to advocate.

Some of the literature discusses topics that are considerably less predictable than others. For instance, one sticks to the political theme by measuring the influence of CEO political inclination on corporate lobbying efforts (Unsal et al.). It finds that firms with Republican-leaning management tend to spend more on lobbying and lobby a larger number of bills.

In comparison to their Democratic and Apolitical counterparts, lobbying efforts by conservatives are more likely to be in vain, with a lower average Tobin's Q ratio, higher agency costs of free cash flow, and lesser increases in buy and hold abnormal returns in the periods following lobbying engagement. The conclusions of Unsal et al. suggest that political orientation will not only affect engagement in corporate lobbying, but also its effectiveness.

Much like this thesis, the literature tends to focus on social engagements and attitudes that the public widely associates with placements on the political spectrum. It is common knowledge that conservatives value self-reliance as opposed to the liberal ideal of interdependence. In 2016, Chin and Semadeni explored whether the contrasting views extend to

corporate leadership of Fortune 1000 companies in relation to pay egalitarianism among top management teams (TMTs).

According to their research, the public association is only partially correct. It finds that in comparison to liberalism, conservatism heightens the disparity in salaries and bonuses among TMT members, but it does not affect the ratio of CEO pay compared to that of the rest of the top managers. The data reflect the theory that liberals are sensitive to systematic income inequality but not necessarily to their own.

In the last study measuring social impact as the dependent variable, a Chinese study recently drew upon the ideas of Chin et al. and investigated the impact of Chinese CEOs' socialist political ideology on CSR commitments (Ou et al.). This is the only study in the collection that focuses on a country other than the United States. It is also the only one that considers socialism as opposed to the conservative-liberal spectrum.

Instead of using political donation information, which is not available in China, it accessed information on which CEOs in their randomized 1,970-company sample were members of the Communist Party of China (CPC). The study's results show an increased engagement in behavior associated with socialism by CEOs in the CPC. Their firms had a higher probability of being involved in social initiatives and having generous employee benefits. This study also includes measurements on environmental impact and found organizations with socialist leaders to be the most sustainability-oriented. In their consideration of environmental concerns, Ou et al. conduct a study most similar to this thesis.

In addition to the country and political system involved, the study has further dissimilarities with the collection of literature. It finds that there are other factors that strengthen the relationship between its variables, including the percentage of employees belonging to the

CPC, CEO political connections, and the political environment of the regions in which these companies operated. The relationship weakened in regions known for having stronger religious and market-oriented ideologies.

Because of the main differences in the Chinese study and its international implications, it is perhaps the most important study in the literature. Its data put forth the claim that CEO ideology impacts business decisions in the international community, not just the U.S. Of course, different countries will have different political systems and varying degrees of power allotted to their companies' CEOs, but the conclusions illustrate the universality of the impact of political orientation on management decisions.

Another significant topic the literature discusses is financial and risk-related impact from a variety of perspectives. As mentioned earlier, Hutton et al. found companies with conservative CEOs to on average be more profitable. One finance and risk-related study corroborates the results of Unsal et al. in its finding that when adjusted for factors such as economic incentives, management power, power of marketing departments, and macroeconomic growth, companies with more liberal CEOs generally have lower Tobin's Qs but higher stock volatility (Kashmiri and Mahajan). It makes sense that liberal risk taking would raise stock volatility. Hutton et al. also found that firms with liberal CEOs are more likely to have a higher rate of new product introductions (NPIs), which associates with the previously mentioned indicators.

One of the riskiest activities a firm can engage in is mergers and acquisitions (M&A). In 2017, a study predictably found that the degree of CEO liberalism positively relates to engagement in M&A (Elnahas and Kim). The study's authors also discovered that enterprises with liberal chief executives were less likely to use cash as a method of payment. Finally,

liberals were more likely to target firms from outside of their company's industry and to engage in acquisitions high on information asymmetry.

A direct effect of approach to risk is the audit prices that a company must pay. Firms with liberal chief executives that accordingly take more risks typically pay higher audit fees due to lower quality of financial reporting and higher client business risk. A recently published 2018 study investigated this expectation and found it to be correct (Dong et al.). Furthermore, the effects of CEO ideology on audit fees magnified when their firms had weaker corporate governance. In their research, Bhandari et al. verify that Republican CEOs promote higher quality reporting (Bhandari et al.). They come to their conclusion based on the finding that firms with conservative executives display lower discretionary accruals and are less likely to beat earnings benchmarks.

The whole of the literature supports the hypothesis that companies with liberal CEOs are prone to riskier behavior. In the last study explicitly examining association with risk, it once again is in support. The analysis, focusing on Real Estate Investment Trusts, finds that those with liberal CEOs indeed engage in riskier behavior. On average, they have more capital expenditures, higher levels of leverage, and in accordance with the findings of Dong et al., have riskier investments (Deng et al.). The research of Deng et al. draws from a different sample of companies to further support the findings of Chin et al. and Ou et al. that degree of liberalism positively affects the level and diversity of commitments to CSR.

One other study from the collection analyzes a specific industry. As previously mentioned, the study conducted by Hutton et al. found a relationship to exist between external shocks and the decision-making of executives based on political preference. In 2017, Campbell et al. expanded on the research in an effort to determine whether politically opposing CEOs of

credit unions perform differently during crises. The study considers risk and finances and finds that firms with liberal CEOs tend to outperform their peers in crises. In particular, credit unions with liberal CEOs in times of crisis have return on assets that are 22 basis points higher due to a more liberal approach to accounting practices and discretionary provisions for loan losses.

The last related study investigates political ideology from a more precise standpoint. Other research widely ignores the fact that political orientation is composed of two branches: fiscal and social. In a 2018 study, Chin et al. consider the effects of liberalism on corporate entrepreneurialism from both standpoints. Despite the fact that entrepreneurialism is inherently risky, the public commonly associates it with conservatism for a litany of reasons.

The research supports the theory that in reality there is more nuance to entrepreneurialism. It finds that organizations with fiscally liberal CEOs are lower than others on corporate entrepreneurship and that those with socially liberal executives are more entrepreneurial. Thus, although there is little evidence that boards of directors select executives based on their values, a board in favor of free market enterprise may actually be best suited selecting a leader who is fiscally conservative and socially liberal.

In addition to studies focusing on CEOs, the relevant literature delves into topics concerning the decision-making processes of others in different positions within their respective companies, namely middle managers. As there are many more middle managers in the United States than CEOs, these studies produce much larger sample sizes. One study finds that managers with conservative orientations are more likely to defend human flaws such as overconfidence and over attribution and are more likely to hold those under them accountable for their actions (Tetlock).

It also finds that conservatives tend to be more skeptical of complex management strategies. Perhaps most importantly, Tetlock's figures support the theory that conservative managers are inclined to prefer the shareholder model of governance to the stakeholder model. Other studies focusing on managers assess the impact of political affiliation in regard to crossvergence theory and differences in behavior (Ralston et al.; England). Whether these findings apply to CEOs has yet to be determined, though they notably follow the pattern portrayed by literature on chief executives.

Together, these pieces of literature produce many key conclusions. First, they support upper echelons theory in recognition that personal biases of executives impact corporate direction. Each study finds an impact associated with political ideology. The literature widely focuses on dependent variables that relate to at least one of the umbrellas of social activism, political involvement, financial performance, and attitude toward risk.

In doing so, the majority of the findings supports conventional wisdom on political values and related behaviors. Behavioral analyses tend to display that liberal executives are more socially active, lobby less, and make riskier decisions, but their financial impact is more complex. Firms with liberal executives tend to perform better under crisis, have higher stock return volatility, and be less profitable. Tax avoidance, however, holds contradictory findings.

Important to note is that neither the Democratic nor Republican party is more valuable from a leadership perspective. The better party depends on the specific indicator being measured. Thus, a firm's owners' selection between two otherwise equal candidates for the CEO position would hinge on external circumstances and the personal and financial priorities of owners. As it relates to the literature, sustainability is risky, stems from social awareness, and bears financial costs on companies, though knowledge is spreading that it can be a financial

benefit regardless of public image considerations. Because of these factors, one would reasonably make the prediction that corporations with more liberal CEOs on average more highly prioritize sustainability.

Chapter 4

Methodology

Measurement of Political Ideology

This study calculates political ideology, or liberalism score, on a scale of 0% to 100%, 0% being completely conservative and 100% being completely liberal. Opensecrets.org provided political donation information to calculate political ideology. For any political donation of at least \$200, Open Secrets stores information on donor name, location of donor, occupation or company name where donor works, date of donation, amount donated, donation recipient, and the category of the recipient of the donation, i.e. whether it is directly to a candidate or to a political action committee (PAC). Liberalism score weights donations to candidates and PACs equally.

The framework of this study only involves American companies because of the significance of measuring political ideology. Open Secrets collects data on donations made to American political parties only. Such a system does not exist internationally. Further, the American bipartisan system enables much more seamless measurement of political leanings, as there are only two significant variables, Democratic and Republican, to consider. Also, corporations operate differently in different countries, and CEOs' ability to affect sustainability may vary. Concentrating on one country controls for that potentially confounding variable. Despite the American focus of this study, it is reasonable to expect similar results in certain other countries because the climate change debate is international.

Liberalism score considers all donations made by chief executives regardless of whether or not they occurred during their terms in office. The reasoning assumes that being in office

does not significantly affect donation patterns. There are certain drawbacks to this assumption. If an employee becomes CEO of her company, she may become inclined to change her donor patterns to benefit candidates who endorse the goals of her business as opposed to her personal opinions. Chapter 3 of this thesis addresses these concerns.

