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# Beyond the green iron cage: exploring the macro and micro-level influences on executive decisions about sustainability investments in small and medium size firms

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# BEYOND THE GREEN IRON CAGE: EXPLORING THE MACRO AND MICRO-LEVEL INFLUENCES ON EXECUTIVE DECISIONS ABOUT SUSTAINABILITY INVESTMENTS IN SMALL AND MEDIUM SIZE FIRMS

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## VITA

**Igor Estraykh** is an accomplished supply chain executive with extensive operational experience in public, private equity, and startup firms. Igor is currently the Chief Financial Officer of GreenMet, a private firm developing sustainable supply chains that meet U.S. and greater North American green energy and technology needs. Igor is also a member of several private firm boards in director and advisor capacities. He was previously the vice president of procurement at the largest private label spices manufacturing company in the US where he was instrumental to the company's organic and M&A growth and a successful exit to a strategic buyer. Igor has also held leadership roles in operations, supply chain, and global sourcing at public and private firms in the consumer goods, home appliances, and industrial manufacturing sectors. Prior to joining the corporate world, Igor served as an active-duty Officer in the US Army Special Forces (Green Beret), where he gained on-the-ground international diplomacy, negotiations, and project management experience while serving in combat and working with European ally partners. Igor earned an MBA from Pepperdine Graziadio Business School, an MS in International Relations from Troy University, and a BA in Psychology and Economics from Ripon College.

## ABSTRACT

Although research on corporate environmental sustainability has shed light on different aspects of organizational and individual level factors that influence corporate decisions, it does not fully account for how individual executives within firms react to these forces and make decisions, specifically within small to medium size enterprises (SMEs). This study used a grounded theory approach to interview 19 SME executives from 13 different industries to explore how organizational and individual level factors influence their ability to evaluate and make decisions related to sustainability initiatives. The study found that SME executives faced isomorphic pressures for sustainability, individual agency pressures, significant resource limitations including executive bandwidth, and cognitive influences and pitfalls for evaluating and executing sustainability initiatives. These findings were used to develop a proposed theoretical model of how different isomorphic pressures influence SMEs who are at different stages of adopting sustainability initiatives and the moderating roles of agency pressures, organizational resources, and cognitive barriers to sustainability. The results of this study can guide future theoretical research and help SME practitioners improve internal processes for evaluating and pursuing sustainability initiatives by providing best practices from firms who successfully integrated sustainability into their business.



*Keywords*: sustainability, SMEs, micro-institutionalism, environment, decision-making

# CHAPTER 1: INTRODUCTION

## Overview

> A company cannot achieve long-term profits without embracing purpose and considering the needs of a broad range of stakeholders…we will be increasingly disposed to vote against management and board directors when companies are not making sufficient progress on sustainability-related disclosures and the business practices and plans underlying them. (Larry Fink, Chief Executive of Blackrock, 2020)

The world is heading towards a climate disaster despite a global call to action by the United Nations (2019) for the accelerated transition away from fossil fuels. There is a central question in the debate on corporate social responsibility (CSR) if for-profit firms should take the lead in combatting climate change through sustainability initiatives instead of waiting for national or global regulations (Business Roundtable, 2019; Fink, 2020). Moreover, 81% of global consumers feel that firms should improve the environment (Nielsen, 2018). Yet, despite the institutional pressures for firms to pursue sustainability, not all for-profit firms are embracing this call to action for environmental sustainability equally.

The debate over economic externalities, such as the environmental impact of greenhouse gasses causing climate change, and the responsibilities of for-profit firms to shareholders and other societal stakeholders emerged in the economics literature over 50 years ago with concepts such as market failures, the free-rider problem, and spillover effects. Although there is a stream of literature challenging the compatibility of sustainability science with free market capitalism (Badaracco, 1997; Crane et al., 2014; Davis et al., 1998; Epstein & Yuthas, 2010; Friedman, 1970; Reich, 2007; Vogel, 2005), there is an equally robust stream of literature supporting the ability of individual firms doing good while doing well financially (Bradbury & Clair, 1999;

Burnett et al., 2007; Carson et al., 1962; Elkington, 1998; Jacobs et al., 2016; Martin, 1994; McAfee, 2019; Narver, 1971; Porter & Kramer, 2006; Waddock & Graves, 1997; Wackernagel & Rees, 1997). Despite the often-negative connotations of capitalism in the media, firms can proactively take the lead in addressing climate change through sustainability initiatives.

There is encouraging evidence that technological innovation combined with market incentives, public awareness, and a responsive government have drastically improved the living conditions across the planet including reducing poverty and increasing access to food, drinking water, and education (McAfee, 2019). There is also evidence that the sustainability investments in state-of-the-art technologies and initiatives can be profitable but face high capital barriers compared to other investments (Cebulla & Jacobson, 2018). Solar energy is one example where solar electricity has become less expensive per kilowatt hour than utility grid electricity from coal or retrofitting nuclear power plants that require end-of life maintenance but requires a major up-front capital investment with a long payback period (Cebulla & Jacobson, 2018).

The challenge for firms to act is that environmental sustainability is a very complex problem and requires cooperative solutions from multiple stakeholders. Lewis et al. (2021) posit, "Many environmental issues are, by their nature, 'collective action problems' that require coordinated efforts to address. By this we mean it is highly unlikely that any one group, or one new technology will solve our environmental problems" (p. 61).

Large public corporations are responsible to multiple societal stakeholders in addition to shareholders and often have the resources to tackle these complex problems. McAfee (2019) highlights that many major corporation (e.g., Apple, Facebook, Microsoft, Salesforce) have pledged to become carbon neutral over the next decade and Google become the largest buyer of renewable energy in the world in 2017 for its data centers.

The overwhelming majority of U.S. firms are not large public firms (SBA, 2018) with immense resources and they face different obstacles to pursuing sustainability initiatives. These small to medium size enterprises (SMEs) generally have less than 1,000 employees and generate less than $1 billion in annual revenues. Yet, these firms face similar pressures to pursue sustainability as large public firms. Institutional theory can provide the macro-level context for how these isomorphic coercive, normative, and mimetic pressures influence SMEs towards sustainability initiatives (DiMaggio & Powell, 1983). However, it is the individual SME executives who are responsible for evaluating and making business decisions for sustainability initiatives while navigating the complexities of competing stakeholder priorities (Schilke, 2018). SMEs also have more autonomy to proactively pursue sustainability initiatives and less structured and visible sustainability reporting requirements and oversight to make these decisions than large public firms (Hörisch et al., 2015). Consequently, it is important to understand not just the institutional pressures for sustainability on SME firms but the micro-level individual factors influencing SME executives to evaluate and make decisions within these firms.

This study addresses the problem of how SME executives evaluate and make decisions to pursue sustainability initiatives and investments. The debate in the organizational literature on institutional theory has evolved from the competing views of the dominance of isomorphic pressures on organizations versus the individual level influence of agents to a call for understanding the interplay between these forces on how individuals behave. For example,

> Much analytical purchase can be gained by developing a micro-level component of institutional analysis…we need a richer understanding of how individuals locate themselves in social relations and interpret their context. How do organizational

> participants maintain or transform the institutional forces that guide daily practice? (Powell & Colyvas, 2008, pp. 276-277)

Yet, research on this topic is still nascent and needs to be further explored, particularly around the current practical problem of how for-profit SME firms can pursue sustainability initiatives to combat climate change in the absence of national and global regulations.

**Problem Addressed**

When we think of corporate sustainability, it is commonly at the organizational level of decision making. However, it is individuals within these organizations who evaluate and make decisions around business initiatives and investments like sustainability. While institutional forces provide the momentum for lasting changes, the decisions on how to react to these forces are executed by individuals who are influenced by other forces like agency and rational choices. This argument challenges previous theory and suggests that SME executives face complex choices when making decisions to pursue sustainability initiatives. On individuals within organizations who evaluate and make decisions, Powell and Colyvas (2008) say,

> The individuals that presently populate institutional analysis are portrayed as either 'cultural dopes' or heroic 'change agents'…surely heroic actors and cultural dopes are a poor representation of the gamut of human behavior…we contend that institutional analysis needs more attention to everyday processes than momentous events. (p. 277)

To understand the micro-foundations of institutionalism, it is important to understand decision-making at the individual level and the relevant theories like agency and rational choice (Bazerman & Hoffman, 2000; Eisenhardt, 1989).

Rational choice and agency theory can explain why SME executives pursue sustainability initiatives that help reduce costs and improve operational efficiencies which are linked to superior financial performance and long-term value creation (Aguinis & Glavas, 2012; Burnett et al., 2011; Eisenhardt, 1989; Jacobs et al., 2016; McAfee, 2019; Porter & Kramer, 2006, 2011). Rational choice theory cannot explain why firms would engage in seemingly cost-accretive sustainability initiatives like voluntary carbon offsets where firms pay to offset their emissions through projects such as reforestation and rainforest protection. Moreover, individuals often make unintentional and poor-quality decisions that are harmful to the environment because they are bounded in their ability to achieve rationality in practice (Bazerman & Hoffman, 2000; Irving, 2009; Simon, 1955; Tversky & Kahneman, 1986).

Using traditional financial analysis methods like cost-benefit analysis, return on capital investments, or net present value would show that voluntary sustainability initiatives that do not directly increase revenue or decrease costs are a net cost to the firm and decrease shareholder value. However, traditional financial analysis methods fail to capture the long-term value of brand equity, customer loyalty, and employee commitment that can be created through sustainability investments (Anderson et al., 2015; Siegrist et al., 2019). Executives and managers within SMEs responsible for making decisions may not realize how sustainability initiatives can help their firms achieve longer-term strategic goals. Using traditional financial models and decision-making processes for complex sustainability investment choices may lead to irrational choices by SME executives that are not in the best interest of their firm's stakeholders (Bazerman & Hoffman, 2000; Hörisch et al., 2015). The current study focused on exploring and understanding the influence of these competing external pressures and individual cognitive processes on SME executives to provide better insight into how SMEs can pursue sustainability initiatives and contribute to the fight against climate change.

### Research Question(s)

This study used a grounded theory qualitative methods research design to explore the following research questions: First, how do SME executives evaluate and make decisions for sustainability initiatives and investments? Furthermore, what additional factors and pressures influence SME executives in evaluating and making sustainability investment decisions? And finally, how does institutional pressure for sustainability influence SME executives?

### Significance of the Proposed Research

This study seeks to add a meaningful contribution to sustainability research by exploring the interactions between the macro-level organizational pressures for corporate sustainability with the micro-level cognitive processes of executives who must act on those and other competing pressures such as creating shareholder value. This is an important area of research within the business management discipline to better understand an important practical problem through the lenses of existing theory and generate new theory for corporate sustainability investments of SMEs. The findings could have potential theoretical contributions to corporate sustainability theory as well as other corporate or government policies that influence sustainability investments with long-term horizons and benefits to non-financial stakeholders.

Firm managers and boards would care about the results of this research to identify best practices for sustainability initiatives aimed at combatting climate change. If executives make different decisions based on how information about sustainability investments is presented, business leaders, government officials, and NGOs would be able to draft different policies or support programs that increase sustainability initiatives as a bridge to global carbon neutrality. If SME firms pursue sustainability goals, it may also get them access to new capital markets that require firms to meet sustainability targets (Fink, 2020). Sustainability investments may also help firms create smarter supply chains through mechanisms like emissions tracking. There is evidence that smart supply chains that leverage sensor technology can create more efficient and transparent supply chains for consumers (Gunner, 2019), which helps create long term-value for shareholders and external stakeholders.

Executives at SMEs would be interested in the research to understand how firms who successfully invest in sustainability can do this with limited resources. SMEs may not have the dedicated sustainability resources and expertise internally and need to find more creative solutions than large firms (Hörisch et al., 2015; Martinez-Olivera & Mora-Vargas, 2019). Sustainability programs created by large public firms often require large amounts of internal resources and expertise to execute. For example, sustainability initiatives such as installing renewable energy systems, increasing energy or waste management productivity, and redesigning products or packaging to reduce waste require enough expertise to understand and evaluate the financial investment decisions and to project manage the execution and integration of these investments into existing business processes and operational assets. These are all worthy sustainability investments that large firms with resources can more easily execute than SMEs or firms without dedicated resources.

# CHAPTER 2: LITERATURE REVIEW

## Background

The literature review is organized into four sections focusing on the extant corporate sustainability research, institutional theory, agency theory and the micro-foundations of sustainability, and the gaps in the current literature related to the research questions. Business management research on sustainability has several nomenclatures describing corporate sustainability such as ESG (environmental, social, and governance) and CSR (corporate social responsibility). For the purposes of this research, I will use the term *sustainability* as an interchangeable term specifically related to the environmental practices of corporations including environmental sustainability initiatives and investments.

Research on corporate sustainability has primarily focused on the role of the corporation within society and the dichotomy of responsibilities of the firm to financial shareholders versus other societal stakeholders (Friedman, 1970; Narver, 1971). Institutional theory posits that external isomorphic pressures can create an iron cage that constrains what firms and decision-makers within firms can do (DiMaggio & Powell, 1983). Alternatively, agency theory argues that individual decision-makers within firms are only serving their own self-interests and are immune to external pressures from societal stakeholders (Eisenhardt, 1989).

A more recent view argues that external pressures are not an iron cage, but individual decision-makers within firms are also not purely selfish agents immune to other influences (Cardinale, 2018; Powell & Colyvas, 2008; Schilke, 2018). A potential explanation can be drawn by incorporating institutional theory with agency theory literature including limits to rational choice from prospect theory, information framing, mental gaps, and loss aversion (Handel & Schwartzstein, 2018; Kahneman, 2003; Simon, 1955; Thaler, 2018; Tversky & Kahneman 1986).

Despite the intermediate to mature state of corporate sustainability research at the organizational level of analysis and research on agency of executives and managers within corporations, there are gaps in the literature related to the research questions of this study. Research on the micro-foundations of how decision-makers within firms make sustainability investment decisions is still in a nascent state. Similarly, research on sustainability initiatives within SMEs and private firms remains nascent despite the importance of these firms in the fight against climate change.

**Corporate Sustainability Literature**

Sustainability research has challenged Friedman's (1970) argument that the role of a corporation is only to maximize shareholder value by calling for value maximization to all stakeholders. This builds on a long history of literature aligning shareholder value creation with environmental and societal stakeholders. Narver (1971) leads the charge on this counter,

> We may conclude that in general a substantial number of citizen consumers are willing to pay (at times, a substantial amount) for a quality environment. At this point in the argument, we have established only that the costs of social responsibility regarding pollution are not uniformly high, but even if some costs have to be passed on, nontrivial segments of substantial numbers of markets would be willing to pay more. (p. 108)

Management researchers contend that sustainability can increase firm value through improved financial performance (Waddock & Graves, 1997), lower costs (Burnett et al., 2007; Jacobs et al., 2016), dematerialization of physical resources (McAfee, 2019), and strategic differentiation (Hull & Rothenberg, 2008; McWilliams & Siegel, 2000; Porter & Kramer, 2006, 2011). Nevertheless, the extant literature on firm sustainability decisions remains divided.