Also, CEOs do not stand to gain much by making their political affiliations public. Political stance is a very polarizing subject. Some CEOs may opt to not make one in the consideration that their donations are public to employees and consumers alike. Executive political wariness may have excluded certain CEOs from making donations and becoming eligible for investigation in this study. One potential example is Facebook CEO Mark Zuckerberg, who has never expressed his political classification and has not made any contributions to candidates or PACs.

Noteworthy is that many executives made donations while at different companies earlier in their careers. Location of donation and online resources like LinkedIn and company websites provided biographical information to verify CEO identities in these instances. Mergent Online and Hoovers provided access to CEO start dates. This research considers the top 187 organizations of the Fortune 500. Of this number, 86 companies screened through the following two criteria. The requirement was that a firm's CEO had to have been in office at least 3 years as of September 9, 2018 when gathering of sustainability metrics began. The screen is 3 years to ensure that the executives have had a sufficient time period to impact sustainability and other extra-financial initiatives at their respective companies.

This experiment further screened companies to have CEOs who have made at least 5 political contributions. The objective here was to ensure that measured contributions were based

off of sufficient sample sizes. For example, two donations of \$1,000 to Republican candidates is not satisfactory to conclude the donor's liberalism score.

Liberalism scores includes two criteria in its measurement: amount of donations made and monetary amount of donations to the Democratic or Republican party. It takes the average of the amount of contributions to the Democratic party as a percentage of all donations and the amount donated to the Democratic party as a percentage of all money contributed. Take the following example:

$$\text{Liberalism score} = \frac{\frac{\$ \text{ donated to Democratic party}}{\$ \text{ donated to Democratic and Republican parties}} + \frac{\text{amount of donations to Democratic party}}{\text{amount of donations to Democratic and Republican parties}}}{2}$$

$$\% \text{ of dollars donated to Democratic party} = \frac{(500+2700+850+5000+4000+4000+1000)}{(500+2700+850+5000+4000+4000+1000)+(3000+2000+300+1500)}$$

$$= 72.64\%$$

$$\% \text{ amount of donations to Democratic party} = \frac{7}{7+4} = 63.64\%$$

$$\text{Liberalism score} = \frac{72.65\% + 63.64\%}{2} = 68.14\%$$

An individual with these contribution data leans liberally based on the calculation of liberalism score. Of the 86 CEOs included in this study, the sample leans decidedly conservatively with a mean liberalism score of 34.28%. A key observation is that 25, or 29.07%, of the executives score above 50% on the liberal side of the spectrum. Figure 2 visualizes the concentration of CEOs on the political spectrum at 10% intervals.

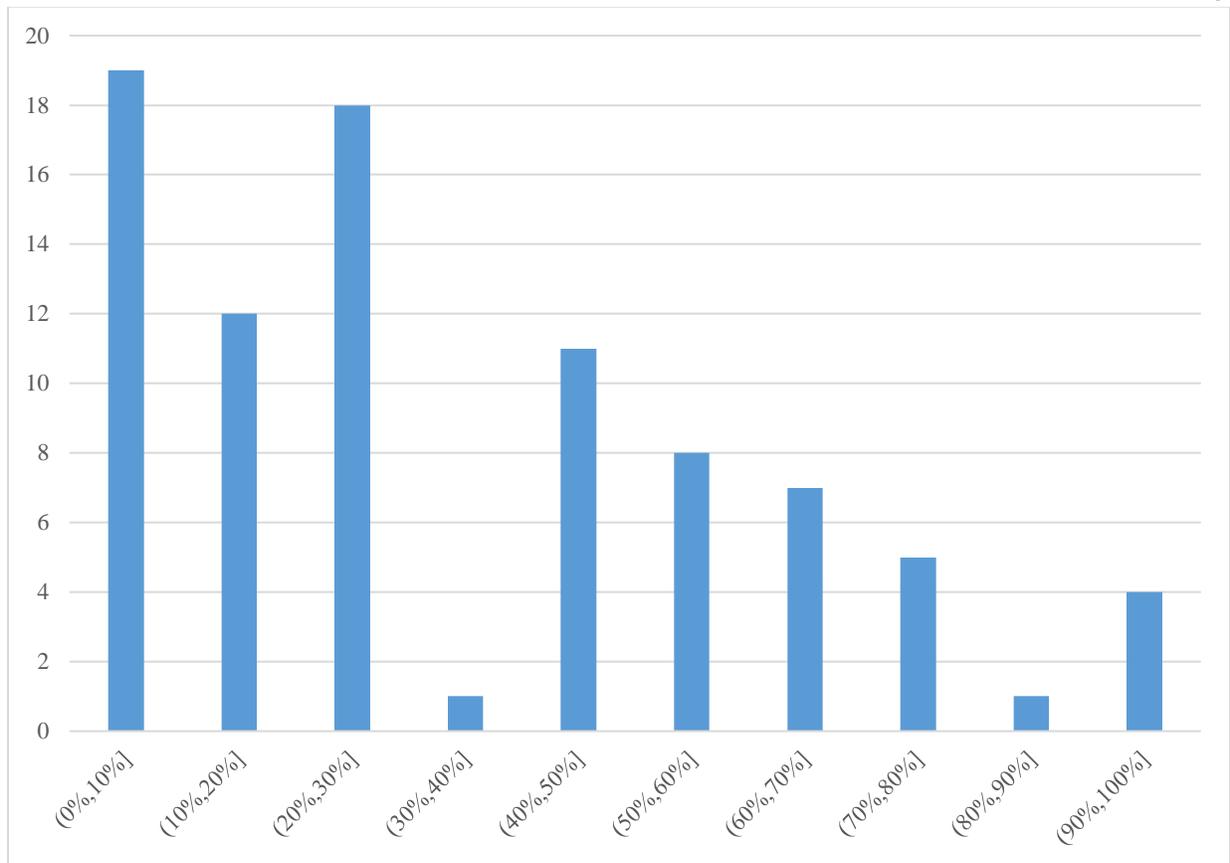


Figure 2. Liberalism Index Distribution (n=86)

Measurement of Sustainability

This study sources each of its 10 measures of sustainability from the Bloomberg Terminal's ESG (Environmental, Social, Governance) Index. The ESG has a strong reputation among companies and investors when measuring corporate values and risk. The environmental aspect considers usage of natural resources, emissions, and innovation, the social aspect considers workforce, human rights, community, and product responsibility, and the governance aspect considers management, shareholders, and corporate social responsibility (CSR) strategy (Thomson Reuters 3). The amount of ESG metrics in the Bloomberg Terminal varies by company.

Four indicators – Greenhouse Gas (GHG)/Revenue, Energy/Revenue, Water/Revenue, and Waste/Revenue – provide specific measurements of corporate sustainability in addition to benchmarks against industry averages. Bloomberg uses the average of these four measurements to determine environmental performance versus peers and separately versus corporate historical performance. Revenue as the denominator normalizes performance across industries and company sizes. The ESG selects revenue over other financial metrics because it best measures company size. In another broad metric, the Carbon Disclosure Project (CDP) Climate Score analyzes sustainability efforts but does not include ranking against industry peers.

Two measures – RobecoSAM and Sustainalytics – rank companies based on other criteria as well as environmental factors. The former also considers economic and social factors, while the latter also considers social and governance-related factors. RobecoSAM measures environmental output through a Corporate Sustainability Assessment (CSA) that businesses themselves fill out. Through RobecoSAM's utilization of the CSA, its research extends beyond the use of public records. The CDP similarly relies on self-reported data. The ESG Disclosure Score also considers other criteria, as explained later, but it does so in an attempt to measure corporate transparency.

Despite its good reputation, the ESG has various notable flaws. Sustainability has historically been a burden for statisticians attempting to measure it. ESG management itself admitted as much on its website, citing the 8 following issues with its calculations (Bendell):

- When companies self-report their sustainability output, their information may be untruthful and reflect biases.
- ESG analysts and raters focus on companies' management policies instead of their actual impacts.

- The system evaluates firms from a risk perspective in regard to reputation and potential litigation as opposed to ranking companies based on social and environmental impact on society.
- Sustainability and CSR are complex issues. ESG analysts deploy methods to measure these issues that are perhaps too simple. ESG metrics subjectively combine issues that may not be relevant to each other.
- Multiple conflicts of interest emerge in the corporate reporting that affects the ESG.
- Credibility is questionable when considering that some ESG metrics judge financial quality of performance and others attempt to quantify what are essentially moral judgments.
- The ESG considers all types of enterprises, including those in extractive industries like oil that are incapable of truly being sustainable. Industry-specific concerns raise ambiguity in trying to define what sustainability investing means.
- The ESG has not been a very transparent operation, especially in regard to disclosure of research methodology.

These weaknesses are certainly important to consider. Chief among them is subjectivity. However, because management has become aware of these concerns, it has been able to partially correct some of them, especially its lack of transparency. Also, financial analysts widely consider the ESG to be the most reliable marker of sustainability regardless of these potential issues. Chapter 5 delves deeper into details on the ESG, including strengths and limitations of specific metrics, in addition to what they consider in their calculations.

Additional Detail on Measurements

GHG/Revenue Ranking and Energy/Revenue Ranking

The CDP uses very similar methods to calculate GHG/Revenue and Energy/Revenue. Greenhouse gases are gases like carbon dioxide, methane, and nitrous oxide that trap heat in the atmosphere and damage the ozone layer. GHGs present perhaps the most significant problem to the environment. Therefore, metrics concerning GHG emissions do well to represent environmental damage as a whole. They strongly indicate companies' sustainability profiles and contributions to climate change. Overall, they give the opportunity to compare companies in terms of their environmental footprints.

CDP analysts measure GHG/Revenue and Energy/Revenue using energy-specific intensity, energy conversion efficiency, an emission factor that quantifies the emissions, net generation of energy, and corporate revenue in U.S. dollars (Griffin et al. 6). Emission factors consider generation source and grid. Inputs for these metrics come from readily available company filings in addition to estimations based on company throughput capacities (Griffin et al. 3).

Waste/Revenue Ranking and Water/Revenue Ranking

Although Waste/Revenue and Water/Revenue do not yield large sample sizes, they support the research by offering additional perspectives through which CEOs impact corporate sustainability. Excessive waste creation and water usage have many detrimental effects on ecosystems and the environment, which is why they are at the forefront of many sustainability efforts.

Environmental Performance vs. Peers and Company History

To calculate Environmental Performance vs. Peers and Company History, the Bloomberg Terminal pulls aggregate information from the indicators above and others that did not produce large enough sample sizes to be included in this thesis (Bloomberg ESG). These data points contextualize the information above and offer more in-depth analysis of each CEO's effect on corporate environmentalism. Environmental Performance vs. Peers clarifies whether a company's standing in sustainability is better than, in line with, or below industry expectations, and Environmental Performance vs. Company History compares recent output to performance over the past 10 years.

CDP Climate Score Ranking

Analysts compute climate score based on a variety of factors in regard to climate issues, including disclosure, awareness, management, and leadership (CDP). In comparison to other metrics used in the methodology, this one most accurately and holistically grades corporate sustainability. The CDP questionnaire asks companies to describe products they have that enable third parties to avoid GHG emissions and to describe corporate risks driven by changes in physical climate parameters (CDP 5). It also asks quantity-driven questions like what percentage of total operational spend in the reporting year was on energy.

It uses a variety of inputs in its calculations, including an emissions input of metric tons of CO₂e per USD value added (CDP). The questionnaire takes answers from these questions, divides them by the maximum number of points available for these questions, and calculates a climate score on a scale of 0 to 10 from least sustainable to most sustainable (CDP 6). The CDP

Climate Score section in the Chapter 5 gives additional detail as to why its data are so valuable for this project.

RobecoSAM Ranking

From the point of view of shareholders, sustainability can be a viable way to differentiate their companies. However, it turns some decision-makers away because of the costs it bears. Sustainability is certainly important, but it must support the bottom line to satisfy all shareholders. RobecoSAM considers cost-cutters by computing sustainability from a financial perspective. Companies that have strong RobecoSAM scores attract more sustainability investment, and therefore more capital (RobecoSAM). Thus, sustainability becomes a financial tool for corporate leaders to advance their businesses.

Sustainalytics Ranking

Because Sustainalytics also factors social activism and governance into its calculations, it adds another dimension to this research paper. Indeed, it aids the collection of relevant literature that discusses the factors in relation to CEO political ideology. Sustainalytics researchers draw input data from publicly accessible information in order to calculate companies' levels of riskiness in ESG (Sustainalytics).

It uses a two-dimensional materiality framework that measures corporate exposure to industry-specific risks and a company's ability to manage those risks (Sustainalytics). Negative news like ESG-related controversies will damage a corporation's Sustainalytics score. Like the RobecoSAM rankings, Sustainalytics scores are useful for investors. Investors who are concerned with any type of risk in their holdings can benefit from these ESG ratings.

ESG Disclosure Score Ranking

ESG Disclosure Scores measure corporate disclosure of ESG reports. This thesis uses this metric in order to determine whether CEO political affiliation impacts corporate transparency in regard to extra-financial material. Bloomberg sources its Disclosure Scores from published company reports, and 33% of the inputs for its calculations are environmental (Thomson Reuters 8). These results are important to consider because corporate disclosure impacts all the results of this study.

For example, if companies with liberal CEOs are more inclined to disclose extra-financial information, corporate transparency will impact other metrics in this thesis as opposed to actual differences between companies. Although this research hypothesizes that companies with more liberal CEOs will be more transparent, a lack of difference between conservatives and liberals is preferable for the reliability of this project's results.

Chapter 5

Empirical Results and Analysis

This study will discuss the relationship between CEO political ideology and corporate sustainability through the lenses of the 10 different metrics mentioned in Chapter 4. Graphs and tables in this examination divide sample sizes into groups for comparison. The method of using sample divisions is preferable because liberalism scores are too volatile on a case-by-case basis for visual representation.

Through the use of political contribution information and the Bloomberg ESG Index, this thesis investigates the 6 following hypotheses:

1. Companies with more liberal CEOs generally grade higher on sustainability.
2. Companies with CEOs higher on liberalism will grade higher on sustainability metrics than peers in their industries.
3. Companies with CEOs higher on liberalism will grade higher on sustainability when compared with the history of their companies' sustainability performance.
4. Companies with CEOs higher on liberalism will be more attractive to sustainability investors.
5. Companies with CEOs higher on liberalism will grade higher on metrics that additionally consider the social and governance-related metrics of the ESG.
6. Companies with more liberal CEOs are more transparent in their disclosure of extra-financial performance.

Descriptive Chart:

	Min	Max	Mean	SD	Skew
GHG/Revenue	0.46	6738.97	357.58	1104.82	4.58
<i>Compared to Peer Median</i>	-682.57%	85.81%	-28.67%	1.49	-2.95
Energy/Revenue	5.64	1972.69	560.20	722.64	1.09
<i>Compared to Peer Median</i>	-580.50%	72.55%	-46.21%	1.74	-2.59
Waste/Revenue	0.10	29346.66	1972.49	7572.89	3.87
<i>Compared to Peer Median</i>	-862.56%	81.46%	-77.11%	2.77	-2.46
Water/Revenue	23.64	95110.65	8670.70	27300.27	3.43
<i>Compared to Peer Median</i>	-2303.21%	65.31%	-312.39%	7.48	-2.58
Environmentalism Performance vs. Peers	0.00	1.00	0.32	0.40	0.72
Environmentalism Performance vs. Company History	0.00	1.00	0.77	0.41	-1.34
CDP Climate Score	0.00	8.00	4.49	2.83	-0.58
RobecoSAM Score	0.00	100.00	55.94	26.16	-0.17
Sustainalytics Score	8.10	94.30	56.69	22.41	-0.63
ESG Disclosure Score	9.60	66.20	38.33	14.69	-0.14

Table 1. Descriptive Chart

The stark differences between minimum and maximum in the sample size with metrics that use revenue as a denominator are due to industrial differences. Analysts create these metrics so that even the companies with the smallest footprints can be measured, which leads to very high numbers on the part of companies that are least sustainable. For example, the Bloomberg

Terminal measures drug wholesale corporation AmerisourceBergen's GHG/Revenue at 0.10, in contrast with retail energy provider American Electrical Power at 6,738.97. The large disparity here is the result of differences in industrial usage of greenhouse gases.

Large disparities between industries leads to large standard deviations and skewness, as shown in Table 1. This thesis's analysis deliberately ranks all metrics because of the large variability of results. Ranking corporate outcomes moderates the negative effect of variability and allows for much clearer visual representation. The table also shows that large variability and skewness exist within industries, but with considerably lower standard deviation. Once again, using a ranking system for comparisons to industrial peer average partially negates these concerns.

All other metrics from Environmental Performance vs. Peers down have much more controllable output in Table 1. These scores have lower and upper limits that restrict variance in their samples of companies. For the most part, skewness is close to even distribution, and standard deviations are low. Although the data are much simpler, this thesis still uses a ranking system for these metrics in order to more clearly visualize results.

GHG/Revenue Ranking:

Figure 3. Average Liberalism Score by GHG/Revenue Rank (n=57)

For the ranking system in Figure 3, firms with lower number ranks produce more greenhouse gas output when adjusted on a per unit revenue basis. As such, Figure 3 illustrates that corporations with higher GHG emissions have more conservative CEOs. The graph's curve is not upward sloping at each change of rank, but it evinces a clear trend.

Although GHG/Revenue is but one of many indicators discussed in this analysis, it is perhaps the strongest when examining the first hypothesis that CEO political ideology has a direct impact on corporate sustainability due to sample size, specificity, and measurement precision. It has a much larger sample size (n=57) than the other metrics that have the option to

compare against industry average. In contrast, the average sample size of the other three is 14.33, which declines further when accounting for industry comparisons.

In terms of specificity, many of these metrics reflect more than just corporate sustainability, as mentioned earlier. Lastly, the ESG's GHG/Revenue score does not rank companies on a limited scale. That is, each company scores differently than any other, unlike with environmental performance vs. history and peers, CDP Climate Score, RobecoSAM rank, and Sustainalytics rank.

When companies achieve the same rank, it is impossible to differentiate them. In addition, attempting to evenly partition a sample size and assign averages is difficult when firms on different sides of the division have the same rank. Overall, GHG/Revenue is the only measurement that fulfils all three criteria and it supports the existence of a causal relationship between CEO political preference and sustainability.