There is support in the literature for firms pursuing sustainability initiatives that reduce costs and increase firm value (Burnett et al., 2007; Jacobs et al., 2016; McAfee, 2019; Porter &

Kramer, 2006, 2011; Waddock & Graves, 1997). However, there is a disagreement in explaining why for-profit firms pursue sustainability initiatives that prioritize external stakeholders over shareholders (Crane et al., 2014). While individual executives and managers within firms are responsible for understanding sustainability information and proposing sustainability initiatives, there is a gap in understanding the antecedents to firm sustainability at the individual level of analysis (Aguinis & Glavas, 2012). This is an important research topic for practitioners because "individual actors are those who actually strategize, make decisions, and execute CSR initiatives" on behalf of firms (Aguinis & Glavas, 2012, p. 953). Yet, rational choice theory would argue against sustainability investment decisions by individuals that are not maximizing benefits to the firm such as voluntary initiatives.

Sustainability research at the organizational level has focused on practical solutions to sustainability within the boundaries of shareholder and stakeholder value creation. The main questions and problems addressed to date in the business management literature have been the reactive and proactive reasons for firms to engage in sustainability, which can be interpreted through the lens of institutional theory (DiMaggio & Powell, 1983). Reactive factors would be government legislation, regulations, certification requirements, and pressure from institutional and stakeholder groups (Boal & Peery, 1985; Brammer & Millington, 2008; Campbell, 2007; den Hond & de Bakker, 2007; Greening & Gray, 1994; Henriques & Sadorsky, 1999; Sharma & Henriques, 2005; Stevens et al., 2005). These factors can be described as the coercive isomorphism mechanism that constrains and directs organizational behavior (DiMaggio & Powell, 1983).

The proactive reasons firms engage in sustainability initiatives would be self-interested reasons like improved financial performance and normative reasons such as the firm's core values (Aguilera et al., 2007; Aguinis & Glavas, 2012; Ellen et al., 2000; Hull & Rothenberg, 2008; McWilliams & Siegel, 2000; Narver, 1971; Sen & Bhattacharya, 2001). These factors can also be classified as the normative isomorphism mechanism of organizational behavior (DiMaggio & Powell, 1983).

The other questions addressed to date in the corporate sustainability literature also include the study of consumer behavior and reactions to sustainability information, stakeholder management, and the impact of sustainability initiatives on organizational citizenship and employee engagement (Brammer & Pavelin, 2006; Fombrun & Shanley, 1990; Lev et al., 2010; Sen & Bhattacharya, 2001; Surroca et al., 2010; Turban & Greening, 1997; Verschoor, 1998; Waddock & Graves, 1997). Part of this can be explained through the mimetic isomorphism mechanism of organizational behavior (DiMaggio & Powell, 1983). As peers and competitors engage in sustainability initiatives, this creates mimetic pressure on firms to do the same. This effect is evident in the large public firm arena where many major public firms have already made commitments to reduce or eliminate their carbon footprint over the next several decades, including Coca-Cola, BMW, Tesla, United Airlines, Disney, Walmart, Google, Apple, Amazon, and Citibank (Morgan, 2019).

**Institutional Theory as a Framework for Corporate Sustainability**

Institutional theory describes the influence of organizational inertia and firm isomorphism, which can both have a large degree of influence on firm sustainability initiatives. Organizational inertia and *isomorphism*, the process of firm homogenization over time, forces firms in a population to resemble other firms that face the same set of environmental conditions (DiMaggio & Powell, 1983). This happens through three mechanisms: coercive (political influence and other pressures), mimetic (standard responses to uncertainty, copy other successful or available models), and normative (from professionalization, formal education, and professional networks). More recent institutional theory literature found that industry dominant logic on sustainability initiatives is hard to break (Glover et al., 2014), firms adopt social initiatives to gain legitimacy with external stakeholders (Hess & Warren, 2008), and firms are more likely to act in a socially responsible manner when monitored by an independent organization (Campbell, 2007).

Institutional inertia and isomorphism can also help explain why some firms have been slow to adopt climate change solutions. Institutional isomorphism can explain how firms and the business management community adopted Friedman's (1970) idea that firms should only seek utility and profit maximization for shareholders. Without coercive pressure or other firms to mimic, firms had little incentive to voluntarily pursue sustainability initiatives beyond the minimum regulatory requirements. As business research and practitioner focus turned towards satisfying the needs of multiple stakeholders without sacrificing profits for shareholders, the concepts of win-win initiatives became more widely accepted through mimetic and normative pressures. These include the triple bottom line (Elkington, 1998), eco-efficiency (Burnett et al., 2007; Jacobs et al., 2016), creating shared value (Porter & Kramer, 2006, 2011), and dematerialization (McAfee, 2019).

Critics of the win-win approach to corporate sustainability argue that the model is too idealistic, and firms will always choose profits over other stakeholders' interests in win-lose decisions (Badaracco, 1997; Crane et al., 2014; Davis et al., 1998; Epstein & Yuthas, 2010; Reich, 2007; Vogel, 2005). In fact, one study on sustainability initiatives in the dairy supply chain found that industry dominant logic of eco-efficiency was difficult to break, and firms did not pursue sustainability initiatives that negatively impacted profitability (Glover et al., 2014).

Part of the explanation for the reluctance of firms to adopt sustainability initiatives can be addressed through agency pressures on the individual executives within these firms, while other explanations can be described as sticky pressures that create hurdles for organizations to adopt new behaviors with sustainability initiatives. Moreover, it is evident that firms are not universally adopting sustainability initiatives from the United Nations (2019) as IPCC (2018) data shows no meaningful decrease in greenhouse gas and carbon emissions globally despite several global agreements to voluntarily reduce emissions. Despite being a global leader on environmental sustainability regulations in the 1960's and early 1970's, the United States is now lacking strong regulatory pressures and a laggard compared to European Union environmental regulations (Kelemen & Vogel, 2010).

In the absence of strong coercive regulatory pressure, mimetic and normative pressure of cooperative ecosystems can also shift future firm behavior towards more sustainability initiatives. As more successful and public firms adopt and publicize their sustainability programs, other firms will come under mimetic pressure to do the same. Also, as managers and executives from these firms move to new companies and share knowledge through their professional networks, they will exert normative pressure for change at the new firms to pursue successful sustainability initiatives. Another positive influence of normative and mimetic pressures for sustainability will be the creation of independent third-party organizations that monitor and report on firm sustainability initiatives to create transparency and accountability. The administration and monitoring of sustainability programs by independent non-profit organizations should increase the likelihood of firms acting in a socially responsible manner (Campbell, 2007). Although the isomorphism mechanisms from institutional theory can provide insight into how firms are influenced by pressure for sustainability at the organizational level, it does not explain the competing pressures at the individual level that firm executives and managers face as agents.

This was further supported by Heugens and Lander's (2009) meta-analysis of institutional theory using 144 studies on institutional theory. Although they confirmed that the three isomorphic pressures (i.e., coercive, normative, and mimetic) influenced organizational behavior, their results show that isomorphism accounts for a relatively small percentage of the variance in behavior except for symbolic performance. Symbolic performance is the extent to which organizations "command legitimacy, status, and reputation" and "generate positive social evaluations" to fit in with cultural norms (Heugens & Lander, 2009, p. 64). This may explain why some firms only pursue initiatives such as sustainability only for external signaling, which can sometimes be seen as greenwashing. Consequently, Heugens and Lander (2009) call for qualitative research to explore how organizations experience, interpret, and learn to manage isomorphic pressures.

Institutional forces can provide the momentum for lasting changes but are executed by individuals who are influenced by other forces like agency and cognitive pitfalls to rational choices. Yet, much of the research on institutional theory limits human behavior to a narrow set of cultural obedience or positions individuals as rational agents who act outside of the influence of external factors. As Powell and Colyvas (2008) succinctly explain, "surely heroic actors and cultural dopes are a poor representation of the gamut of human behavior" (p. 277). They further posit that the extant literature cannot sufficiently describe the full breadth of social relations within organizations or the microprocesses of how individuals interpret and react within this context. Research into the micro-foundations of institutionalism can help uncover some of these mechanisms.

## Agency and Micro-foundations of Institutionalism

Agency theory gained popularity in the 1980s and 1990s as an alternative to institutional theory to explain how the agent-principal relationship between firm owners and employees can misalign individual incentives and influence behaviors. The agency theory problem can be summarized as “when (a) the desires or goals of the principal and agent conflict and (b) it is difficult or expensive for the principal to verify what the agent is actually doing” (Eisenhardt, 1989, p. 58). The premise of agency theory is that individual agents act in their self-interest, while assuming rational economic behavior, and sometimes those self-interests conflict with the interests of their principals. This can especially be important for firm executives facing decisions related to sustainability initiatives where their self-interests are not aligned with the interests of corporate stakeholders, such as investments in sustainability that cost resources without increasing profits.

In addition to agency theory, more recent research into the micro-foundations of institutionalism provide a complex view of organizational behavior (Haedicke, 2012). This research highlights the role of individuals in how they react to external influences like isomorphic pressures and make organizational decisions. Research into translation of institutional pressures by individuals describes the importance of local organizational cultures on individuals, “people use elements of local cultures to make sense of new environments and to guide organizational theory” (Haedicke, 2012, p. 48). Translation is how individuals and leaders within organizations interpret external concepts like institutional pressures for sustainability to change internal organizational practices. Haedicke (2012) suggests that local culture can moderate how individuals within firms compromise with or resist isomorphic pressures.

Schilke (2018) argues that organizational identity influences how actors within firms react to external environmental pressures: “an increasing consensus is emerging that decision-makers can exercise considerable discretion in deciding to what extent their organization becomes isomorphic with the environment” (p. 1432). Moreover, executives often face difficult decisions with competing isomorphic pressures from different sources. As Schilke (2018) notes, “environmental pressures often contradict each other in reality, making it important to study how decision-makers process and prioritize competing institutional logics” (p. 1452). Corporate sustainability decisions are certainly an example of a complex problem with competing priorities for different stakeholders.

There is also support for the influence of experience as well as expectations of how to behave in new jobs or organizations on how individuals within firms make decisions. Cardinale (2018) found that agents within organizations act based on experience from previously held positions while executives act according to “expectations attached to the positions they occupy” (p. 140). It appears that individual experiences and expectations of how they believe they should act influences actual behaviors within firms, which would affect how these individuals interpret and react to external pressures for sustainability initiatives. Furthermore, even organizational decisions that appear to be passive may be deliberate choices, “habitual action does not reflect passivity, but is a skilled means of directing attention” (Powell & Colyvas, 2008, p. 279). This is an important point in understanding why some firm executives do not react to external pressure for sustainability and maintain the status quo behaviors.

One important caveat to institutional agency, however, is the limitation created by its assumption of rational agents. Decision theory in the 20$^{th}$ century largely relied on the economic theory of rational choice and expected utility (Simon, 1955). Yet, observations of actual decision-making often contradicted the expected outcomes of rational choice theory and resulted in the development of new theories of behavior. Business managers and executives often do not follow the behavioral patterns predicted by classical economic theory, which oversimplifies the reality of actual organizational behavior. One major pitfall of the rational choice model noted by Kahneman (2003) is the false assumption "that agents make their choices in a comprehensively inclusive context, which incorporates all the relevant details of the present situation, as well as expectations about all future opportunities and risks" (p. 1459).

Real world individuals have a limited cognitive ability to focus only on a small fraction of information and sensory inputs to make decisions. This leads to mental shortcuts, "the system tends to see what it expects to see—a form of Bayesian adaptation" (Kahneman, 2003, p. 1454). There is a mental cost to deviating from these shortcuts and making rational choice decisions, which creates frictions and mental gaps to rational decision-making. Frictions and mental gaps create barriers to rational choice decisions due to transaction costs and psychological distortions in information gathering, attention, and information processing (Handel & Schwartzstein, 2018). In complex problems, this can result in intuitive and irrational decision-making, "ambiguity and uncertainty are suppressed in intuitive judgment as well as in perception" (Kahneman, 2003, p. 1454). One way to overcome the effects of frictions and mental gaps is through the framing of information.

Prospect theory describes how framing a problem in different ways changes preferences and behavior even when the alternative decisions have the same risks and rewards (Tversky & Kahneman, 1986). Rational choice theory would predict the same behavior from an actor under a specific set of circumstances no matter how that actor receives the information. Yet, the way information is presented or framed changes how individuals behave and make decisions.

Kahneman (2003) found that framing effects can violate the invariance principle of rational choice theory “where extensionally equivalent descriptions lead to different choices by altering the relative salience of different aspects of the problem” (p. 1458). Thus, framing how sustainability initiative choices are presented may influence how managers make decisions in addition to the effects of agency self-interest.

Managers can also be influenced by the loss aversion effect from prospect theory, which explains how planned costs feel neutral while unplanned costs of the same magnitude feel like losing (Tversky & Kahneman, 1986). Framing a problem in different ways or nudging towards a desired outcome changes preferences and behavior, even when the alternative decisions have the same risks and rewards (Kahneman, 2003; Thaler, 2018). In addition to framing the problem, framing how choices are presented influences decisions because of how human brains process different types of information. For firm managers making constant decisions about profitability and sustainability, the process of evaluating decisions can become a resource-intensive burden. Within SMEs, this may lead to avoiding the decisions altogether due to a lack of dedicated sustainability managers or time to deal with seemingly non-essential operational issues.

Making constant decisions can also invoke mental heuristics and biases to expedite decision-making through mental shortcuts instead of making elaborate rational choice decisions (Tversky & Kahneman, 1974). If firm managers make many decisions about sustainability initiatives, each decision can create a psychological impact for the decision maker by invoking the win-loss choice. Sustainability initiatives that require resources may appear as a potential loss in profit, which is less likely to be accepted because of the loss aversion effect (Tversky & Kahneman, 1986). The effects of irrational individual behaviors contrast with classical economic theory of rational choice and utility maximization including the presence of an economic mind that persists to maximize selfish behavior (Pettit, 1995). Since self-interested behavior is a critical assumption of agency theory, it is important to explore the potential cognitive factors that influence firm executives' decision-making related to sustainability initiatives in practice.

**Literature Gap**

There are several key gaps in the literature on corporate sustainability that require further exploration on how firms balance isomorphic pressures with agent self-interests and seemingly irrational choices of voluntary sustainability investments. First, there is a gap in research on the mediation mechanisms of sustainability from the individual level of analysis perspective. In their meta-analysis of CSR literature, Aguinas and Glavas (2012) found that only 4% of articles included content on mediating variables at the individual level. Most of the research at the individual level focused on non-financial outcomes of CSR, including employee retention, attractiveness to prospective employees, and engagement but not the actual predictors that influence individuals to make decisions to carry out CSR activities. While the research has focused on firm CSR predictors and outcomes, "individual actors are those who actually strategize, make decisions, and execute CSR initiatives" (Aguinas & Glavas, 2012, p. 953). This further highlights the importance of understanding the micro-CSR antecedents and moderators of individual-level sustainability decision-making.

While institutional pressures for sustainability are important, it is equally important to understand how individuals within firms interpret and act on those pressures. Yet, this is a poorly understood area, "we know very little about whether and how the characteristics of decision-makers and their immediate context shape organizational resistance" (Schilke, 2018, p. 1432). This is the argument against the institutional isomorphic iron cage (DiMaggio & Powell, 1983) and the view of corporate executives as either heroic actors or cultural dopes (Powell & Colyvas,

2008) when the reality of sustainability decision-making is much more complex (Bazerman & Hoffman, 2000). Understanding how individual corporate executives make decisions can help firm boards and policy makers create policies to encourage better executive decisions for sustainability initiatives.