GHG/Revenue Ranking vs. Peers:

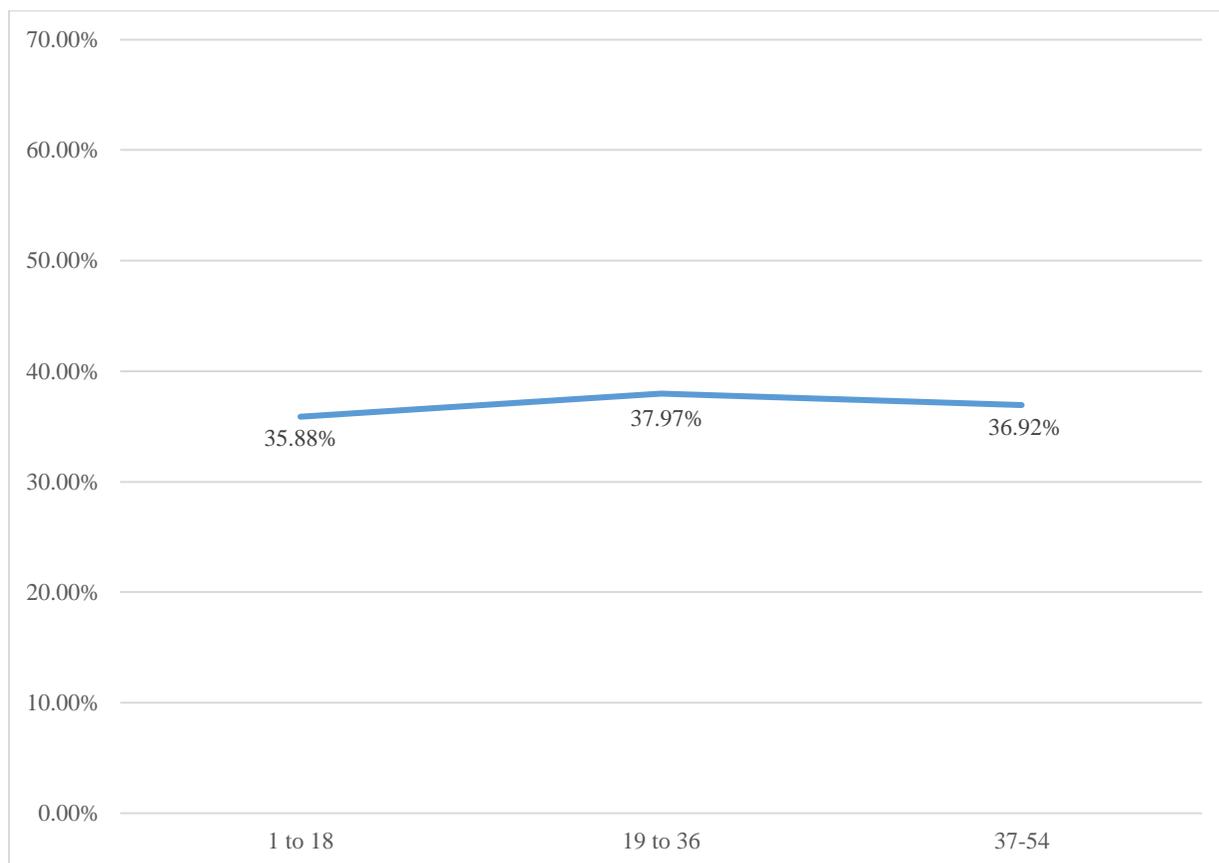


Figure 4. Average Liberalism Score by GHG/Revenue vs. Peers Rank (n=54)

Firms with lower ranks in Figure 4 produce more GHG/Revenue relative to peers. Ranks 1 to 18 emit the most GHGs compared to industry competitors and are least sustainable, while ranks 37-54 emit the least GHGs compared to industry competitors and are the most sustainable.

When comparing GHG/Revenue to competitors, results are not nearly as conclusive as the previously discussed indicator. The tendency for companies within certain American industries to subscribe to the same political line of thinking plays a key role here. For example, just as the tobacco industry largely employs Republican CEOs, so too does the technology industry largely employ Democratic CEOs. While most industries are not as extreme, industry-specific homogeneity is still a variable to consider. Essentially, executives with similar

ideologies are liable to make similar decisions regarding sustainability, thus making it difficult to outperform industry peers.

In evaluating metrics vs. peers, one can more clearly develop a hypothesis regarding CEO decision-making, namely that a CEO's degree of liberalism affects his or her management style and by extension his or her company's output in sustainability, which should cause an organization with a more liberal CEO to outperform industry peers in sustainability. The research in greenhouse gases fails to support this new hypothesis. Although the line of best fit in Figure 4 has an upward slope, the difference in political ideology between the 18 most and least GHG-efficient companies is only 1.04% in favor of liberals.

Energy/Revenue Ranking:

	Average Liberalism Score	
	Energy/Revenue (n=16)	Versus Peers (n=15)
Top 5	20.26%	24.59%
Bottom 5	39.42%	30.59%
Difference	19.16%	6.00%

Table 2. Energy/Revenue Ranking

For all tables, a green highlight marks most sustainable performance, while a red highlight marks least sustainable performance.

As displayed in Table 2, the 5 companies that use the most energy per unit of revenue on average are about half as liberal according to scale as the 5 that have the highest energy efficiency. The data closely mirror the findings in GHG/Revenue, as the 10 most GHG-efficient firms are about twice as liberal in CEO ideology as the 10 least efficient companies. These findings offer further support that degree of liberalism has a causal link with promotion of sustainability.

Energy/Revenue Ranking vs. Peers:

The results compared to peers in Table 2 are more extreme than those of GHG/Revenue. The difference between the top and bottom 10 in Energy/Revenue vs. peers is 6%. The data present that companies with CEOs higher on liberalism will embrace sustainability more so than their competition, though not to the same extent when comparing across industries. Based on the more limited sample size, these findings hold less weight than those of the previous section.

Waste/Revenue Ranking:

	Average Liberalism Score	
	Waste/Revenue (n=15)	Versus Peers (n=13)
Top 5	35.17%	22.11%
Bottom 5	38.50%	33.60%
Difference	3.34%	11.49%

Table 3. Waste/Revenue Ranking

Corporate Waste/Revenue breaks from the mold of prior indicators while still supporting the first hypothesis. The difference of 3.34% in Table 3 fails to substantiate a strong relationship. If anything, it proves that corporate sustainability does not always play a decisive role in determining liberalism score, as it has with prior indicators.

Waste/Revenue Ranking vs. Peers:

Similarly, research on waste delineates a variance across specific environmental measures in how CEOs perform in comparison to peers in their industry. The 11.49% disparity in Table 3 is almost twice as high as the energy ratio graded against peers. The findings indicate

that more liberal CEOs produce less waste than their peers even in a context in which companies with liberal and conservative CEOs perform with relatively little variation across industries.

Water/Revenue Ranking:

	Average Liberalism Score	
	Water/Revenue (n=12)	Versus Peers (n=10)
Top 5	32.37%	45.09%
Bottom 5	49.17%	44.15%
Difference	16.80%	-0.94%

Table 4. Water/Revenue Ranking

The change in liberalism score in Table 4 between the bottom and top 5 users of water on a revenue basis once more provides support for Hypothesis 1. Although not as large a difference as exhibited with previous indicators, a 16.8% difference in liberalism score highly supports the relationship between political partiality and sustainability.

Water/Revenue Ranking vs. Peers:

However, the research does not support the relationship between political partiality and sustainability in regard to industry comparisons. In Table 4, the 5 companies that produce the highest Water/Revenue ratio employ CEOs that are on average .94% more liberal than the companies on the opposite extreme. The data contradict the pattern of the previous 4 indicators and contributes to an overall sense that political ideology does not affect sustainability performance versus peers.

Environmental Performance:

Vs. Peers

		Average Liberalism Score
	N	Environmentalism vs. Peers
Better	11	36.28%
Worse	31	35.94%
Difference		0.34%

Table 5. Environmental Performance vs. Peers (n=42)

Table 5 further reflects the notion that political ideology does not affect sustainability performance versus peers with an insignificant total difference of 0.34%. The ESG determines environmental performance vs. peers and history based on GHG/Revenue, Energy/Revenue, Waste/Revenue, and Water/Revenue, in addition to metrics that did not produce sufficient sample sizes to be included in this thesis. Such ratios include the percentage of water recycled and industry-specific measures for select companies. Thus, when considering all environmental metrics in the ESG, political orientation is inconsequential.

Important to note are some key constraints with the ESG's measure of performance. One, as referenced earlier, is that the ESG produces only three possible results – Better, Neutral, and Worse. The ESG does not measure total performance numerically. Thus, many varying results group together into one. As shown in Table 5, lack of accounting for variances creates a large deviation in subsets of the sample size and makes measurement much less fluid in comparison to previous metrics discussed.

Secondly, the criteria to produce ESG comparisons versus peers and company history required having at least one of the aforementioned metrics that use revenue as a denominator. The ESG utilizes variable factors and amounts of factors to assess environmental performance

for different companies. For example, ESG comparisons only considers GHG/Revenue when evaluating JPMorgan Chase & Co., but it also considers load factor percentage, GHG/Revenue by passenger mile, fuel usage by passenger mile, and average age of fleet in its evaluation of American Airlines Group. In effect, certain Fortune 500 companies have higher quality representation in their results than others. The comparisons in Table 5, however, are reasonable considering the results of previous measurements against industry competitors.

Vs. Company History

	Average Liberalism Score
Better (n=40)	36.16%
Worse (n=11)	33.67%
Difference	2.49%

Table 6. Environmental Performance vs. Company History (n=51)

In addition to the potential issues discussed above, recorded company history of performance in sustainability only spans the last 10 years, and many of the CEOs in the sample have been in office before or throughout that period. This paper forecasts that organizations with more liberal CEOs are currently producing better output in sustainability compared to the company average over the last 10 years. Important to note is that the vast majority of firms are performing better than their 10-year averages in terms of sustainability. Recently strong performances substantiate the findings of the Dow Jones Sustainability Index mentioned in Chapter 1.

Table 6 shows only a 2.49% difference in favor of more liberal CEOs. The slight difference does not provide sufficient evidence to support Hypothesis 3. A potential cause of the

insignificant finding is that many of these CEOs were in office at the beginning of the 10-year period. Another is the possibility that new CEOs mirror the political ideology of their predecessors, as certain companies and industries have their own political leanings.

CDP Climate Score Ranking:

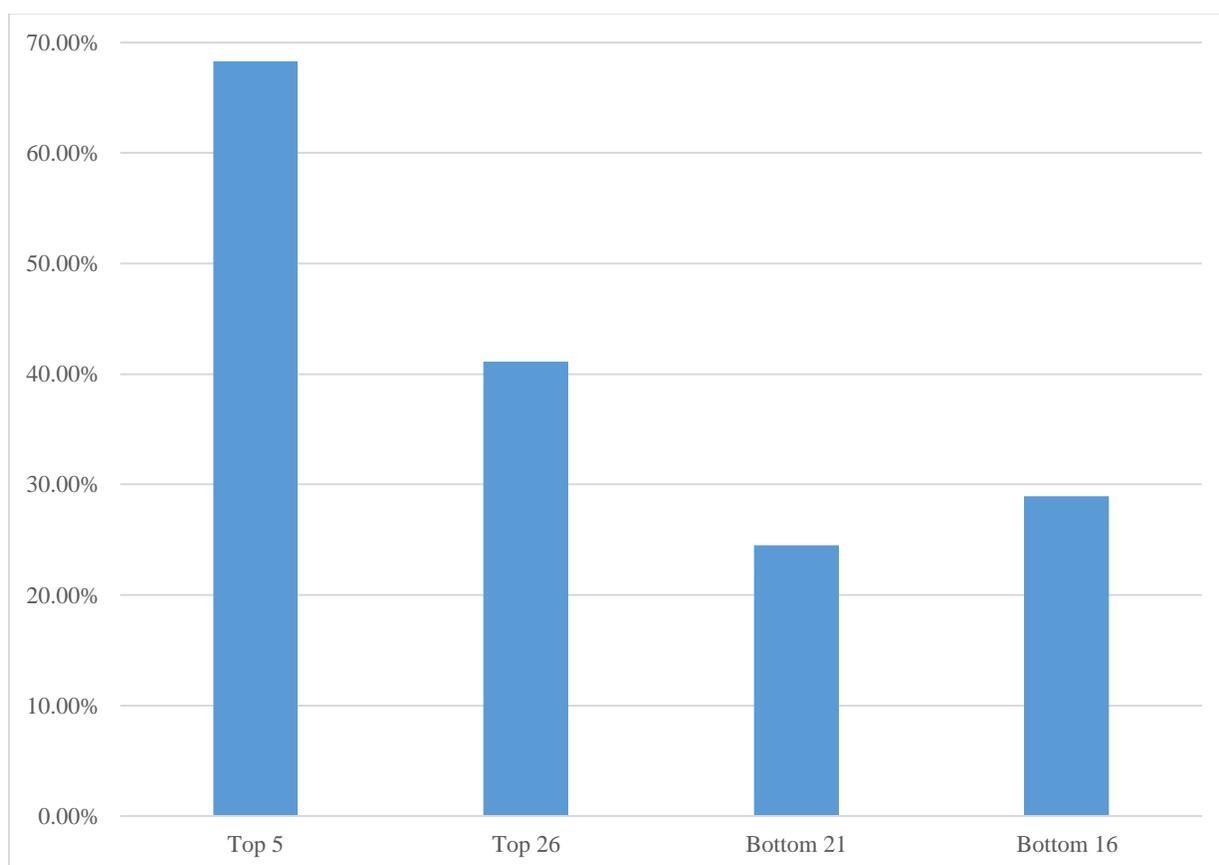


Figure 5. Average Liberalism Score by CDP Climate Score Rank (n=74)

Firms with lower number ranks on CDP Climate Score in Figure 5 are more sustainable.

As mentioned in Chapter 4, analysts compute climate score based on a variety of factors in regard to climate issues, including disclosure, awareness, management, and leadership (CDP). In reference to the GHG/Revenue section, CDP Climate Score is the second most useful tool to investigate Hypothesis 1 because it has a sample size of 74 companies and focuses solely on

sustainability. However, it uses a ranking system on a scale of 1 to 10 that disregards the variation among the many firms that classify under the same ranks. As a result, the sample cannot cleanly divide into equal or nearly equal groups to find average liberalism scores.

Despite the constraint, Figure 5 depicts a clear trend. Perhaps the most noteworthy finding, the 26 companies that rank most favorably on climate score have CEOs 16.60% more liberal on average than the 21 least climate-conscious. In juxtaposition with GHG data, the research tenably supports the notion that CEOs higher on liberalism are likely to embrace sustainability.

RobecoSAM Ranking:

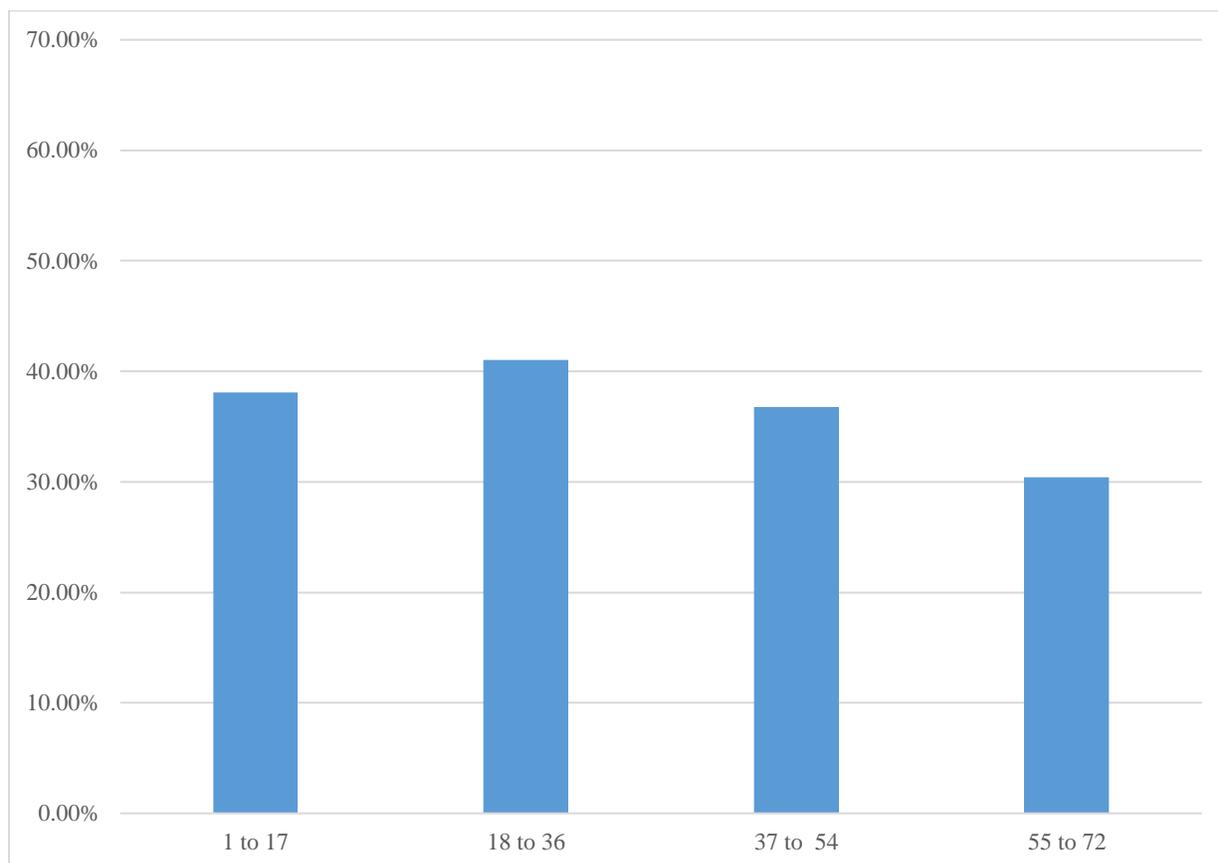


Figure 6. Average Liberalism Score by RobecoSAM Rank (n=72)

Firms with lower number ranks on RobecoSAM in Figure 6 are more attractive to sustainability investors. For example, ranks 1 to 17 are the most attractive, while ranks 55 to 72 are the least attractive. RobecoSAM rank is the first of two consecutive sections that examines the relationship between CEO political inclination and metrics that measure more than sustainability. For these metrics, sustainability is just part of the equation. In addition to output in sustainability, RobecoSAM rank includes social and economic factors in its calculation of a security's attractiveness from a sustainability investor's standpoint (RobecoSAM 5). The benchmark only includes sustainability measures that contribute to the financial performance of a company, therein affecting security valuation.

The hypothesis is that companies with CEOs higher on liberalism will be more attractive to sustainability investors. Again, the ranking system created a situation in which more equal subsets of the sample size had securities with the same rank. Regardless, a sample size of 19 is comparable to 17. According to Figure 6, the top 17 most attractive organizations on average have CEOs with a liberalism score of 38.06%, compared to the bottom 18 with 30.39%. The difference of 7.67% signals a noteworthy relationship between political ideology and sustainability investing attractiveness. Moreover, the 36 most attractive, or the top half, averages a liberalism score of 39.62%, while the bottom half scores 6.06% lower at 33.57%. The data consistently indicate that companies with more liberal CEOs do indeed outperform other companies from a sustainability investment perspective.