Another gap is that the literature has been extensively focused on trying to link sustainability with financial performance using traditional economic models, which has shifted the focus of many firms towards eco-efficiency initiatives and away from the stakeholder responsibility and normative argument of ecologists. Most firms do not have win-win sustainability opportunities and will choose profits over responsibilities to other stakeholders (Badaracco, 1997; Crane et al., 2014; Davis et al., 1998; Epstein & Yuthas, 2010; Friedman, 1970; Reich, 2007; Vogel, 2005). This may be particularly relevant to voluntary firm sustainability initiatives with either a long-term financial return horizon or indirect benefits such as brand reputation. Research on consumer sustainability behavior shows that irrational choice preferences and the long return horizon of sustainability programs level prevents the welfare maximization of government environmental policies (Allcott & Taubinsky, 2015). Despite the isomorphic institutional pressures on firms to adapt sustainability initiatives, the individual decision makers and agents within firms may be susceptible to the same factors as consumers of government sustainability initiatives.

Lastly, there is gap in the literature on the amount of sustainability research focused on SMEs and private firms compared to large public firms. Data on large publicly traded firms is much easier to obtain from sources like published financial reports, public news or announcements, self-reported statistics, and published government data. Data on SMEs and private firms is much more difficult to obtain and is often confidential or non-existent outside of those firms. Nonetheless, SMEs are critical actors in the fight against climate change because they constitute the vast majority of for-profit firms in the U.S. economy and are considered the backbone of the economy (Martinez-Olivera & Mora-Vargas, 2019). According to the US Small Business Administration (2018), 99.7% of all U.S. firms have fewer than 500 employees, which makes SMEs essential to sustainability initiatives such as reducing carbon dioxide emissions and transitioning to renewable energy sources.

It is also important to study SMEs and private firms because their resource capacities are different from larger firms, thus the solutions they can rely on may be unique from large public firms. SMEs face the additional barriers to isomorphic pressures for sustainability from large public firms because of greater influence on the business from owners, resource limitations, agency from senior management, and a lack of internal expertise in sustainability (Hörisch et al., 2015). Furthermore, SMEs have more trouble implementing new technologies and adapting their business models to the environment that large firms with more resources (Martinez-Olivera & Mora-Vargas, 2019). Because many SMEs are less visible to external stakeholders than large public firms or major brand name firms, they may not be impacted as fast or as hard by isomorphic pressures as large public firms (Hörisch et al., 2015). SMEs may be able to ignore the general isomorphic pressures from society unless it comes directly from government regulators, consumers, customers, investors, or shareholders.

# CHAPTER 3: RESEARCH DESIGN AND METHODS

## Overview

The IPCC (2018) report predicts a global catastrophe by the end of the 21st century if the planet's temperature continues to rise at current rates due to human activity. The major cause of climate change is greenhouse gas emissions from manufacturing, transportation, non-renewable energy, agriculture, and other industries. In the United States, industry accounts for 22% of greenhouse gas emissions while transportation and electricity generation account for another 55% (EPA, 2018). The largest component of greenhouse gas emissions is carbon dioxide (CO2). Firm supply chains, which include overseas manufacturing and logistics, are a major source of CO2 emissions.

Ecologists and biologists point out the interdependence of society, natural resources, and ecosystems to argue that firms have a responsibility to maintain the ecosystems and resources they depend on to make profits (Bradbury & Clair, 1999; Carson et al., 1962; Elkington, 1998; Martin, 1994; Narver, 1971; Wackernagel & Rees, 1997). Economists identify CO2 emissions as an example of a market failure and acknowledge that corrective measures such as state and national carbon emissions trade schemes and the United Nations self-imposed national targets have failed to correct this market failure without a global enforcement mechanism (Andrew, 2008; United Nations, 2019). Furthermore, the practitioner side and capital markets are taking a strong position in support of firm sustainability initiatives as evidenced in the recent comments by the Business Roundtable (2019) and Blackrock's CEO Larry Fink (2020).

Meanwhile, researchers are showing possible roadmaps to climate change solutions with interventions using a combination of new technologies like efficient renewable energy, real-time CO2 emissions tracking, energy efficiency in manufacturing, and carbon capture that could be implemented today while creating long term value in the global economy (Consolandi & Eccles, 2018; Jacobson, 2017; McAfee, 2019). Firms could make a significant impact on CO2 emissions through sustainability initiatives without taking on large economic burdens (Bushnell, 2012; Daniels, 2010). While there is a significant amount of research on large public firms who publish their ESG and sustainability data, there is a gap in research on private and small to medium size firms (Aguinis & Glavas, 2012). This is an important population to study since SMEs make up over 99.7% of all US firms according to the SBA (2018), especially given growing evidence that SMEs may collectively be responsible for up to 70% of global pollution (Hörisch et al., 2015). This research study will build on the extant sustainability literature by exploring how SMEs are influenced by isomorphic pressures for sustainability and the micro-level challenges SME executives must navigate to balance the needs of the stakeholders with these pressures.

**Research Design and Approach**

The philosophical basis for this study is a constructivist worldview using a qualitative grounded-theory methodology (Birks & Mills, 2015; Charmaz, 2014; Creswell & Creswell, 2018) to explore and understand how SME executives pursue sustainability initiatives. This is an appropriate methodology to study nascent concepts and develop new theoretical constructs for further exploration. Sustainability has been broadly examined in economics, ecology, and other disciplines for over 50 years, and the business management discipline has been researching corporate sustainability for over 30 years. Similarly, institutional theory research is in the mature stage with decades of research since DiMaggio and Powell's (1983) research on institutional isomorphic pressures on organizations. However, many important questions remain unanswered or disputed in the literature.

Specifically, how do individuals make sustainability related decisions? What drives their choices; is it internal to the firm? How, if at all, do the external business conditions environment influence these decisions? Schilke (2018) noted that "future research is needed to develop a more comprehensive understanding of the various conditions and mechanisms relevant to decision-makers conforming with versus resisting environmental pressures" (p. 1452). Similarly, Cardinale (2018) highlights that understanding the micro-foundations of institutionalism is the key to addressing a fundamental organizational and social theory problem of "explaining how human action is influenced by, yet to some extent autonomous from, the institutions or structure within which it takes place" (p. 152). Although the current state of corporate sustainability literature is intermediate to mature, research on the micro-foundations of sustainability decisions at the individual level, especially within SMEs and private firms, is still nascent.

Exploring this new area within a nascent research domain requires the appropriate methodological fit, which "promotes the development of rigorous and compelling field research" (Edmondson & McManus, 2007, p. 1169). The use of qualitative methods is appropriate to explore nascent domains, "when little is known about a research topic or question, initial steps must be taken to explore and uncover new possibilities before useful quantitative measures can be informative" (Edmondson & McManus, 2007, p. 1172). Moreover, the practical problem of climate change and how SMEs respond to institutional pressures to address climate change require field research to uncover how individual decision makers within SMEs approach this challenge.

Insight into private and SME executives as well as data on how SMEs pursue sustainability initiatives is more limited and difficult to access because these firms often do not publish their data as large public firms are required to do. Thus, a grounded theory approach will help to develop a theoretical construct by engaging with the elusive target population, “good theory comes from engagement with problems in the world, not gaps in the literature” (Van Maanen, Sorensen, & Mitchell, 2007, p. 1149). This research leverages the best practices from grounded theory qualitative research with my access to SME executives from my professional network to add rigor and relevance to the study. The aim of the study is to explore and identify how SME executives evaluate and investment in sustainability initiatives within their firms.

**Study Population and Sampling**

The target population for this research topic is SME executives and managers responsible for evaluating and making decisions on behalf of their firms for sustainability investments and initiatives. The SMEs are for-profit firms who are not publicly traded and generally have less than 1,000 employees and $1 billion in annual revenue according to the SBA (2018) definition. The target population of SMEs is from different industries and is geographically located in the United States for this initial exploratory research. This is to mitigate against the effects of different cultural and political norms for sustainability from other developed countries in Europe and large CO2 emitters like China and India. The research was not looking at the broad general population because firm managers and executives responsible for sustainability decisions presumably have different levels of education, experience, and decision-making judgement than the general population.

The study used expert sampling, a type of purposive sampling (Etikan et al., 2016) for the qualitative interviews with corporate sustainability decision makers. The intent was to interview 15-25 experts to reach data saturation for understanding how corporate decision makers evaluate and make decisions related to sustainability investments (Guest et al., 2020; Saunders et al., 2018; Vasileiou et al., 2018). This is an appropriate approach to study a specific population with qualities possessed by participants like specialized knowledge and experience when investigating new areas of research (Biernacki & Waldorf, 1981).

The actual study sample population was 19 SME executives involved with and responsible for corporate sustainability decisions. These executives worked at SMEs in various industries described in Table 1. The executives' roles ranged from senior manager to president and CEO. Access to interviewees was through my professional contacts at SMEs and private equity owned SME subsidiaries using a purposeful snowballing chain referral sampling strategy to gain additional respondents (Biernacki & Waldorf, 1981). SMEs and private equity owned firms are a difficult to reach population and not easily accessible to outsiders for research. My professional network and prior work with some of these firms established the bona fides and rapport to get interview access to these executives and the subsequent snowball introductions to additional participants. Since this is an exploratory study and not looking to generalize the findings to a broader population, this was an appropriate approach to the sample population and data collection.

**Table 1**

***Descriptive Data on Study Sample***

| Private | Gender | Role within Firm | Annual Revenue | Ownership | Firm Industry | Previous Work at Large Public Firm? |
|---|---|---|---|---|---|---|
| Yes | Female | Contracts senior manager | $100M-$1B | Individual/Family | Government Contracting | Yes |
| Yes | Male | Vice President and Treasurer | $10-100M | Individual/Family | Packaging Distributer | No |
| Yes | Male | Client Program Director | $100M-$1B | Individual/Family | Government Contracting | Yes |
| Yes | Male | President | $10-100M | Individual/Family | Automotive Manufacturing | Yes |
| Yes | Male | CEO / Director (PE parent) | $100M-$1B | Private Equity | Beverage Manufacturing | Yes |
| Yes | Male | General Manager | $100M-$1B | Individual/Family | Furniture Importer | No |
| Yes | Male | CFO | $100M-$1B | Private Equity | Food Manufacturing | Yes |
| Yes | Male | COO | $100M-$1B | Private Equity | Beverage Manufacturing | No |
| Yes | Female | Head of product innovation | $100M-$1B | Corporate | Kitchen Appliances | Yes |
| Yes | Male | President and CEO | $1B plus | Private Equity | Packaging Distributer | Yes |
| Yes | Male | COO | $100M-$1B | Individual/Family | Plastics Manufacturing | No |
| Yes | Male | Regional VP Sales and Marketing | $100M-$1B | Private Equity | Label Manufacturing | Yes |
| Yes | Male | Head of product development | $10-100M | Individual/Family | Ecommerce, Consumer Goods | No |
| Yes | Male | Head of procurement | $100M-$1B | Corporate | Food Manufacturing | Yes |
| Yes | Male | Director R&D | $100M-$1B | Individual/Family | Packaging Manufacturing | No |
| Yes | Male | President | $100M-$1B | Individual/Family | Food Manufacturing | Yes |
| Yes | Male | VP Sales and Marketing | $100M-$1B | Individual/Family | Food Manufacturing | No |
| Yes | Male | COO | $1B plus | Private Equity | Health and Wellness | Yes |
| Yes | Male | CEO | $10-100M | Individual/Family | 3PL Warehouse and Distribution | No |

It is noteworthy to comment on the demographics of the sample population, which may indicate potential differences from the general population or a disproportionate make up of certain demographics within SME senior management. The sample only had two females, and neither of these interviewees held a C-suite role within their organization. Additionally, 16 of the interviewees were Caucasian. In terms of roles within the firm, 11 of the interviewees held C-suite or senior executive roles within their firms. Finally, seven of the interviewees held an ownership role or equity stake in the business. Although this sample may not be demographically representative of the population of all U.S. SMEs in terms of race and gender, it provides a sufficient representation of decision-makers within SMEs to answer the exploratory research questions of this study. Specifically, the high percentage of C-suite executives and executives who also have an ownership interest in the SMEs is sufficient to represent the viewpoints of SME senior management and owners as decision-makers on behalf of their firms.

## Data Collection Methods and Instruments

The qualitative interviews were conducted using a video conferencing software and their cloud recording and transcription service. The interviews were semi-structured (Billups, 2020) and each one lasted approximately 45-60 minutes. The interview protocol is attached in Appendix B. The interview protocol was developed after several preliminary interviews and discussions with SME executives and sustainability researchers. The semi-structured questions were constructed using suggested word choices and sentence designs for qualitative research by Charmaz (2014) and Birks and Mills (2015).

# CHAPTER 4: DATA ANALYSIS AND FINDINGS

## Overview

The data analysis followed best practices of qualitative research using methods and techniques from Billups (2020), Birks and Mills (2015), Charmaz (2015), Corbin and Strauss (2007), and Creswell and Creswell (2018). The interview data was analyzed using coding techniques to develop a grounded theory model of how SME executives evaluate and make decisions related to sustainability initiatives.

## Data Analysis Methods

The interview data was analyzed using coding and qualitative data analysis techniques from grounded theory methodology (Birks & Mills, 2015; Charmaz, 2014; Corbin & Strauss, 2007; Neely, 2013). The data was coded using thematic coding to generate categories and then aggregate theoretical dimensions (Neely, 2013). This approach was chosen over open in-vivo and line by line coding based on the complexity of the data, use of business jargon, and accuracy of the video conferencing transcription quality. Concurrently, I wrote memos to reduce the raw data into first and second order codes to help identify the categorial codes and aggregate theoretical dimensions as certain topics reached data saturation from the interviews (Billups, 2020, Birks & Mills, 2015, Charmaz, 2015). The basic demographic data was also collected as part of the interview protocol.

## Preliminary Analysis

The research and data analysis used an iterative process of interviews, coding, and memo writing to develop the categorical and theoretical dimensions. Several of the categories reached data saturation after the first eight interviews, while other categories reached data saturation after 16 of the 19 interviews. Research validity and trustworthiness was established by interviewing firm executives from 13 different industries. The interviews were conducted with executives holding different roles from senior manager to president and CEO, which also supports data trustworthiness to account for potentially skewed views of executives holding specific roles. Moreover, the findings use a rich, thick description (Creswell & Creswell, 2018) to add context and perspectives around the real-world business problems SME executives face when evaluating sustainability initiatives.

Nonetheless, there is a risk for researcher bias in this study since I am a practicing SME executive and view the interview data through both the lens of a researcher as well as through that of a practitioner who has faced similar business decisions. Additionally, I did not conduct pre-screening interviews or attempt to recruit a sample of informants that could be generalized to the broader population. The challenges of conducting research on SMEs and private firms include access to executives and being able to create an environment where they are comfortable sharing honest answers without worrying about negative repercussions to themselves and their firms. The broad range of interviewee industries, roles, and range of responses related to sustainability initiatives support the validity and trustworthiness of the research procedures.

The data codes were developed through an iterative analysis, memo, and inductive reasoning process. The initial research focus was on individual decision-making process, but it became apparent through inductive discovery that the SME executives were also influenced by the external business environment including the micro process of evaluating sustainability opportunities. SME executives faced isomorphic pressures for sustainability from their consumers, large brand-name customers, financial institutions, competitors, technological innovations, and government regulators. SME executives were not just aware of these pressures but discussed how they must consider and make decisions based on the pressures including the risks of ignoring the pressures and not pursuing sustainability initiatives. These choices included identifying the risks of losing business opportunities, delaying initiatives until their firm reached certain milestones, and protecting their existing business. These categorical focused codes were consolidated into the aggregated theoretical dimension of isomorphic pressures for sustainability.