Sustainalytics Ranking:

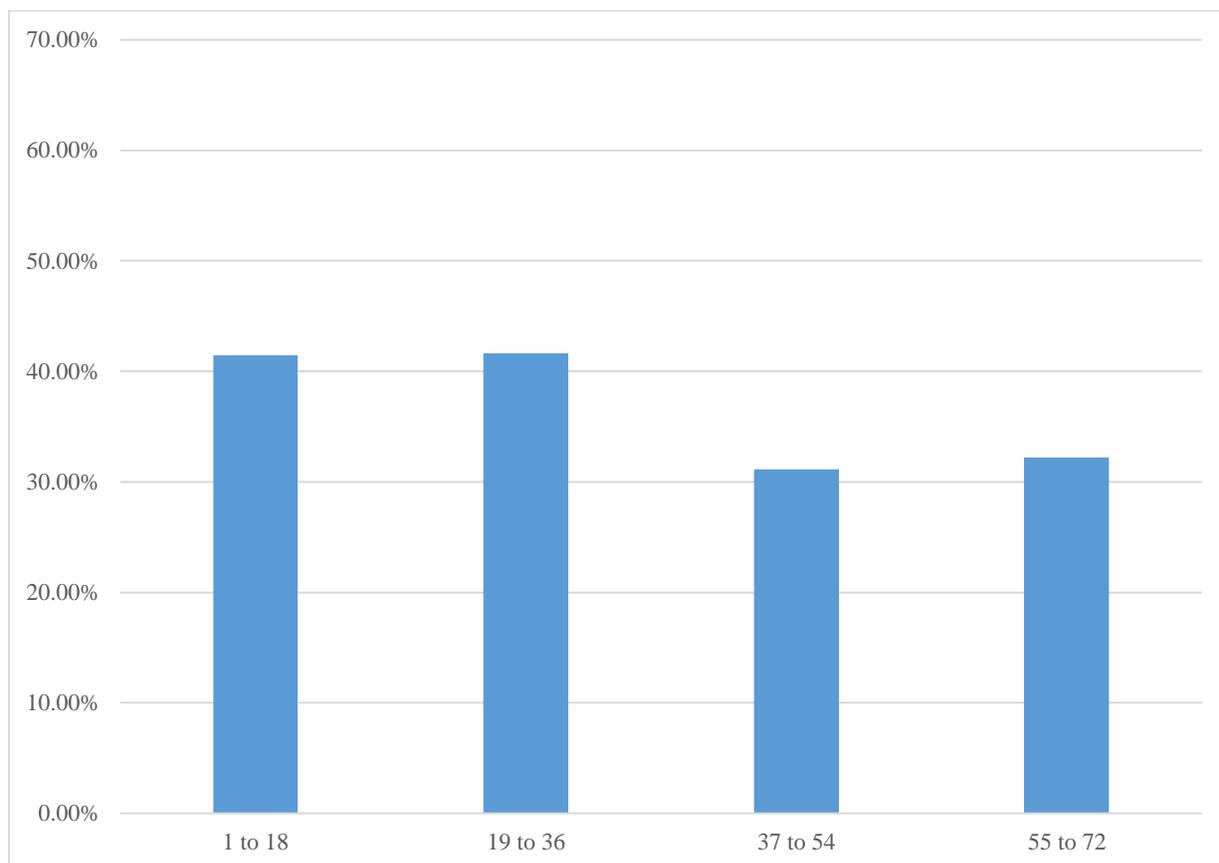


Figure 7. Average Liberalism Score by Sustainalytics Rank (n=72)

Firms with lower number ranks on Sustainalytics in Figure 7 grade more favorably in terms of risk associated with sustainability, social activism, and governance. For example, companies with ranks 1 to 18 are the least risky, while those with ranks 55 to 72 are the riskiest. With these data, the hypothesis is that companies with CEOs higher on liberalism will grade higher on metrics that additionally consider the social and governance-related metrics of the ESG. Despite using a ranking system, the sample size equally divides into 4 parts for comparison. The results are similar yet more conclusive to those of the RobecoSAM rank.

At opposite ends of the spectrum, a clear disparity is present. The top 18 companies by Sustainalytics rank in Figure 7 have a mean liberalism score of 41.46%, 9.27% above the bottom

18 at 32.19%. Similarly, the top 36, or top half, has an average liberalism score that is 9.86% higher than the bottom half. In sum, these comparisons verify the hypothesis mentioned above.

ESG Disclosure Score Ranking:

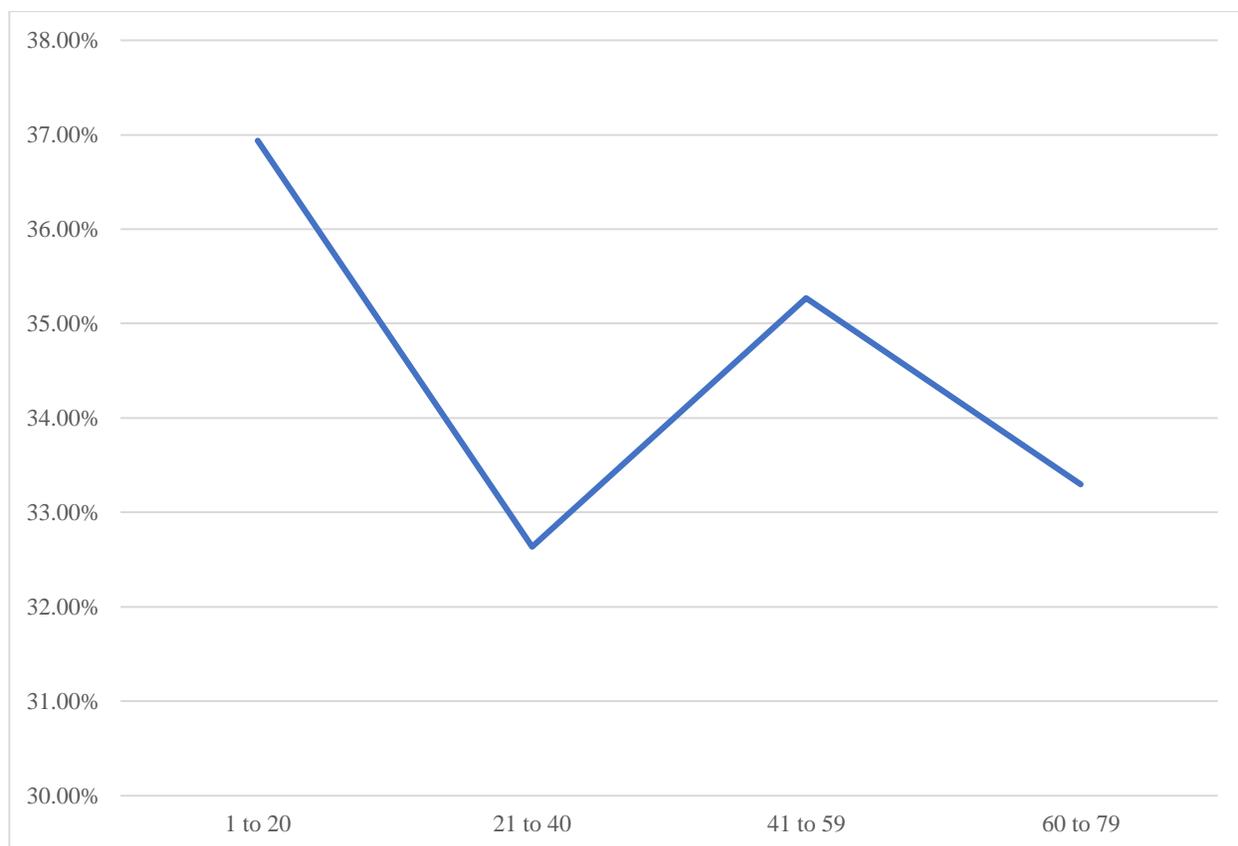


Figure 8. Average Liberalism Score by ESG Disclosure Rank (n=79)

Firms with lower number ranks on ESG Disclosure in Figure 8 are more transparent. For example, companies ranking in the top 20 are the 20 most transparent, while those ranking 60 to 79 are the 20 least transparent. The ESG Disclosure metric measures on a scale of 1 to 100 the degree of transparency a company has in its reporting of extra-financial performance. To calculate total transparency, the benchmark considers the reporting of environmental, social, and governance-related metrics. For ESG Disclosure Score, this research hypothesizes that

companies with more liberal CEOs are more transparent in their disclosure of extra-financial performance.

Logic follows that companies that take pride in their performance in these areas would be more likely to report on them. Also, companies with goals to improve performance benefit from the measurement of these ratios. ESG Disclosure data in Figure 8 do not strongly support liberal disclosure. The 20 most transparent companies on average are 3.64% more liberal than the 20 least, which may indicate the existence of a relationship. When comparing the 39 most transparent to the 39 least, however, the difference in average liberalism score drops to 1.42%. The statistics support that companies with more liberal CEOs may have a slightly higher tendency to be transparent. However, differences in transparency do not seem to negatively impact the tenability of metrics previously mentioned in this chapter.

Chapter 6

Summary and Conclusion

As stated in Chapters 1 and 2, sustainability has been on the rise since the 1960s and is becoming an essential tool for businesses to remain competitive in their respective industries. Chapter 3 thoroughly investigates the relevant literature and finds that CEO political identification is a strong indicator of a vast array of financial and extra-financial aspects of a company. In general, Republican executives direct corporate affairs in a conservative manner while corporations with Democrats at the helm tend to display liberal values.

Chapter 5 seeks to determine whether this general rule applies to corporate sustainability. It does so by drawing political donor information on CEOs from the top 187 organizations in the Fortune 500 to establish political orientation on a scale from 0 to 1, 0 being completely conservative and 1 being completely liberal. It then compares corporate performance against a company's historical performance in sustainability, against all other companies in the sample, and against peers within a company's industry.

The research includes metrics that use social and governance-related performance in their calculations and separately investigates the topic from the point of view of sustainability investors. It also measures corporate disclosure of extra-financial performance and finds that a slight link may exist based on CEO political leanings. This research supports upper echelons theory in its findings that businesses with more liberal CEOs tend to be much stronger in terms of performances in sustainability and with sustainability investors, though against industry

competitors the disparity notably shrinks. Further research should seek to test these results, especially the inconclusive ones like performance against peers.

BIBLIOGRAPHY

- Augier, Mie, and David J. Teece. "Dynamic Capabilities and the Role of Managers in Business Strategy and Economic Performance." *Organization Science*, vol. 20, no. 2, 2009, pp. 410–421. *JSTOR*, JSTOR, www.jstor.org/stable/25614663.
- Bendell, Jem. "Responsible Investor." *Impact Investment Is Blossoming in Japan - Responsible Investor*, Responsible Global Media Limited, 18 Apr. 2011, www.responsible-investor.com/home/article/esg_res/P0/.
- Bhandari, Avishek, et al. "CEO Political Ideology and Financial Reporting Quality." 2012. "Bloomberg Financial Markets." *Dow Jones North America Composite Index*, Bloomberg L.P., 2018.
- "Bloomberg Financial Markets." *Dow Jones World Composite Index*, Bloomberg L.P., 2018.
- "Bloomberg Financial Markets." *ESG*, Bloomberg L.P., 2018.
- Briscoe, Forrest, et al. "CEO Ideology as an Element of the Corporate Opportunity Structure for Social Activists." *Academy of Management Journal*, vol. 57, no. 6, Dec. 2014, pp. 1786–809. *Crossref*, doi:10.5465/amj.2013.0255.
- Brundtland, Gro Harlem. "Report of the World Commission on Environment and Development: Our Common Future." *UN-Documents*, United Nations, 20 Mar. 1987, www.un-documents.net/our-common-future.pdf.
- Campbell, Katherine, et al. "Political Ideology and CEO Performance under Crisis." 18 Aug. 2017.
- Carson, Rachel. *Silent Springs*. Houghton Mifflin, 1962.

“CDP 2017 Climate Change Scoring Methodology .” *CDP*, CDP Worldwide 2017, 2017,

b8f65cb373b1b7b15feb-

c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/000/509/original/CDP-climate-change-scoring-methodology.pdf.

“CDP Climate Change 2018 Scoring Methodology.” *CDP.net*, CDP, 2018,

guidance.cdp.net/en/guidance?cid=2&ctype=theme&idtype=ThemeID&incchild=1&site=0&otype=ScoringMethodology&tags=TAG-599%2CTAG-605%2CTAG-646.

Childs, Martin. “Joe Farman: Scientist Who First Uncovered the Hole in the Ozone Layer.” *The*

Independent, Independent Digital News and Media, 20 May 2013,

www.independent.co.uk/news/obituaries/joe-farman-scientist-who-first-uncovered-the-hole-in-the-ozone-layer-8624438.html.

Chin, M. K., and Matthew Semadeni. “CEO Political Ideologies and Pay Egalitarianism within

Top Management Teams: CEO Political Ideologies and Pay Egalitarianism within

TMTs.” *Strategic Management Journal*, vol. 38, no. 8, Aug. 2017, pp. 1608–25.

Crossref, doi:10.1002/smj.2608.

Chin, M. K., Donald C. Hambrick, and Linda K. Trevino. "Political Ideologies of

CEOs." *Administrative Science Quarterly* 58.2 (2013): 197-232. *ResearchGate*.

Web. 08 May 2017.

Chin, M. K., et al. “The Effect of Two Dimensions of CEO Political Ideology on Corporate

Entrepreneurship.” *Academy of Management Proceedings*, vol. 2018, no. 1, July 2018, p.

12910. *Crossref*, doi:10.5465/AMBPP.2018.39.

Christensen, Dane M., et al. “Top Management Conservatism and Corporate Risk Strategies:

- Evidence from Managers' Personal Political Orientation and Corporate Tax Avoidance: Managers' Political Orientation and Corporate Tax Avoidance." *Strategic Management Journal*, vol. 36, no. 12, Dec. 2015, pp. 1918–38. *Crossref*, doi:10.1002/smj.2313.
- Claessens, Stijn, et al. "Political Connections and Preferential Access to Finance: The Role of Campaign Contributions." *Journal of Financial Economics*, vol. 88, no. 3, June 2008, pp. 554–80. *Crossref*, doi:10.1016/j.jfineco.2006.11.003.
- "Climate Change Scoring Methodology." CDP.net, CDP Worldwide, www.cdp.net/en/scores-2017/climate-change-scoring-methodology.
- Cohen, Steven. "Sustainability by the Numbers: The Growing Reality of the Green Economy." *The Huffington Post*, HuffPost Impact, 19 Jan. 2013, www.huffingtonpost.com/steven-cohen/sustainability-by-the-num_b_2158104.html.
- "Company Description." *D&B Hoovers*, D&B Hoovers, 2018, subscriber.hoovers.com/H/login/login.html.
- "Company Details." *Mergentonline.com*, Mergent Online, 2018, mergentonline.com/.
- Cook, John, et al. "Quantifying the Consensus on Anthropogenic Global Warming in the Scientific Literature." *Environmental Research Letters*, vol. 8, no. 2, June 2013, p. 024024. *Crossref*, doi:10.1088/1748-9326/8/2/024024.
- Crandall, Christian, and Monica Biernat. "The Ideology of Anti-Fat Attitudes1." *Journal of Applied Social Psychology*, vol. 20, no. 3, Feb. 1990, pp. 227–43. *Crossref*, doi:10.1111/j.1559-1816.1990.tb00408.x.
- "Current World Population." *Worldometers*, Worldometers, 2018, www.worldometers.info/world-population/.
- Daly, Herman E. *Steady-State Economics*. Freeman, 1977.

- Dauvergne, Peter. *Historical Dictionary of Environmentalism*. Scarecrow Press, 2009.
- Deng, Xiaoying, et al. "How Do the CEO Political Leanings Affect REIT Business Decisions?" *American Economic Association*, Dec. 2017, p. 2.
- DiMaggio, Paul J., and Walter W. Powell. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review*, vol. 48, no. 2, 1983, pp. 147–160. *JSTOR*, JSTOR, www.jstor.org/stable/2095101.
- Dong, Wang, et al. "CEO Political Ideology and Audit Pricing." *SSRN Electronic Journal*, 2018. *Crossref*, doi:10.2139/ssrn.3246551.
- Eccles, Robert G., Ioannis Ioannou, and George Serafeim. "The Impact of Corporate Sustainability on Organizational Processes and Performance." *Management Science* 60.11 (2014): 2835-857. Web. 8 May 2017.
- "Ecosia - the Search Engine that Plants Trees." *Ecosia - the Search Engine That Plants Trees*, Ecosia, Jan. 2019, www.ecosia.org/.
- "Ecotourism." *Merriam-Webster*, Merriam-Webster, www.merriam-webster.com/dictionary/ecotourism.
- "Ecotourism Statistical Fact Sheet." *Active Tourism*, The International Ecotourism Society, 2000, www.active-tourism.com/factsEcotourism1.pdf.
- Elnahas, Ahmed M., and Dongnyoung Kim. "CEO Political Ideology and Mergers and Acquisitions Decisions." *Journal of Corporate Finance*, vol. 45, Aug. 2017, pp. 162–75. *Crossref*, doi:10.1016/j.jcorpfin.2017.04.013.
- England, George W. "Personal Value Systems of American Managers." *Academy of Management Journal*, vol. 10, no. 1, Mar. 1967, pp. 53–68. *Crossref*, doi:10.5465/255244.

- Ensley, Michael J. "Individual Campaign Contributions and Candidate Ideology." *Public Choice*, vol. 138, no. 1–2, Jan. 2009, pp. 221–38. *Crossref*, doi:10.1007/s11127-008-9350-6.
- "ESG Ratings and Research." *Sustainalytics*, Sustainalytics, 2018, www.sustainalytics.com/esg-ratings/.
- Feather, N. T. "Values, Expectancy, and Action1." *Australian Psychologist*, vol. 14, no. 3, Nov. 1979, pp. 243–60. *Crossref*, doi:10.1080/00050067908254353.
- Francia, Peter L., et al. *The Financiers of Congressional Elections Investors, Ideologues, and Intimates*. Columbia University Press, 2010.
- Francis, Bill B., et al. *CEO Political Preference and Corporate Tax Sheltering*. Bank of Finland, 2016. *Open WorldCat*, <http://urn.fi/URN:NBN:fi:bof-201604111076>.
- Griffin, Paul, et al. "The Clean and Complete Dataset 2016." *CDP*, CDP, 1 Dec. 2016, b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/comfy/cms/files/files/000/000/632/original/Technical-Annex-II_Bottom-up-Estimation-Methodology.pdf.
- Hambrick, Donald C., and Phyllis A. Mason. "Upper Echelons: The Organization as a Reflection of Its Top Managers." *The Academy of Management Review*, vol. 9, no. 2, 1984, pp. 193–206. *JSTOR*, JSTOR, www.jstor.org/stable/258434.
- Hadley, George. "The UK Needs 3 Planets to Support It." *WWF*, World Wildlife Fund, 2018, www.wwf.org.uk/updates/uk-needs-3-planets-support-it-0.
- Hornaday, William Temple. *Our Vanishing Wildlife: Its Extermination and Preservation*. Arno, 1970.
- Howarth, R. B., and S. Baumgärtner. "Ecological Economics." *Highlighted Articles - Elsevier*, Elsevier, www.journals.elsevier.com/ecological-economics.