SME executives were also influenced by internal pressures or perceived internal pressures based on increasing shareholder value and the alignment of personal incentives. The categorical focused codes generated for these data were investor or owner interests, revenue growth, increasing profits, personal motivation, and branding or company purpose. The mix of codes covers different ownership and compensation structures of the interviewed SMEs. For example, some SME executives who were also owners of the firm had a personal motivation to pursue sustainability. Others discussed the implications of investing in sustainability on firm revenues and profits, especially if these decisions required a dedication of resources or opportunity costs to focus on other business priorities. These codes were consolidated into the aggregated theoretical dimension of agency and rational choice pressures for sustainability.

The data also indicates that SME executives were keenly aware of their resource limitations and constraints to focus on sustainability. This included people who could focus on sustainability initiatives and their own time to spend on evaluating sustainability instead of focusing on other priorities that directly impacted the firm’s top and bottom lines. The categorial focused codes for these data were costs versus payoff, sustainability manager or team, and time commitment of executives. These codes were consolidated into the aggregated theoretical dimension of resources for sustainability.

Lastly, the data also indicated several cognitive pressures and influences on SME executives related to sustainability initiatives and decision-making. The categorical focused codes developed for these influences were awareness of sustainability, benefits to company, credibility of sustainability initiatives, data visualization and decision-making, and preconceived notions about sustainability. These factors appeared to have a major influence on SME executive consideration for evaluating and pursuing new sustainability initiatives. For example, several interviewees brought up concerns with being able to validate the credibility of voluntary carbon offset programs administered by 3rd party organizations and the hypocrisy of global campaigns for sustainability while the attendees take private jets to events. Conversely, several interviewees described how external sustainability monitoring programs help them visualize data, compile reports, and make better decisions about improving their sustainability programs. These codes were consolidated into the aggregated theoretical dimension of executive awareness and perception of sustainability.

**Results**

The coding categories were developed using Neely's (2013) approach for categorical focused codes and aggregated theoretical dimensions codes. Table 2 highlights example quotes from the data used to develop the coding scheme and categorial codes. Table 3 shows the full range of illustrative quotes used to develop the categorical codes. The analysis produced 19 categorical codes which were categorized into four aggregated theoretical dimensions of isomorphic pressures for sustainability, agency and rational choice pressures for sustainability, resources for sustainability, and executive awareness and perceptions of sustainability. The results were used to develop a new model for how SMEs integrate sustainability into their practices and generate a grounded theory of the macro and micro-level influences on SME executives evaluating and making decisions for sustainability initiatives.

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**INSERT TABLES 2 & 3 ABOUT HERE**

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**Findings**

The interview data support the overall effects of isomorphic institutional mechanisms from institutional theory on how private SMEs are pressured to pursue sustainability initiatives and make investment choices around sustainability. This includes the coercive effects of changing regulations and customer pressures, mimetic effects of competitive pressures, and normative effects of professionalization of SMEs through changes in ownership and key executives (DiMaggio & Powell, 1983). However, the data also indicate a much more complex relationship between the isomorphic pressures on SME firms and how executives within those firms react to those pressures to evaluate and make strategic choices related to sustainability.

Rather than evaluating SME commitments to sustainability investments and initiatives as black and white or all-or-nothing, the data describe a much more complex sustainability spectrum and a web of sticking points that SME executives must navigate. SME executives also consider personal values and their responsibilities to society, fiduciary responsibilities to their shareholders, personal financial self-interest, competing business priorities, and deployment of limited resources. Moreover, SME executives balance the external and internal pressures with pre-existing beliefs about sustainability and may be susceptible to cognitive pitfalls such as risk aversion and biases without a deliberate process for sustainability decision-making.

The findings section is organized into five sub-sections. The first section will describe the findings about a sustainability spectrum that describes the range of sustainability integration by the sample SMEs from little to no sustainability activities to fully integrated sustainability as a competitive advantage. The second section will describe the organizational level pressures for sustainability SME executives face and how these pressures can create the conditions for corporate greenwashing. The third section will focus on the individual level agency pressures for sustainability. The fourth section will discuss the specific resource constraints and challenges SME executives face to pursuing sustainability initiatives. The last section will describe the influence of executive awareness and perception of sustainability on how SMEs evaluate and make decisions to engage in sustainability initiatives and how deliberate organizational decision-making processes can overcome cognitive pitfalls.

**SME Sustainability Integration Spectrum**

Inductive analysis revealed that SMEs varied on the degree to which they have incorporated sustainability initiatives and that their degree of engagement with institutional pressures for sustainability help illuminate their process. The emergent model from the data of how SMEs conform to institutional pressures from sustainability can be visualized as a spectrum in Figure 1. The sustainability spectrum in Figure 1 provides the key topics and examples from the data of the interviewed SMEs that have integrated little to none, moderate, or significant amounts of sustainability initiatives into their business models. There was a large range within the interviewed SME on levels of sustainability integration from none to incorporating sustainability into all operations and using it as a key competitive advantage. Five of the SMEs were in the little to none, 10 SMEs in the some to moderate, and four SMEs in the significant to fully integrated range of the sustainability spectrum. The wide range of SME sustainability initiatives and integration, even in this sample of 19 firms, supports the validity of the research sampling approach.

**Figure 1**

***SME Sustainability Integration Spectrum***

**Sustainability not tied into business strategy, operations, or products**
"We currently don't have a process for that, evaluating which sustainability goals were important. Basically, running off our intuition and making decisions at the moment." *Vice President, packaging distributer firm*

**Industries that don't value sustainability as competitive advantage**
"[our customers are in] Defense contracting and they are the polluters of the world, sustainability is not something they think about." *Contracts Senior Manager, government consulting firm*

"You're asking a company that the rules of a company is to maximize profit to be okay to be a charitable company" *General Manager, furniture importer firm*

-"family businesses for years have ignored these initiatives [sustainability], because there was no immediate payback or there's no measurable payback" *President, automotive manufacturing firm*

**No executive time, resources, and people to focus on sustainability**
"I don't have the capacity to think about that stuff [sustainability] so because we don't have the time to deal with that. We want to focus on how do we increase the top line and bottom line." *General Manager, furniture importer firm*

**Incorporate sustainability into product or services design; Lower costs, increase operational efficiencies, and reduce waste**
"ROI is going to be first across the board, if I can make the case that meeting any particular sustainability goals...then all the better." *Head of Product Innovation, kitchen appliances firm*

"I think companies make very rational decisions around [sustainability]...it's got to be driven by one of those two or three things we talked about, a regulation and economic incentive and a customer demand." *CEO, beverage manufacturing firm*

**Investor focus on ESG and sustainability programs**
"There's a need in the growing consumer space, especially with the company of our size to have the ESG record that we can speak to market...The number of people that bring up ESG you know, during the pitch and their new goals once at our size, I think we get a hall pass today for the lack of ESG initiatives I don't think that will be the case, three to five years from now." *COO, beverage manufacturing firm*

**Developing dedicated resources and staff to look at sustainability**
"We've recently hired and made our general counsel also the chief sustainability officer. We're building out that team that specifically focuses on the internal operational elements and how we drive more efficiency and sustainability." *CEO, packaging distributer firm*

**Paying attention to major customers and large brands firms**
"What they [major brand customers] would be asking for is packaging that helps them achieve the goals that they have." *Director R&D, packaging manufacturing firm*

"Our strategy is more basic in many ways which is to grow the business, drive the margin in the business...we have to respond to what customers are interested in...we would weight more heavily in things with environmental impacts if it's important to our customers" *CFO, food manufacturing firm*

**Sustainability is part of the overall business strategy and integrated into routine business processes**
"We put a quarterly metric out there, of identifying items to redevelop to make them more sustainable and operational product reviews on quarterly basis to actually achieve the redevelopment of those certain number of items." *Head of Product Development, e-commerce consumer goods firm*

**Sustainability focus is driven from the top by owners and executives**
"I have a great team that I'm extremely proud of, the team of about five key people who work hand in hand with me, and these are the people that help run the operation and we collectively come up with ideas [including sustainability initiatives] in our quarterly meetings, and we always make it a point that you know next meeting, three months from now, we gotta do something different, we got to be proactive, we got to be the best and that's something that we continue to do and I'm very proud of my team." *President, warehouse and logistics firm*

**Do the right thing for the business, not just for external signaling or greenwashing**
"Everything we try to do we try to have a dollar payload associated with it, it's very important to us that we don't just virtue signal sustainability... we want to understand exactly what our impact is as a corporation, so that we can target cogently areas to fix or to improve on." *COO, health and wellness firm*

"When companies look for a source, who can provide a sustainable product that has no impact on the environment we will be ready...We're obviously hoping for an ROI at some point on this, which we think it will be out there and that's in the form of more customers more volume coming to us with their confidence in our [sustainable products] program." *President US, food manufacturing firm*

SME firms on the left side of the spectrum had little to no integration of sustainability initiatives into their overall business strategy, operations, and products or services. They also operate in industries that do not value sustainability as a competitive edge and may not understand the value of sustainability to their firm. As one General Manager of a furniture importer firm said, “you’re asking a company that the rule of a company is to maximize profit to be okay to be a charitable company.” Moreover, these SMEs did not have adequate people, resources, and time for executives to focus on sustainability initiatives because it would be at the expense of focusing on other business priorities like growing revenue and profits.

SMEs in the middle of the spectrum had some or a moderate degree of incorporating sustainability into their product or services design and looked at how they could reduce costs through increased efficiencies and reduced waste from sustainability initiatives. These firms also considered how their external stakeholders and investors viewed the importance of ESG and sustainability. This included paying attention to the expectations from major customers and large brand firms. As the CFO of a food manufacturing firm explained, “Our strategy is more basic in many ways which is to grow the business, drive the margin in the business…we have to respond to what customers are interested in…we would weigh more heavily in things with environmental impacts if it's important to our customers.” In turn, these SMEs developed dedicated sustainability resources and teams to evaluate sustainability opportunities to meet demands from their large customers.

On the right side of the spectrum, the SMEs took this approach even further and fully integrated sustainability across all levels of their business. They incorporated sustainability into the overall business strategy and routine business processes, “We put a quarterly metric out there, of identifying items to redevelop to make them more sustainable and operational product reviews on quarterly basis to actually achieve the redevelopment of those certain number of items" (Head of Product Innovation, kitchen appliances firm). These firms also had supportive senior executives and owners who believed in pursuing sustainability initiatives because it was the right thing to do for their business instead of just as a signaling or greenwashing mechanism.

**Organizational Level Isomorphic Pressures for Sustainability and Risk for Greenwashing**

Institutional theory describes coercive isomorphic pressures as both formal pressures such as government regulations and informal pressures such as cultural expectations (DiMaggio & Powell, 1983). The SMEs in my research faced both formal and informal coercive pressures. The formal coercive pressures came from explicit government regulations while informal coercive pressures were largely driven by major customers and financial institutions. SME executives were keenly aware of the regulatory requirements in their industries. These regulatory requirements, however, were limited to manufacturing facilities and metrics like emissions and waste. One specific example was a California legislative requirement for plastics manufacturers to use a minimum percentage of post-consumer recycled content. Yet, the legislators in this example failed to look at the requisite broader ecosystem requirements necessary to execute this plan, which forces SMEs to evaluate the trade-offs between compliance and penalties. The COO of a beverage manufacturing firm expanded on this:

> But this piece of legislation, failed to really carve out complexities around other licenses, I mean other resin types, such as HDPE which has a very limited supply base for PCR [post-consumer recycling] and it also has a very high cost and there's limited uses for the food packaging industry because of that constraint, so therefore when you start to look at this as an ESG initiative because you're being enforced by a government per se you start to look at the benefits of compliance versus the penalties...I think it's a good example of how politicians can get involved in setting these mandates without understanding the total impact by all the different fragments of the industry.

This is surprising and unfortunate considering the well-intentioned coercive pressure but demonstrates that SME executives make rational decisions as agents of their shareholders on behalf of their firms.

Similarly, the lack of government mandates around sustainability created disincentives for SMEs in the government contracting industry. One SME in the government contracting industry described how voluntary sustainability is not valued in their industry:

> On most government contracts, unless they would specifically write it [sustainability] in, and that's quite rare specifically writing it down into a contract as a requirement, like you, must show us evidence of this. Typically, it's more like a feather in your cap for us.

When SMEs are rewarded for only specific or explicit sustainability initiatives, it may signal a disincentive for firms to voluntarily pursue sustainability initiatives that are not directly required by the government. This appears to be particularly relevant to SMEs providing services to the government who are using detailed government contract requirements to drive business decisions. Nonetheless, the same government contract SMEs also participated in sustainability initiatives that created economic value such as scrap recycling and reducing logistical costs. These sustainability initiatives were not required or even suggested by the government through coercive pressures. Rather the business executives identified economic opportunities that also happened to be more sustainable.

SMEs also faced significant informal coercive pressures, particularly from large brand-name customers and increasingly from the financial sector. SMEs often act as sub-contractors or suppliers to large companies including public firms and major brand name firms. As these large firms make public commitments to sustainability, they add requirements to their suppliers to help them achieve these sustainability commitments. One CFO of a food manufacturing firm said,

> Big customers—and we have the predictable big customers Walmart, Costco—if it's [sustainability] important to them, then we'll have to make it important to us, otherwise

> we could lose that business…we have to respond to what customers are interested in…we would weigh more heavily in things with environmental impacts if it's important to our customers.

The SME executives working with these large brand public companies were keenly aware of the overt and implied coercive pressures to pursue the sustainability initiatives important to their customers. For SMEs, these public companies represent large percentages of current revenue as well as major growth opportunities for new business.

These coercive pressures also provide opportunities for SMEs to innovate and provide solutions for the large customers. As one SME in the packaging industry explained, when large customers announce sustainability goals it becomes a market signal to their suppliers:

> What they [major brand customers] would be asking for is packaging that helps them achieve the goals that they have, you know, put out to the marketplace [and] social media. So, company goals such as, you know, they're committing to having fully sustainable or recyclable packaging by a certain year. So, you know, a statement such as we will provide recyclable or compostable packaging by 2025 like that would be a common type of statement. and you know so then that drives a lot of R&D [research and development] activity through their supply chain.

While SMEs on the low and middle half of the sustainability spectrum look at these coercive pressures for sustainability as a burden and only focus on the minimum requirements of the large brand name customers to not lose business, SMEs on the high side of the spectrum used this as an opportunity. These SMEs invested in new technologies and processes to provide solutions to their customers and gain new business.

One of the interviewed food manufacturing SMEs proactively invested in sustainability knowing that it takes many years to establish a sustainable supply chain in their industry. This SME was proactively investing based on informal coercive industry signals in the hopes of getting paid a premium for their products in the future by large brand customers.

> When companies look for a source, who can provide a sustainable product that has no impact on the environment we will be ready. Maybe it's not right now, right here today

> we may or may not reap benefits, but in the future, the world is definitely going in that direction, so we want to be future ready. We're obviously hoping for an ROI [return on investment] at some point on this, which we think it will be out there and that's in the form of more customers, more volume coming to us with their confidence in our [sustainable products] program.

This investment in sustainability and future demand can be compared to how firms invest in new technologies and research without having a guarantee of success or a return on investment. For firms on the right side of the sustainability spectrum, this is an opportunity to benefit from the customer and consumer isomorphic pressures for sustainability by investing in new capabilities.

SMEs are also beginning to feel the informal coercive pressures from their financial institutions and investors. Financial institutions and investors are asking SMEs about their ESG and sustainability practices and evaluating how SMEs compare to their peers for merger and acquisition events. The recent origins of this pressure can be traced back to the Fink (2020) and Business Roundtable (2019) announcements about the need for public firms to focus on ESG and sustainability. These announcements included the threats of activist investor pressures and removing board members from non-compliant firms. Several of the interviewed SMEs described how they are feeling the coercive pressure for sustainability from the financial sector. In particular, one COO of a beverage manufactuting firm explained,

> There's a need in the growing consumer space, especially with the company of our size to have the ESG record that we can speak to market, it also helps with value creation for the next [M&A] transaction...The investment partners are driving it, I would say that it would resonate well with our consumers and our customers.

While the coercive pressure from large financial institutions was initially focused on large public firms, it appears the same pressures have started to flow through the financial markets to SMEs.

The same SME executive discussed the importance of being aware of external expectations for sustainability and how that influences internal decision-making. This firm was owned by a private equity investment company, which traditionally buys firms to grow and sell after several years. This SME executive had to consider the importance of sustainability to potential future buyers of the company and financial stakeholders, "The number of people that bring up ESG you know, during the pitch and their new goals once at our size, I think we get a hall pass today for the lack of ESG initiatives. I don't think that will be the case three to five years from now." This is a great example of an indirect coercive pressure for sustainability. There was no pressure directed at this firm, but the SME executive is making decisions based on the perceived pressure and importance to a future private equity sale.

Despite the overt messaging from financial markets about sustainability, SME executives and employees are questioning the informal coercive pressures and mixed messaging that are inconsistent with the behaviors of the sources of these pressures. One COO commented,

> Something we should be factoring in is the impact a lot of these NGOs have…part of this greening is the absolute abject cynicism there is when your companies or people are being Twittered to death and you got people commuting to these [sustainability] forums in private jets...there's a lot of skepticism out there as to how serious these problems are when leadership from both influence peddlers and senior government officials doesn't reflect the sense of urgency in their own personal lives. (COO, health and wellness firm)

Like the coercive pressure from large brand name customers, this informal coercive pressure from non-governmental organizations puts SME executives into a position where they need to signal sustainability without a direct benefit from the investment in sustainability initiatives. None of the interviewed SME executives mentioned that engaging in sustainability initiatives opened new lines of credit or financial instruments not previously available to them. Rather, SMEs now faced additional requirements and expectations to engage in sustainability initiatives regardless of the burden this created on their firms.

As SMEs navigate these sustainability investment choices, they are also forced to deal with mimetic isomorphic pressures about external messaging on sustainability and perceptions of greenwashing. *Greenwashing* is the practice of public disinformation to enhance a firm's environmentally friendly image. This seemingly simple description is not so simple to ascertain in practice. The COO of a plastics manufacturing SME was forced to explain to customers why they are not following a competitor's recycled plastics program, which turned out to be a greenwashing campaign but still required a competitive response. This competitor launched an initiative to collect used toothbrushes and recycle them to create new plastic toothbrushes. However, it turns out the competitor was only recycling one to two percent of the discarded toothbrushes, "just enough to be able to say it on their corporate sustainability page" (COO, plastics manufacturing firm). The interviewed SME had to explain to their own customers why their competitor's message was inaccurate without sounding like they are anti-sustainability or just denigrating their competitor. Without transparency and commonly accepted standards, the coercive and mimetic pressures for sustainability may create incentives for greenwashing or push some firms away from engaging in meaningful sustainability initiatives.

Other sustainability initiatives are more complicated because they require continued involvement over a longer period. A food manufacturing SME executive described a project that started off as a genuine sustainability initiative but may have turned into a greenwashing campaign and a detriment to the local community:

> A hospital was built near a village, to provide you know services for the entire village [as part of a secure crop supply program]…If investments like this aren't maintained and monitored and audited, they can sometimes fall by the wayside and corruption can take place. If the subsidizing of, you know, these buildings or of the people who are in service in those buildings is not truly transparent then these types of sustainability projects or well-intended gifts to a community in order to provide that cooperation and build trust they can basically, work in the inverse and show that there was not enough follow through. And what was once considered a great idea has only led to corruption and detriment.

This project started off as a well-intentioned sustainability initiative to ensure the firm had a secure supply chain of specific crops growing in a remote area without adequate infrastructure.

The firm used the sustainability investments into this village for both supply security and for messaging their activities to customers. However, after several years the program was no longer sustainable, but the firm continued to market its sustainability efforts in that village. While some competitors or customers may perceive this as greenwashing, this is not necessarily an obvious or accurate description of this kind of sustainability initiative.

This begs the question if all perceived greenwashing is nefarious or deliberate. Firms who are reacting to mimetic competitive pressures may be simply choosing to go after the low-hanging fruit opportunities first that require the least amount of resources to get the biggest return on investment, which includes advertising and customer capture. These firms could be facing the pressure to be sustainable without customers willing to pay the premium for the requisite investments. One participant expanded on this thought,

> The majority of the consumers in America are still quite sensitive to pricing itself so if you can buy let's say a chair that is $50 extra because it's much more recyclable...The consumer might not be willing to pay for that $50 premium despite [it being] eco-friendly because it doesn't bring them benefits with the extra spent dollars, that they have to shave off from their pocket. (COO, furniture firm)

If competitors start selling products marked as sustainable and taking market share, mimetic pressure may push SMEs towards greenwashing to execute the bare minimum sustainability initiatives required to signal to their external stakeholders and customers without incurring the full cost and reducing profits.

Similarly, some SMEs operate in industries that are inherently less sustainable and must find the best solutions with what they have available to pursue sustainability initiatives. One participant, a head of product development at an e-commerce consumer packaged goods firm, mentioned,

> If we were to objectively look at what kind of ecological footprint the e-commerce industry has, in general, we have a lot of violation to make up for...a few items and giant

> boxes or sending out multiple shipments wouldn't be as efficient as if somebody went to a Target store...but the ecommerce industry as a whole doesn't have a very clean nose with respect to its footprint.

For SMEs operating in these industries, the executives are facing isomorphic pressures in addition to business and technical pressures that constrain how they can pursue sustainability initiatives. Nonetheless, this SME hired product development engineers who could incorporate sustainability into product design while simultaneously minimizing costs and meeting customer expectations. Despite the structural industry challenges of e-commerce regarding sustainability, this SME was able to make an impact and engage in sustainability initiatives to the best of its ability instead of greenwashing its image because executives made a choice to prioritize sustainability as a strategy.

**Individual Level Agency Pressures for Sustainability**

While some sustainability initiatives can create mutually beneficial results for SMEs and external stakeholders, SME executives often face hard choices between the requirements of large brand customers and profitability. Although large brand customers require their SME suppliers to focus on sustainability, they are not necessarily willing to pay for the additional investments SMEs must make to meet those sustainability goals. One participant said,

> We've had a couple of customers ask us if they have an expectation of us being [carbon] net neutral, and if I went to them and said ‘hey you can pay $1 for this part now, but you can pay $1.05 tomorrow and it'll be carbon neutral’ I don't see any customers willing to, I would be shocked. (President, automotive components firm)

As these large brand customers push their own sustainability initiatives upstream through their supply chain without financially supporting it, they create a lot of tension within SMEs between responding to the coercive pressures and agency interests of executives and shareholders.

Consequently, SME executives must manage the dissonance between the coercive pressures to invest in sustainability initiatives that help their large brand customers achieve their goals and the financial burden of investing in those initiatives. This is a tough position for SME executives to decide how to balance the customer needs, and threats to their business, with the financial agency requirements to their shareholders' profits and personal incentives for compensation. A SME executive in the packaging distribution industry explained that sustainability is not always technically or financially feasible: "Some of the stuff that we make and sell is so effective and cost-driven that it's hard to replace it with something that's sustainable or green just because it doesn't function as well and the cost impact is so big." This SME had to manage customer expectations and pressures for sustainability with the economic impact their firm would incur to meet those expectations. While some large customers understand this paradox, others may threaten to move their business elsewhere and force SME executives to make difficult tradeoffs between agency and isomorphic pressures. This may even incentivize SMEs to remain in the left half of the sustainability spectrum or potentially engage in greenwashing to signal sustainability activities to appease the isomorphic pressures.

Theories such as creating shared value (Porter & Kramer, 2006, 2011) or practitioner metrics like the balanced scorecard or triple-bottom-line (Elkington, 1997) suggest that firms can balance profits with the needs of other stakeholders. But this is not the reality of choices SME executives face. This was evident as several SME executives described the competing pressures to balance return on investment (ROI) with sustainability initiatives, even those driven by coercive pressures from large customers. One participant explained,

> ROI is going to be first across the board. If I can make the case that meeting any particular sustainability goals, whether it be the company's or mine or my team's, if I can make the case it will increase the ROI then all the better. Ideally these numbers don't compete with themselves, but just flat-out dollars ROI is always going to win. (Head of product innovation, kitchen appliances firm)

SMEs still look at how to remain profitable and competitive, which weighs heavily on traditional financial business measurements like ROI and profitability. While a sustainability investment can be profitable or make long-term strategic sense, SME executives also must consider the opportunity costs of other non-sustainability investments with quicker and higher returns.

The data also indicate that there is no single answer for the threshold a firm needs to reach to make sustainability investments versus other investments. Each SME needs to evaluate their industry, business strategy, and the cost versus benefit of specific sustainability investments. The COO of a plastics manufacturing firm described the example of the higher costs associated with investing too early in a new more efficient and environmentally friendly manufacturing machine:

> I think, yes, definitely you have this new machine runs better, but obviously new machines that use cleaner technology cost a lot more money, so I think when this technology first came out it used to cost over two times a normal machine. That was a very hard decision for us, so we couldn't adopt it early. However, as the years move on and the price of these technologies comes down it's become a much closer gap. So, I think at some point it could get to like 50% premium, even less than 50% premium, depends on the currency at that time. So it definitely helps us a lot in making the transition into the new equipment, so I think that would be the balance for us—to definitely have to look at the return on investment.

This firm was consciously balancing the isomorphic pressures for sustainability from their customers with the available state of the art technology in their industry and return on capital investment from the new machine. This SME chose to remain in the moderate stage on the sustainability spectrum to manage the tradeoffs between mimetic pressures for sustainability and the financial implications to their business.

In another example, a kitchen appliances SME identified a financially beneficial sustainability opportunity due to a shift in market dynamics. As this SME’s customer demand shifted from retail stores to e-commerce, it exposed an opportunity to re-engineer their product packaging to create logistical efficiencies and cost-savings while reducing waste and transportation emissions:

> It turns out that actually the packaging was designed to have a really big presence on the shelf in American retail stores and they don't need to be nearly that big…we will be able to get more product in every container, we will usually ship 40HC containers and because we hit the volume before the weight so reducing that will have a direct impact on how many containers we need a year. We can bring in more per segment, we can reduce the packaging inside, which ultimately should reduce the waste and we reduce our costs too, so it never hurts.

The risks of these sustainability investments, however, is that they require large amounts of cash and can take many years to payback on the investment. If the sentiment for sustainability is not a long-term trend, firms who proactively over-invest in sustainability may be committing too many resources and exposing themselves to competitors who invest in other initiatives.

**SME Resources for Sustainability**

As SME executives navigate this complex web of institutional isomorphism and agency pressures, they are also forced to react to mimetic pressures from competitors. This includes copying what peers in their industry are doing with sustainability initiatives to capture new or retain existing customers. This is where SME executives can run into a major sticking point of lacking the resources to focus on sustainability opportunities. As one SME executive explained, they did not even have the time to think about potential sustainability opportunities.

> I have to be honest, I don't think that we're trying to right now…I don't have the capacity to think about that stuff [sustainability] because we don't have the time to deal with that. We want to focus on how do we increase the top line and bottom line.
> (COO, furniture firm)

All the interviewed firms discussed resource constraints and the need for dedicated resources to effectively focus on sustainability, including executives having the capacity to consider new responsibilities in addition to their primary role.

The challenge of SMEs lacking dedicated sustainability resources is summarized in Table 4, which shows that four of 19 interviewed firms had a dedicated sustainability manager or team. Moreover, only one firm had a Chief Sustainability Officer role, and that role was being filled by the firm's General Counsel in addition to other executive responsibilities.

**Table 4**

***Dedicated Sustainability Teams and Resources***

| Annual Revenue | Ownership | Firm Industry | Sustainability manager | Track CO2 emmisions |
|---|---|---|---|---|
| \$100M-\$1B | Individual/Family | Government Contracting | No | No |
| \$10-100M | Individual/Family | Packaging Distributer | No | No |
| \$100M-\$1B | Individual/Family | Government Contracting | No | No |
| \$10-100M | Individual/Family | Automotive Manufacturing | No | No |
| \$100M-\$1B | Private Equity | Beverage Manufacturing | No | No |
| \$100M-\$1B | Individual/Family | Furniture Importer | No | No |
| \$100M-\$1B | Private Equity | Food Manufacturing | No | Yes, for customer/PE owner |
| \$100M-\$1B | Private Equity | Beverage Manufacturing | No | No |
| \$100M-\$1B | Corporate | Kitchen Appliances | No | No |
| \$1B plus | Private Equity | Packaging Distributer | GC is also CSO, no team yet | No, scoping for CDP and Eco Vidas |
| \$100M-\$1B | Individual/Family | Plastics Manufacturing | No, marketing manager responsible | No |
| \$100M-\$1B | Private Equity | Label Manufacturing | No, hiring sustainability manager | No, scoping for CDP and Eco Vidas |
| \$10-100M | Individual/Family | Ecommerce, Consumer Goods | No, hiring sustainability manager | No |
| \$100M-\$1B | Corporate | Food Manufacturing | Yes, parent company | Yes, through 3rd party logistics provider |
| \$100M-\$1B | Individual/Family | Packaging Manufacturing | No | Yes, carbon footprint |
| \$100M-\$1B | Individual/Family | Food Manufacturing | Yes | No |
| \$100M-\$1B | Individual/Family | Food Manufacturing | Yes | No |
| \$1B plus | Private Equity | Health and Wellness | Yes, team of 7 | Yes |
| \$10-100M | Individual/Family | 3PL Warehouse and Distribution | No, part of executive team KPIs | No |

The implication of these resource constraints is that SMEs have limited resources to focus on sustainability, which adds to the tensions SME executives face to balance the external pressures for pursuing sustainability with agency and internal resource constraints. The result is that even SMEs on the right side of the sustainability spectrum can only focus on sustainability initiatives that make the biggest positive impact for their firm. The CEO of a packaging distributor firm commented,"You can boil the ocean or attempt to boil the ocean and get really nothing done and so we've really been trying to focus on, you know what are the two or three things [sustainability initiatives] internally that could make a huge a huge difference." While this SME took pride in integrating sustainability into their business strategy, it had to balance deploying resources towards sustainability with other strategic and operational priorities to create value for their shareholders and external stakeholders. This aligns with research on the positive relationship between slack resources and sustainability in large public firms (Aguinis & Glavas, 2012; Bourgeois, 1981; McWilliams & Siegel, 2000; Waddock & Graves, 1997). SME executives may be left to choose between investing in additional internal resources to focus on sustainability and investing in other capabilities such as product development and innovation.