- Huang, Shihping Kevin. “The Impact of CEO Characteristics on Corporate Sustainable Development: CSR Drivers, CSR CEO Characteristics, Hypotheses, Method, Discussion.” *Corporate Social Responsibility and Environmental Management*, vol. 20, no. 4, July 2013, pp. 234–44. *Crossref*, doi:10.1002/csr.1295.
- “International Tourism, Number of Arrivals.” *World Bank*, The World Bank, 2019, data.worldbank.org/indicator/ST.INT.ARVL.
- “Ironclad Guarantee.” *History of Patagonia - A Company Created by Yvon Chouinard*, Patagonia Action Works, www.patagonia.com/ironclad-guarantee.html.
- Jensen, Michael C., and William H. Meckling. “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure.” *Journal of Financial Economics*, vol. 3, no. 4, Oct. 1976, pp. 305–60. *Crossref*, doi:10.1016/0304-405X(76)90026-X.
- Jost, John T., et al. “Political Conservatism as Motivated Social Cognition.” *Psychological Bulletin*, vol. 129, no. 3, 2003, pp. 339–75. *Crossref*, doi:10.1037/0033-2909.129.3.339.
- Kashmiri, Saim, and Vijay Mahajan. “Values That Shape Marketing Decisions: Influence of Chief Executive Officers’ Political Ideologies on Innovation Propensity, Shareholder Value, and Risk.” *Journal of Marketing Research*, vol. 54, no. 2, Apr. 2017, pp. 260–78. *Crossref*, doi:10.1509/jmr.14.0110.
- Kenton, Will. “Empire Building.” *Investopedia*, Investopedia, 12 Mar. 2019, www.investopedia.com/terms/e/empirebuilding.asp.
- Kenton, Will. “Tragedy Of The Commons.” *Investopedia*, Investopedia, 13 Dec. 2018, www.investopedia.com/terms/t/tragedy-of-the-commons.asp.
- Lakoff, George. “Metaphor, Morality, and Politics, Or, Why Conservatives Have Left Liberals In

- the Dust.” *Social Research*, vol. 62, no. 2, 1995, pp. 177–213. *JSTOR*,
www.jstor.org/stable/40971091.
- Leopold, Aldo. *A Sand County Almanac*. Oxford University Press, 1968.
- Manner, Mikko H. “The Impact of CEO Characteristics on Corporate Social Performance.”
Journal of Business Ethics, vol. 93, no. S1, June 2010, pp. 53–72. *Crossref*,
 doi:10.1007/s10551-010-0626-7.
- McCarthy, John. "Progress and Its Sustainability." *Formal Reasoning Group*. Stanford,
 17 Oct. 1995. Web. 09 May 2017.
- Meadows, Donella H., et al. *The Limits to Growth*. Potomac Associates - Universe Books, 1972.
- “Measuring Intangibles: RobecoSAM's Corporate Sustainability Assessment
 Methodology.” *RobecoSAM*, RobecoSAM, Sept. 2018,
www.robecosam.com/media/d/0/1/d013178bf9bfae863cbea53a27584ac1_measuring-intangibles-csa-methodology_tcm1011-15705.pdf.
- Miremadi, Mehdi, et al. “How Much Will Consumers Pay to Go Green?” McKinsey &
 Company, McKinsey & Company, Oct. 2012, www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/how-much-will-consumers-pay-to-go-green.
- Neff, Jack. “As More Marketers Go Green, Fewer Consumers Willing to Pay For It.” *Ad Age*,
 Ad Age, 24 Sept. 2012, adage.com/article/news/marketers-green-fewer-consumers-pay/237377/.
- Ou, Amy Y., et al. “Chinese CEOs’ Socialist Political Ideology and Corporate Social
 Responsibility Commitments.” *Academy of Management Proceedings*, vol. 2017, no. 1,
 Jan. 2017, p. 10985. *Crossref*, doi:10.5465/ambpp.2017.10985abstract.

- Persico, Simon. « En parler ou pas ? La place des enjeux environnementaux dans les programmes des grands partis de gouvernement », *Revue française de science politique*, vol. vol. 65, no. 3, 2015, pp. 405-428.
- Ralston, David A., et al. “The Impact of Natural Culture and Economic Ideology on Managerial Work Values: A Study of the United States, Russia, Japan, and China.” *Journal of International Business Studies*, vol. 28, no. 1, Mar. 1997, pp. 177–207. *Crossref*, doi:10.1057/palgrave.jibs.8490097.
- Reynolds, Andy. *A Brief History of Environmentalism*. Iowa State University, pp. 1–5, *Iowa State University*.
- Ruth Glasgow, M., et al. “Conservatism, Sensation-Seeking and Music Preferences.” *Personality and Individual Differences*, vol. 6, no. 3, Jan. 1985, pp. 395–96. *Crossref*, doi:10.1016/0191-8869(85)90065-0.
- “Search Donors.” *OpenSecrets.org*, The Center for Responsive Politics, www.opensecrets.org/pres12/search_donor.php.
- Schumacher, E. F. *Small Is Beautiful*. Blond & Briggs, 1973.
- Schwartz, Shalom H. “Value Priorities & Behavior: Applying a Theory of Integrated Value Systems.” *The Psychology of Values*, vol. 8, Jan. 1996, pp. 1–24.
- “Scoring Introduction 2018.” *CDP.net*, CDP, 2018, b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/000/233/original/Scoring-Introduction.pdf?1479494696.
- Sproule, Keith, and Kreg Lindberg, United States. Forest Service, and Forestry Planning and

- Policy Assistance in Asia and the Pacific Region (Project). *Ecotourism In the Asia-Pacific Region: Issues And Outlook*. Rome: FAO, Forestry Policy and Planning Division, 1998.
- “Sustainable Development.” *IISD*, International Institute for Sustainable Development, 29 Nov. 2018, www.iisd.org/topic/sustainable-development.
- Tetlock, Philip E. “Cognitive Biases and Organizational Correctives: Do Both Disease and Cure Depend on the Politics of the Beholder?” *Administrative Science Quarterly*, vol. 45, no. 2, June 2000, p. 293. *Crossref*, doi:10.2307/2667073.
- “Thomson Reuters ESG Scores.” *Refinitiv*, Refinitiv, May 2018, www.refinitiv.com/content/dam/gl/en/documents/methodology/esg-scores-methodology.pdf.
- Thoreau, Henry David. *Walden*. Ticknor and Fields, 1854.
- Unsal, Omer, et al. “Corporate Lobbying, CEO Political Ideology and Firm Performance.” *Journal of Corporate Finance*, vol. 38, June 2016, pp. 126–49. *Crossref*, doi:10.1016/j.jcorpfin.2016.04.001.
- Valero, Alicia, and Antonio Valero. “Physical Geonomics: Combining the Exergy and Hubbert Peak Analysis for Predicting Mineral Resources Depletion.” *Resources, Conservation and Recycling*, vol. 54, no. 12, Oct. 2010, pp. 1074–83. *Crossref*, doi:10.1016/j.resconrec.2010.02.010.
- “What's in a Name? Weather, Global Warming and Climate Change.” *NASA*, NASA, 18 Dec. 2018, climate.nasa.gov/resources/global-warming/.
- Wilson, Glenn D. “A dynamic theory of conservatism.” *The psychology of conservatism*, 1973.
- Wilson, Glenn D., et al. “Conservatism and Art Preferences.” *Journal of Personality and Social*

Psychology, vol. 25, no. 2, 1973, pp. 286–88. *Crossref*, doi:10.1037/h0033972.

ACADEMIC VITA
D. LIAM CAVANAUGH

(215) 687-7593

dlc5559@psu.edu

EDUCATION

The Pennsylvania State University University Park, PA
Schreyer Honors College, Smeal College of Business Class of May 2019
Bachelor of Science in Finance, Minor: International Business
Dean's List: 7/7 Semesters
University of Limerick, Study Abroad, Limerick, Ireland January 2018 – May 2018

WORK EXPERIENCE

JPMorgan Chase & Co.
Wilmington, DE
Global Finance & Business Management Summer Analyst June 2018 – August 2018

- Analyzed financial metrics of merchants priced under \$1 billion with team of 5 in merchant services to then calculate and implement applicable card prices and rates
- Presented to merchant services team on re-engineering and automation of technical pricing process, which led to accurate pricing and significant reductions in time in which team members were able to establish merchant card prices
- Trained new analyst and scheduled meetings with senior firm leaders to discuss expertise within greater financial industry

Janney Montgomery Scott LLC Philadelphia, PA
Sales Associate December 2015 – January 2016

- Researched historical and current 13-F filings for top 15 hedge funds to assist senior sales person in generating new ideas for institutional equity sales
- Developed and implemented social media strategy for financial advisor's private wealth management business, generating 15% increase in quarterly newsletter hit rate to 45%

KPMG LLP Philadelphia, PA
Ace the Case Participant July 2017

- Selected to attend 2-day program to advance analytical, networking, case writing, and presentation skills
- Planned, wrote, and debriefed case with team of 4 students given less than 3 hours of preparation

Wissahickon Physical Therapy Center Flourtown, PA
Physical Therapy Aide Summer 2013, 2014, 2016, 2017

- Managed high volume of operational and administrative duties to facilitate efficient office flow, including mentoring new aides, collecting co-pays, and patient intake

LEADERSHIP & ACTIVITIES

Market Analysis Group September 2016 – December 2018
Secretary, Lead Headlines Analyst

- Implemented analyst evaluation system to incentivize higher quality writing and to provide for improved applicant screening for lead analyst roles
- Examined and analyzed new trends and events within stock market, under different industries, to familiarize with reoccurring and forecasted future themes and publish chosen findings in editorials each weekday

Phi Kappa Theta Fraternity, The Pennsylvania State University Chapter January 2016 – Present
Risk Committee Member

- Raised money for THON through canvassing and ensured safety during social events as member of risk committee

National Society of Leadership and Success August 2016 – Present
Time-Keeper

- Identified and discussed developments in career and personal goals in weekly meetings with team of 7 business majors, organizing and monitoring activities as time-keeper

International Society and Outdoor Pursuits Club at University of Limerick January 2018 – May 2018

AWARDS

- 2-year recipient of Sam Wherry Honors Scholarship in Smeal College of Business July 2017 – Present
- Beta Gamma Sigma Honor Society October 2017 – Present
 - Inducted upon recognition of being in top 7% of juniors academically in Smeal College of Business