**Executive Awareness and Perception of Sustainability Initiatives and Processes to Overcome Cognitive Pitfalls**

In addition to external isomorphic pressures, individual agency pressures, and organizational resource constraints, SME executives' sustainability decision-making is influenced by awareness and perceptions of sustainability initiatives. The data showed that SMEs on the left side of the sustainability spectrum can engage in more sustainability after changes in ownership or executive leadership. Changes in ownership occur when family businesses are sold to larger firms and private equity or through acquisitions of other firms who have more established sustainability practices. SME executives at one firm changed their attitudes and perceptions of sustainability opportunities after a board member and investor educated them about an easy-to-use third-party reporting tool. The Regional VP of Sales of Marketing of a label manufacturing firm explained, "We found out about it [CDP sustainability reporting platform] through a board meeting with one of our prior investors and our current financial owner." Although executives at this firm were aware of the importance of sustainability reporting in their industry for large customers, they thought it would require dedicating a lot of resources until they learned about the CDP data collection and reporting tool that requires minimal internal resources.

SME executive awareness and perceptions of sustainability can also be a powerful tool to gain a competitive advantage. Several of the SMEs on the fully integrated end of the sustainability spectrum embraced sustainability into their corporate DNA and used it as a competitive advantage in their industries to capture customers, increase profitability, attract talent, and ensure their own long-term survival by creating sustainable supply chains. In one example, a large firm purchased a SME and retained the owner as a key executive in the COO role to incorporate their sustainability focus into the larger culture. This COO said,

> Sustainability is not only in the aggregate of the product, but it's also in the people...And we work very hard to make sure that we educate all of our collectors [aggregators of crops from small farmers who sell to this firm] worldwide, and now we are with over a quarter million people are involved on a yearly basis and bring a product to market for us, so we want to make sure that they understand that they're important that we can sustain them.

The owners of the acquiring firm understood the importance of the pro-sustainability culture and were able to effectively incorporate the SME's culture of sustainability as a competitive advantage to create value for the larger organization. This is not surprising given the literature on the benefits of strategic sustainability (Ioannou & Serafeim, 2019; Inigo et al., 2017; Porter, 1996; Whelan & Fink, 2016), creating shared value (Porter & Kramer, 2006, 2011), and financial benefits of sustainability (Aguinis & Glavas, 2012; Burnett et al., 2011; Jacobs et al., 2016; McAfee, 2019).

Similarly, SME owner and executives can change their perceptions of sustainability as new executives join from large public firms who had robust sustainability programs. These change agents have spent time at large firms that had extensive sustainability initiatives and ESG practices. Eleven of 19 of the interviewed SME executives previously worked at a large public firm. These executives can bring seemingly simple win-win sustainability initiatives to SMEs that could not have been previously possible. One participant mentioned,

> I think our company was still a little bit behind the times and we're trying to push towards that [with digital signatures and document sharing], right now, where we're not just printing things for the sake of printing them, are generally creating and generating waste for no real gain. (President, automotive components firm)

Although this appears to be a simple solution in the modern digital world, the owners of this SME needed an outside change agent with experience at a public firm and awareness of how sustainability can benefit the firm to initiate the necessary changes.

The change agents can also include younger executives, particularly the next generation in family-owned SMEs, whose values and education emphasized sustainability as a core principle of creating value for shareholders and other stakeholders. The COO of a SME plastics manufacturing firm was keenly aware of this dichotomy between their personal beliefs in sustainability and the preconceived notions around plastics being incompatible with sustainability:

> For me personally being the second generation…I've always [thought] about sustainability, especially with plastics… I remember when I was doing my MBA [at] Berkeley one of the first speeches I gave was trying to explain to people that you know plastic, if used correctly and collected correctly it's not as harmful to the environment and actually might be helpful for environment…I'm even more aware of this issue, especially when there's a lot of negative publicity in the press about our industry.

It was evident from this interview that sustainability is an important concern for this second-generation SME executive, and they were looking for possible ways to incorporate sustainability into what many consider a non-sustainable industry of plastics manufacturing. Age and institutional education appear to have a major impact on how the normative pressure for sustainability influenced this SME executive and, in turn, the culture and focus of the firm. This is a good example of the translation of isomorphic pressures (Haedicke, 2012) and embedded agency (Cardinale, 2018) at the individual micro-level of sustainability initiatives.

Conversely, SMEs looking to move from the left to the right side of side the sustainability spectrum must overcome the perceptions of owners and executives that sustainability is incompatible with profitability. One SME executive, a COO of a furniture firm, described how older private owners of the firm were only looking at their firm through the profit lens and were not aware of how sustainability initiatives could create value for them:

> I think that our leadership doesn't really think about that tool [sustainability] strongly. The leadership it's a much more elderly gentleman, they come from old school thinking, though, so company our size with this mentality it's very difficult to say that hey something that's ecofriendly is the way to go.

There appears to be a generational gap between the contemporary focus on sustainability through normative pressures and the traditional focus on shareholder financial returns. This legacy stems from Friedman's (1970) arguments that the purpose of a firm is only to create shareholder value through profits. Ironically, this may be restricting SMEs' ability to maximize profits and create long-term shareholder value by adapting to isomorphic pressures in a rapidly shifting economy and society.

In addition to awareness and existing perceptions of sustainability, SME owners and executives may be prone to other cognitive pitfalls when evaluating sustainability initiatives. Research from behavioral economics posits that individuals are less likely to look at alternative ways of doing things, such as looking at new opportunities through sustainability initiatives, due to the status quo bias, availability bias, bounded rationality, and risk aversion (Bazerman & Hoffman, 2000; Handel & Schwartzstein, 2018; Simon, 1955; Tversky & Kahneman, 1974, 1986; Wade-Benzoni et al., 2002). These cognitive pitfalls may prevent SME executives who have an unfavorable view of sustainability from proactively looking for opportunities to create value through sustainability such as acquiring new major brand customers and access to financing partners that require some level of sustainability and ESG focus.

One SME executive described how the owners ignored sustainability due to the status quo bias and risk aversion but are being forced to reconsider in light of coercive pressure from the financial industry:

> Family businesses for years have ignored these initiatives [sustainability], because there was no immediate payback or there's no measurable payback and now they're looking at and saying the banks are saying well you know what maybe there isn't a payback on it, but, but if you want to borrow money from us, you better have something you're doing. (President, automotive components firm)

The owners brought in the new president from a large company to institute changes, including more focus on sustainability opportunities. However, the owners may have missed previous opportunities to benefit from sustainability initiatives because of these cognitive pitfalls.

Another SME executive from the government contracting industry discussed a sense of futility in the industry to consider sustainability: "[Our customers are in] Defense contracting and they are the polluters of the world, sustainability is not something they think about." This executive and others in similar positions are less likely to spend the time and resources to pursue or even consider sustainability initiatives because of the status quo bias and risk aversion. One explanation for this cognitive pitfall is that executives might believe the fixed-pie assumption of environmental-economic tradeoffs (Bazerman & Hoffman, 2000). If SME executives believe they must make economic trade-offs to pursue sustainability initiatives, instead of creating win-win opportunities, they may have to overcome risk aversion and other mental biases.

Cognitive pitfalls and biases can also lead SMEs to pursue sustainability decisions for the wrong reasons and without a proper investment analysis. One executive, the COO of a plastics manufacturing firm, described a well-intentioned sustainability investment that did not get properly evaluated from a comprehensive business perspective:

> Solar panel [project] is definitely not as successful as we wanted to be…part of the decision was the managers were very enamored with the idea of it, solar panels. And then

> it's like completely clean energy that they completely forget to dig deeper into the economics on it and a practicality of like the power just needs to be stable. You know, I can't just rely on something that's good for four hours in the afternoon and expect that to run the machines that are supposed to churn our products 24 hours a day.

In this example, the SME managers were overly influenced by the normative pressures and allure for a sustainability investment into solar power which resulted in them skipping a full business analysis and making a less than ideal investment. This can further hurt SMEs by validating existing biases and perceptions owners and executives have against sustainability.

SMEs can overcome the risk of making poor decisions by incorporating sustainability considerations and opportunities into routine business planning and processes. Several of the SMEs on the highly integrated end of the sustainability spectrum incorporated sustainability into their routine business planning processes. One example comes from a family-owned warehouse and logistics SME. The owner and president incorporated their personal desire to be more sustainable into the firm's business strategy and operations to generate new ideas and ensure sustainability initiatives were effective:

> I have a great team that I'm extremely proud of, the team of about five key people who work hand in hand with me, and these are the people that help run the operation and we collectively come up with ideas [including sustainability initiatives] in our quarterly meetings. And we always make it a point that you know next meeting, three months from now, we gotta do something different, we got to be proactive, we got to be the best and that's something that we continue to do and I'm very proud of my team.

By incorporating sustainability into their quarterly review process, this SME ensures that they are tracking performance of initiatives to maintain what works and explore new opportunities.

Another SME adopted an industry third-party tool, Eco Vadis, for tracking and reporting sustainability initiatives to ensure business managers were sharing accurate and consistent information with the owners and firm stakeholders:

> It [Eco Vadis] gives us a ton of kind of dashboards and reports around performance and tracking. And it ensures that I can get the information in a way where we can report the

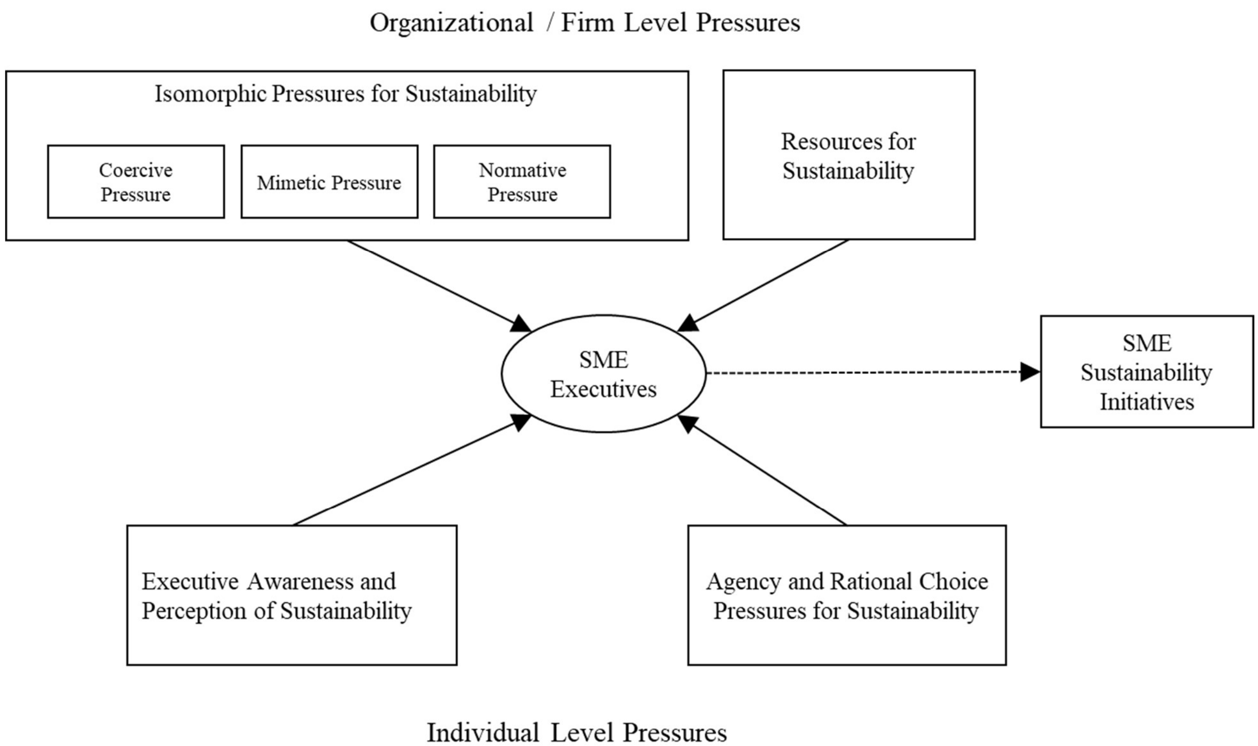
> outcome back to our relevant stakeholders, and I don't have to then train 20 different people in accounting on how to load the data into a process and system. So, it's basically all automated. (Regional VP sales and marketing, label manufacturing firm)

Using a reputable third-party tool like Eco Vadis can help SMEs organize and track their sustainability initiatives as well as communicate reports to their stakeholders as part of their routine business processes. When SMEs adopt sustainability into their existing business processes and practices, it becomes what Powell and Colyvas (2008) call habitual action which helps to translate the normative pressures into organizational action. My research suggests that the SMEs on the moderate to fully integrated half of the sustainability spectrum successfully engaged in habitual action by translating the isomorphic pressures for sustainability into continuous and deliberate organizational action.

The findings from my study suggest an emergent model around the interactions of organizational isomorphic pressures for sustainability, individual agency pressures on SME executives, resource constraints, and executive awareness and perception of sustainability that can create cognitive pitfalls. Figure 2 shows the visual representation of this model and the struggle between the various influences on SME executives responsible for making sustainability investment decisions.

**Figure 2**

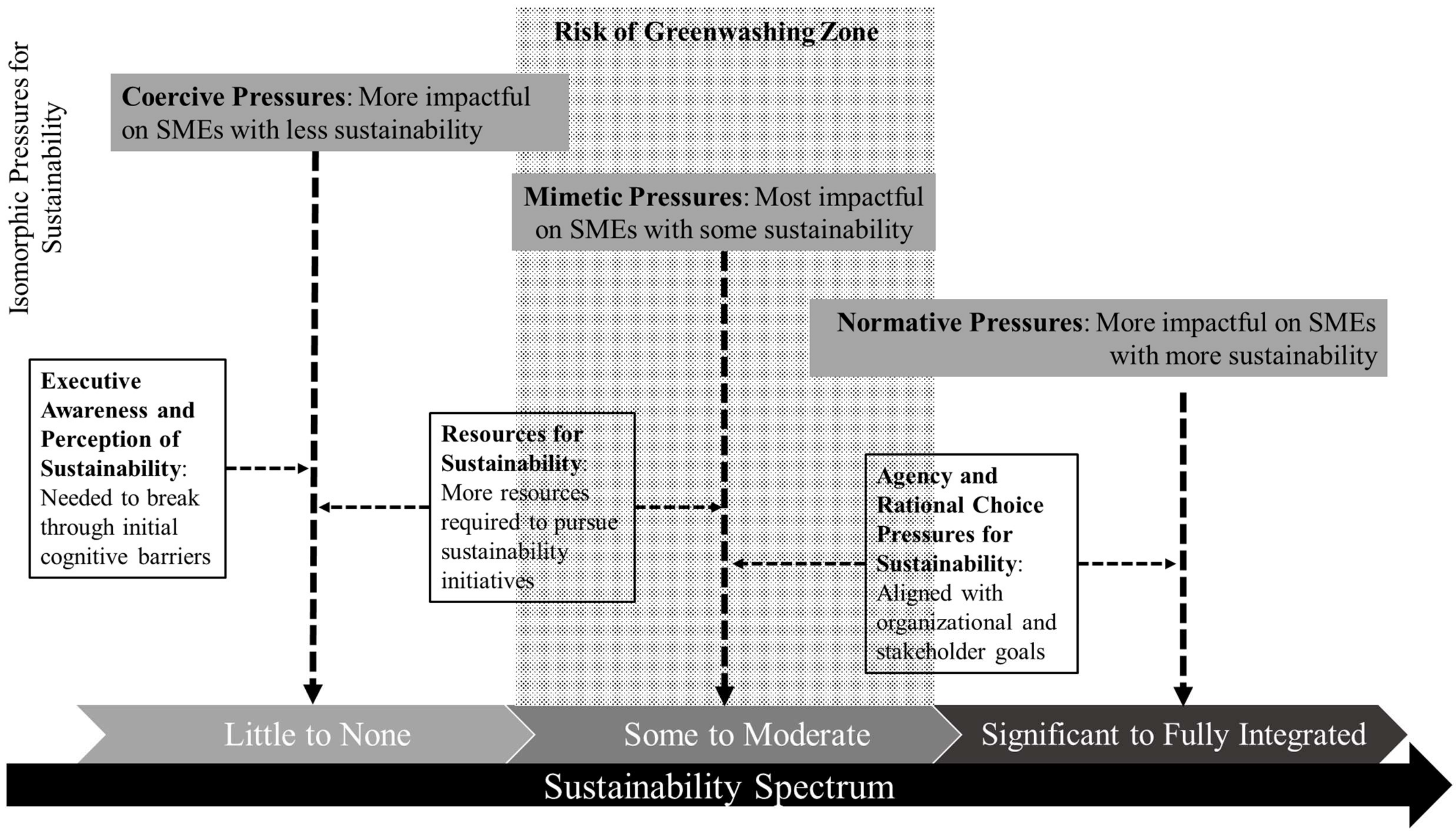
***Emergent Model of SME Sustainability Investments***




There is an additional level of insight to consider by combining the proposed SME investment sustainability model from Figure 2 with the location of a SME on the sustainability spectrum in Figure 1. SMEs at different points on the sustainability integration spectrum are affected differently by the various organizational and individual level pressures for sustainability. These relationships are visually shown in Figure 3 and can provide a theoretical springboard for the future development of formal propositions and empirical testing of these relationships.

**Figure 3**

***Proposed SME Sustainability Spectrum-Pressures Model***



Firms in the little to none area of the spectrum have the least amount of organizational resources dedicated to sustainability and the greatest cognitive barriers to overcome. They likely have the lowest alignment of executive incentives with sustainability goals and a traditional compensation model tied to financial goals, such as EBITDA, revenue, and net profit. For SMEs on this end of the spectrum, normative pressures from stakeholders and mimetic pressures from competitors are less likely to influence executives to pursue sustainability investments. It is more likely that coercive pressures from regulators, large customers, or consumers are necessary for these SMEs to start considering how to integrate sustainability into their organization. The impact of coercive pressures for SMEs on this end of the spectrum is moderated by SME executives' awareness and perceptions of sustainability as well as the availability of resources, including executive bandwidth, to deploy towards sustainability initiatives.

Conversely, firms on the other end of the spectrum who have high integration of sustainability no longer need coercive pressures to start considering how to pursue sustainability initiatives. These firms are more sensitive to changing mimetic and normative pressures from their stakeholders and would proactively act to best position their firms to create value within the context of those isomorphic pressures. These SMEs are also more likely to have aligned executive incentives to focus on sustainability initiatives, dedicated resources for sustainability, and less barriers to overcome from negative perceptions of sustainability. The alignment of agency pressures with firm strategic goals for sustainability likely has a moderating effect on the influence of normative pressures on SME executives in how they pursue sustainability initiatives. Moreover, executives at these SMEs need to ensure they have robust organizational processes to evaluate and review sustainability initiatives, so they do not overinvest or pursue initiatives at a detriment to other strategic businesses priorities such as innovation.

Lastly, SMEs in the middle of the sustainability spectrum must balance all the organizational and individual level pressures to transition to the high end of the spectrum without falling victim to greenwashing. These SMEs have started to commit resources to sustainability and are aware of the potential value-creation through sustainability. However, they may not have agency self-interests of executives aligned with those of other stakeholders. These SMEs are also influenced by all three isomorphic pressures including coercive pressures from key customers and financial institutions, normative pressures from shareholders and consumers, and mimetic pressures from competitors who have embraced sustainability or may be greenwashing to gain market share. The convergence of these forces can create the perfect storm for a SME to find ways to adopt sustainability as a competitive advantage and move into the high end of the sustainability spectrum or pursue a greenwashing strategy. Although greenwashing has negative outcomes for societal stakeholders, it enables firms to appease isomorphic pressures without fully dedicating organizational resources or risking agency incentives for key executives. The impact of isomorphic pressures on SMEs in this part of the sustainability spectrum are also moderated by the availability of organizational resources to deploy towards sustainability, executive perceptions of sustainability, and agency pressures on executives and managers.

# CHAPTER 5: DISCUSSION

## Overview

The study began with a premise that SMEs face different unique challenges from large public firms in how they evaluate and make decisions to pursue sustainability initiatives. This is an important topic to address because SMEs comprise the majority of U.S. firms and must be a part of the solution if for-profit firms are going to make a meaningful impact on combatting climate change. By using an exploratory qualitative research design, I was able to get insight directly from SME executives from multiple industries on how they view sustainability, deal with various pressures for and against pursuing sustainability initiatives, and the unique challenges they face compared to large public firms. The study was able to answer the initial research questions and provide valuable new insight for theory-building and business practices.

The study findings indicate that there is a spectrum on how SME executives evaluate and make decisions for sustainability initiatives and investments. On one end of the spectrum, SMEs do not have the processes or resources, including executives' time and attention, to consider how to incorporate sustainability into their business. On the other end of the spectrum, SMEs have fully integrated sustainability into their operational and strategic planning processes, track metrics and evaluate the effectiveness of sustainability initiatives, and use sustainability as a competitive advantage to create shareholder value for their business. There is also a long continuum between those extremes where SME executives are finding ways to balance other business priorities with finding the time and resources to understand how to integrate sustainability into their business model to create value.

The study also found that institutional isomorphic pressures for sustainability were present and had an influence on SME executives. SMEs faced coercive pressures from government regulations and demands for sustainability from large brand name customers, financial institutions, and investors. SMEs faced normative pressures from investors and new owners during a change in company ownership as well as from changes in executive leadership when new executives joined from larger firms or were a younger generation in family-owned firms with a concern for sustainability. Mimetic pressures for sustainability from competitors also influenced SME executives. However, these pressures can also create an incentive for corporate greenwashing and disingenuous sustainability practices. This kind of pressure for corporate greenwashing has been postulated in large public firms by Reich (2007) and deserves a closer examination within SMEs. Although the influence of isomorphic pressures for sustainability was evident from all the interviewed SME executives, it was also apparently clear that isomorphic pressures by themselves do not force SME executives into decisions to pursue sustainability initiatives.

In addition to isomorphic pressures, SME executives in the study were also reacting to individual agency pressures, organizational resource constraints, and perceptions of sustainability initiatives. SME executives were keenly aware of how sustainability investments could impact their firm's and personal financial self-interests including revenue generation, profitability, and maintaining or growing market share. The interviewed SMEs had serious resource constraints, including key executives not having the capacity to think about how to integrate sustainability into their business practices. This is supported by previous literature on the differences between SMEs and large firms, who have more slack resources and ability to acquire the necessary knowledge to evaluate and implement sustainability initiatives (Hörisch et al., 2015). SME executives were also influenced by their awareness and perceptions of sustainability initiatives in their industry, which impacted how the SMEs chose to pursue or ignore sustainability initiatives since executives at these firms have more autonomy to make decisions than executives in large public firms with independent board oversight. Yet, this may cause some SMEs to miss opportunities to evaluate and pursue financially beneficial sustainability initiatives. Two potential solutions to overcome these cognitive pitfalls evident in SMEs on the fully integrated side of the sustainability spectrum were a deliberate organizational process to evaluate sustainability initiatives and using trusted industry third-party sustainability tracking and reporting firms.

**Implications for Advancing Theory**

The study has several valuable contributions to theory advancement. First, the general findings suggest that SMEs do face isomorphic institutional pressures to pursue sustainability initiatives. However, these pressures by themselves are not significant enough for SMEs to pursue sustainability initiatives if they are not aligned with the financial or strategic business goals. This is in line with Heugens and Lander's (2009) findings that isomorphic pressures account for a small percentage of variance in firm behaviors. However, the study findings contrast with Heugens and Lander (2009) on the importance of isomorphism on symbolic performance, which by itself was not valuable to the interviewed SME executives unless it led to tangible business results.

The study findings show that SME executives face a complex set of decisions related to sustainability initiatives. This supports Powell and Colyvas's (2008) argument that corporate executives are neither cultural dopes nor heroic agents. Nonetheless, SME executives must manage the influence of competing isomorphic and agency pressures. This was called out as an important area for research to focus on by Schilke (2018) because executives often face normative ambiguities to balance the demands of various stakeholders including their own self-interests. This may be even more prominent in SMEs than large public firms because SME senior executives and owners have much more autonomy to make decisions on behalf of their business without independent board or shareholder oversight (Hörisch et al., 2015).

The study also adds new theoretic findings to how SMEs evaluate and pursue sustainability initiatives. SMEs face unique challenges related to limited resources, which constrains how they can pursue sustainability initiatives. Previous research on this topic focused on the role of slack resources as a moderating factor between firm CSR and financial performance (Aguinis & Glavas, 2012; Bourgeois, 1981; McWilliams & Siegel, 2000; Waddock & Graves, 1997). Additionally, prior research comparing sustainability adopting in SMEs and large firms found that "large enterprises have entire departments and multiple managers dedicated to sustainability management, while most SMEs dedicate one manager already wearing multiple hats to sustainability tasks" (Hörisch et al., 2015, p. 774). My research suggests that a key resource is sufficient management bandwidth or attention for SMEs to focus on sustainability initiatives. SMEs do not have sufficient resources including executives who can focus solely on sustainability, and this can create barriers to entry for those SMEs to even begin to evaluate how to integrate sustainability into their business decision-making processes.

Furthermore, because SME executives have more influence on the decision-making process at their firms than in large public firms with independent board oversight, the awareness and perceptions SME executives have of sustainability initiatives can have a more dramatic impact. If SME executives do not believe that sustainability initiatives can create value in their industries, they are less willing to entertain learning about these opportunities or dedicating resources to them. Conversely, SME executives who believe that sustainability can create a competitive advantage may shift all their firm's resources to integrate sustainability into the firm processes and operations. Since SME executives, like other individuals, are prone to cognitive pitfalls including the status quo bias and risk aversion, they may expose SMEs to more irrational choices than larger firms related to sustainability initiatives.

Finally, this study developed a novel theoretical model that describes the organizational and individual level pressures SMEs face in pursuing sustainability initiatives and the different stages of sustainability integration. At the organizational level, SMEs are influenced by isomorphic coercive, normative, and mimetic pressures and face significant resource constraints for pursuing sustainability. At the individual level, SME executives are prone to agency self-interest pressures and cognitive barriers including awareness and perceptions of sustainability, status quo bias, and risk aversion. Moreover, these organizational and individual pressures influence SMEs in different ways depending on the SME's level of sustainability integration. Figure 3 shows this proposed interactive model between a SME's position along the sustainability spectrum and the pressures for sustainability. The model also highlights that SMEs in the middle of the sustainability spectrum are susceptible to greenwashing as a strategy to mitigate coercive and mimetic pressures without committing resources or sacrificing agency self-interests as an alternative to investing to genuine sustainability initiatives.

The proposed SME Sustainability Spectrum-Pressures Model can be used to develop several formal propositions which can be tested with future empirical research.

- P1: Coercive isomorphic pressures are positively related to SMEs transitioning from the little/none to some/moderate category on the sustainability spectrum.
- P2: Normative and mimetic isomorphic pressures are insufficient for SMEs to transition from the little/none to some/moderate category on the sustainability spectrum.

- P3: The combination of normative isomorphic pressures with coercive and/or mimetic pressures are positively related to SMEs transitioning to the moderate and significant categories on the sustainability spectrum.
- P4: The combination of coercive and mimetic isomorphic pressures and a lack of dedicated sustainability resources and agency alignment of incentives are positively related with greenwashing or sustainability initiatives primarily used for external signaling.
- P5: Executive awareness and positive perceptions of sustainability is positively related to SMEs transitioning from little/none to some/moderate category on the sustainability spectrum.
- P6: Executive awareness and positive perceptions of sustainability moderates P1 (effect of coercive pressure)
- P7: Resources for sustainability moderate P1 (positive effect of coercive pressure)
- P8: Resources for sustainability moderate P3 (positive effect of normative and coercive/mimetic pressures)
- P9: Agency alignment moderates P3 (positive effect of normative and coercive/mimetic pressures)

**Implications for Business Practice**

The findings from this research have important implications for SME executives and owners, large public firms who work with SMEs, government officials and NGOs working on sustainability policies, and financial institutions with sustainability and ESG investment goals. SME executives and owners can benefit from this research by understanding the potential pitfalls and opportunities for how integrating sustainability initiatives into their business models can help them grow and improve. The SMEs in my research who were most successful at integrating sustainability into their businesses had several best practices that can benefit other firms.

The first group of best practices focuses on people within SMEs. An organizational focus on sustainability needs to be championed from the top by owners and senior executives. SMEs need a senior executive who can influence strategic business decisions to spend enough time learning about opportunities and benefits of integrating sustainability into the business. This means that a SME senior executive needs to appreciate the role of sustainability as a strategic priority and believe that it can help drive value-creation for the business. If the SME does not have an active owner or executive with this mindset, it can bring in new talent. SMEs in my study were able to bring in an executive change agent by hiring from a large firm, promoting a younger generation in a family business into a senior executive role, and through acquisitions by keeping a sustainability-oriented executive in a senior role post-acquisition.

The second group of best practices focuses on organizational processes within SMEs. SMEs who successfully integrated sustainability in my study had a deliberate process to evaluate and review sustainability initiatives. They also integrated sustainability into the routine operational and strategic organizational processes to ensure key executives, managers, and employees were involved with sustainability in the same way as with other business priorities. This also ensured SMEs did not get enamored with sustainability initiatives that were not the best investment for their business. Lastly, SMEs used third-party vendors to accurately capture and review data to make decisions without tying-up internal resources.

The third group of best practices focuses on SME business strategy and value-creation. SMEs with high sustainability practices looked at sustainability as a part of their overall business strategy and value-creation levers. These firms pursued sustainability initiatives that were the right thing for the business and not just something to use for external signaling or greenwashing. These SMEs also understood that they can be competitive in their industry and sustainable at the same time, and in some cases, they could use sustainability to create a strategic differentiation in their industry. This required each SME to understand which kinds of sustainability initiatives were appropriate for their specific industry and business conditions to help create value for the firm. Lastly, these SMEs acknowledged that it is easier and less expensive to build sustainability into products and services from the onset because this can involve large capital investments.

This research is important for large public firms and major brand name firms to understand the challenges faced by SMEs who are suppliers or partners of these large firms. These SMEs are essential partners to help the large firms achieve their own stated sustainability initiatives such as reducing waste and emissions throughout their supply chains. Yet, it appears that the large firms may not understand the impact of the coercive pressures they create by pushing down their own sustainability goals onto their partner SMEs without providing the requisite resources or financial motivations to justify investments into sustainability initiatives by SMEs. This can easily lead to SMEs engaging in a greenwashing strategy, which is counterproductive to meeting the intent of the large public firms' sustainability goals. If SMEs perceive both coercive customer pressure and competitor mimetic pressures for greenwashing, they may be forced to do the bare minimum sustainability initiatives that can be marketed to appease the pressure rather than focusing on meaningful and lasting sustainability initiatives.

One potential solution to mitigate the risk of greenwashing is to increase the use of third-party sustainability administrators to add transparency and legitimacy across the supply chains. This was mentioned by several SME executives who use well respected sustainability monitoring services in their industries. There is evidence that smart supply chains that leverage sensor technology can create more efficient and transparent supply chains for consumers (Gunner, 2019), which helps create long term-value for shareholders and external stakeholders. Moreover, these kinds of services can also standardize and simplify how SMEs track and visualize the complex data from their sustainability programs, which can also minimize the necessary resources for SMEs to engage in sustainability initiatives.

The research further supports the need to study the micro-foundations of sustainability in addition to looking at the firm level of decision making. SME firms are not just institutional actors; they have individual executives who are integral to evaluating and investing in sustainability initiatives. The findings reinforce the need to evaluate SMEs differently than large public firms because of the differences in resource availability and greater influence on decision-making by top executives. It is my hope that the findings from this research can help SME firms and their stakeholders better understand how to proactively reduce the impact of climate change through effective sustainability initiatives and avert the pending climate catastrophe.

**Limitations**

As with all empirical research, this study had limitations in the methodological procedures and sampling. The research was conducted during the COVID-19 pandemic, which restricted data collection to video conferencing interviews. This prevented the collection of other rich data that would be available from in-person, on site interviews at the SMEs (e.g., field observations). The data collection was also static and performed through a single round of interviews. A longitudinal study may uncover insights such as how SMEs react to changes in isomorphic pressures. Several of the SME executives noted that the coercive pressures from customers and normative pressures from financial institutions were recent occurrences in the past couple of years. It would be interesting to explore how those pressures change over time and how the SME executives react to those changes.

The research was also limited in the data sample. Access to SME executives for research can be extremely challenging, and I used a purposeful sampling methodology to gain access to a sufficient sample to reach data saturation using my professional network of fellow SME executives. This restricted the sample to SMEs from available industries and not a representative sample of all SMEs. According to the SBA (2021), women make up 47.5% of employees and 43.1% of owners, and racial minorities make up 24.8% of employees and 19.0% of owners of U.S. SMEs. The research sample had only 10% women and 16% racial minority interviewees. This may skew the data and not be representative of the broader population. It also interesting that the SBA (2021) census found only 2% of all U.S. SMEs had 20 or more employees, and all the interviewed SMEs in this study had over 20 employees. Thus, the general demographic trends may not necessarily be applicable to this subset of SMEs. Additionally, there is a larger distribution of industries in services and real estate rentals in the general population than in the study sample (SBA, 2021). The study participants were primarily manufacturing firms due to the available access, and this subset represents 2% of all SME industry sectors. Thus, the results are not generalizable to the entire population of all SMEs and SME executives.

## Recommendations for Future Research

Future qualitative studies can build upon this research by including a larger sample of SMEs from a wider selection of industries and with more representative demographics of the population to address the limitations of this study. Future research could also include longitudinal data collection to observe how SMEs react to changes in isomorphic pressures over time as well as how changes in executive leadership or ownership impact SME sustainability initiatives. Future research can also include large public firms to compare the differences between the isomorphic pressures and decision making related to sustainability with SMEs. Part of the difference between executives in SMEs and large public firms is the level of autonomy and influence within the firm. The former may have more autonomy and influence than their peers at large firms with more robust governance practices and independent board oversight. In addition to expanding the demographic pool of interviewees, it would be beneficial to explore differences in views and decision-making between individuals who SME employees versus executives, middle managers versus C-suite executives, and executives who are only employees versus owner-executives.

Future qualitative research can also further explore the SME sustainability spectrum. This includes important questions such as:

- How difficult is it to move between the categories on the spectrum?
- Is it more difficult to move from little to none category to the moderate or from the moderate to the significant category?
- What are the greatest barriers to initiate sustainability initiatives and transition from the little to none into the some to moderate category of the spectrum?
- Can firms regress backwards from doing more to doing less sustainability initiatives?

All of these additional research questions would provide valuable context and insight into understanding the SME sustainability spectrum identified by this research study.

In addition to qualitative research, future mixed-methods and quantitative research can empirically test the proposed theoretical model for SME sustainability decision-making from this study. The model in Figure 3 proposes organizational and individual level pressures for sustainability on SMEs and SME executives as well as different conditions for how these pressures manifest at different stages of the sustainability integration spectrum. This could include multi-level research to empirically test how the micro-level individual processes interact with isomorphic organizational level pressures and under different sustainability integration conditions. This would directly address the call for research into the mediating roles of micro-processes on organizational routines and rules by Powell and Colyvas (2008). Although institutional and societal isomorphic pressures target SME firms, it is the individual executives within those firms who must navigate the complexities of competing stakeholder demands and make decisions on how to act. Moreover, future research needs to investigate how the interaction of organizational isomorphic pressures, resource constraints, and individual agency pressures can create the conditions for greenwashing for SMEs who are considering investing more into sustainability initiatives. There is too much at stake with the pending climate catastrophe to ignore the risks of firms taking shortcuts through greenwashing instead of pursuing meaningful sustainability initiatives that can create long-term shareholder value while benefiting other societal stakeholders.

Additionally, future research can test the propositions from the SME Sustainability Spectrum-Pressures Model through decision-making experiments using scenario vignettes. The experimental vignette scenario design is a well-established experimental methodology for individual-level sustainability behavioral research (Berens et al., 2007; Rungtusanatham et al., 2011; Rupp et al., 2013; Sen et al., 2006). The findings from this research can be used to create the experimental scenario vignettes to provide real-world based scenarios for the pressures and complexity of decisions SME executives face when evaluating sustainability initiatives and investments. This methodology can help test the propositions from the SME Sustainability

Spectrum-Pressures Model including testing the barriers to SMEs engaging in sustainability and transitioning out of the little to none category on the sustainability integration spectrum.

Finally, future research can test if there are any potential differences in how different groups of decision-makers within SMEs look at environmental sustainability initiatives. Agency incentives are different for individuals who are employees versus owners as well as for different levels of management within SMEs, which may influence how these individuals interpret and react to institutional and agency pressures. Adding this variable into an experimental vignette study or another quantitative study can test the differences in decision-making between SME executive employees versus executives who are also owners, C-suite executives versus middle management, and executives or management versus non-executive employees.

**Conclusion**

This research study focused on the important topic of exploring how SMEs evaluate and pursue sustainability initiatives. As SMEs account for over 99.7% of all U.S. firms (SBA, 2018), it is imperative to understand the unique challenges SMEs face in pursuing sustainability initiatives as part of the corporate efforts to address climate change. The research confirmed that SME executives face some of the same common isomorphic pressures for sustainability as large public firms as well as other unique challenges including agency pressures, resource limitations, and a more disproportionate influence of executive perception of sustainability. The results of this study and proposed theoretical model for SME sustainability investments can guide future theoretical and empirical research, help SME practitioners improve internal processes for evaluating and pursuing sustainability initiatives, and provide insight to government officials and NGOs for improving policies and system tools such as sustainability reporting to enable SMEs to make a greater impact in combatting climate change.

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**TABLES**

**Table 2**

***Data Coding Matrix for SME Sustainability Initiatives (Sample)***

| **Illustrative Quotes** | **Illustrative Quotes** | **Categorical Focused Codes** | **Aggregated Theoretical Dimensions** |
|---|---|---|---|
| "There will be clearly identified expectations from consumers for sustainable solutions and if we can't put ourselves in a position to be supporting our customers who are dealing with consumers in providing that and be knowledgeable and those solutions, then that will become ultimately a threat to our business so there's no option." | "I do think all this stuff is very similar when you talk about sustainability, you talk about other social causes I think they're all how businesses interact are all based upon. How it affects their bottom line, whether it is because they get a bad reputation or whatever." | Consumer pressures | Isomorphic pressures for sustainability |
| "We've had more customer audit requests and again, these are you know very large global CPG companies. As we get pulled into those discussions on the quality side it ends up being a dual discussion of quality and sustainability, and then that's driven those folks to sort of be a little bit on the leading edge internally of identifying opportunities for improvements." | "Big customers--and we have the predictable big customers Walmart, Costco--if it's important to them, then we'll have to make it important to us, otherwise we could lose that business." | Customer pressures | |
| "Being able to define and articulate a sustainable value proposition has value not only to our customers, but also to stakeholders and other people that are interested for instance in investing in our business." | "Family businesses for years have ignored these [sustainability] initiatives because there was no immediate payback or there's no measurable payback, and now they're looking at and saying the banks are saying well you know what maybe there isn't a payback on it, but if you want to borrow money from us, you | Financial industry pressures | |

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| | better have something you're doing." | | |
| "The [sustainability initiatives] wave started in Europe probably 10  to 15 years ago, now it's just now coming more into the US. it's kind of easy for us, since we already had so much data and energy and inertia that as companies here asked about it, we were very well prepared for them, but it's still way behind where Europe is." | "I think, where you can drive productivity and eliminate waste it's an obvious, you can take cost out of the system and that works for both profitability and sustainability. I think, if you have to change what you're doing and how you're packing things there's a clear cost right, we have to change the asset base in the business and have to change what we do that's the that's either managing a risk or addressing an opportunity right, if you think that customers are going to want you to do that and particularly if you think one of your competitors might be able to get in there ahead of you." | Competitive pressure | |
| "Technology will also be a solution to providing more sustainable, you know, options. There are ways that we can produce that are clearly more sustainable and, you know, significantly reduce levels of waste." | "What they [major brand customers] would be asking for is packaging that helps them achieve the goals that they have, you know, put out to the marketplace and social media. So company goals such as, you know, they're committing to having, you know, fully sustainable or recyclable packaging by a certain year. So, you know, a statement such as 'we will provide recyclable or compostable packaging by 2025,' like that would be a common type of | Technological innovations | |

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| | statement. And, you know, so then that drives a lot of R&D activity through their supply chain." | | |
| "Two and a half years ago the state of California initiated a sustainability goal relative to post consumer resin (PCR) that they mandated over five years a certain amount of single use beverage plastic containers contain from a beginning starting point of 15% PCR up to 50% PCR over the next five years...But this piece of legislation, failed to really carve out complexities around other licenses, I mean other resin types, such as HDPE which is ours. HDPE has a very limited supply base for PCR, and it also has a very high cost and there's limited uses for the food packaging industry because of that constraint. So therefore when you start to look at this as an ESG initiative because you're being enforced by a government per se, you start to look at the benefits of compliance versus the penalties...I think it's a good example of how politicians can get involved in setting these mandates without understanding the total impact by all the different fragments of the industry." | "I think companies make very rational decisions around this [sustainability]…. it's got to be driven by one of those two or three things we talked about: a regulation and economic incentive and a customer demand that we might want to create. Any of those things are reasons why we would do it." | Government and regulatory pressures | |
| "Well, financial you know trumps everything, I think in the end." | "You're asking a company--that the rules of a company is to maximize profit--to be okay to be a charitable company itself. And, and I think that will only make sense for [a] | Investor or owner interests | Agency and rational choice pressures for sustainability |

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| | company to do that if they think that you have to pay taxes less and maybe there'll be a strategy that you want to do it, but effectively I don't think so." | | |
| "Scrap recycling is a huge initiative for us because recycling of the scrap is not just a revenue driver, I mean it's a big portion of our businesses." | "When companies look for a source who can provide a sustainable product that has no impact on the environment, we will be ready. Maybe it's not right now, right here today we may or may not reap benefits, but in the future, we hope that is the direction the world takes...We're obviously hoping for an ROI at some point on this, which we think it will be out there and that's in the form of more customers, more volume coming to us with their confidence in our [sustainable products] program." | Revenue growth | |
| "ROI is going to be first across the board. If I can make the case that meeting any particular sustainability goals, whether it be the company's or mine or my team's, if I can make the case [that] it will increase the ROI then all the better. Ideally these numbers don't compete with themselves, but just flat out dollars ROI is always going to win." | "From an environmental sustainability perspective then, you know, we are trying to drive productivity...so if you reduce the number of sites or reduce your length of your journeys to customers by having more places to produce, which is something we've done, then I think that has an environmental impact." | Increasing profits | |

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| “It's like 'oh you save 20 grand,' it's not going to make a [difference] because it wouldn't make me be a hero when I do my year-end evaluation to my boss.” | "I was brought up with very, very little. My mother was in an orphanage when she was a child, so we grew up with very, very limited means. So I’m proud of what we've built as a family, and I think it's our duty to give back where we can and that's one of the things that we always stress upon each other as a group, and you know as our team, and both in my private life and in my business life." | Personal motivation | |
| “Everything we try to do we try to have a dollar payload associated with it, it’s very important to us that we don’t just virtue signal sustainability.” | "I think our success in the market, dominance in the market is a direct reflection of our focus on sustainability." | Branding or company purpose | |
| "You can boil the ocean or attempt to boil the ocean and get really nothing done, and so we've really been trying to focus on, you know, what are the two or three things internally that could make a huge a huge difference. We have historically, right or wrong, looked at those areas of sustainability that would also drive efficiency for the customer and or the company. So as an example light-weighting of our resin. Just redesigning products to have lighter weights, have less usage of resin which has a great sustainability benefit. Enhancing, streamlining, optimizing the transportation network, you know, which obviously reduces carbon footprint, but also drives, you know, operational savings for | "If you're working for a company that largely sells wholesale, they don't really have a way to monetize those investments [in sustainability initiatives] compared to a company with a large marketing department." | Costs versus payoff | Resources for sustainability |

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| ourselves and for customers. And then I think recycling initiatives, where you know there's a sustainability benefit, but there may also be economic benefit. So we've sort of looked at things that had maybe dual benefits as opposed to just a straight 'this is more sustainable'." | | | |
| "A key enabler would be having the resources required to, you know, begin to go down this [sustainability initiatives] road right. Without that resource, everything I just said won't happen." | "Every one of us who does product development at the company knows what choices are better choices for sustainability than other choices and has the knowledge resources and passion that it would take to actually execute that...number one is to recruit for that skillset within people who are responsible for the product, to begin with." | Sustainability manager or team | |
| "I don't have the capacity to think about that stuff [sustainability] because we don't have the time to deal with that. We want to focus on how do we increase the top line and bottom line." | "We've recently hired and made our general counsel also the chief sustainability officer. We're building out that team that specifically focused on the internal operational elements and how we drive more efficiency and sustainability." | Time commitment of executives | |
| "Supplier diversity has been there since the late 90s, and until my last days in procurement, it was something that companies would spend time on for more social cause…Besides the altruistic benefits, there were the benefits of expanding supplier base 'our supplier base should represent what our customer | "We're a smaller company, which [CO2 emissions and carbon offsets] is something that's not part of our company's awareness." | Awareness of sustainability | Executive awareness and perception of sustainability |

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| base looks like and it will bring innovation and all those types of things.' And the truth is it really didn't do many of those things. I'm not saying to do it at all and I don't want anyone to take that impression, but it really didn't do many of those things." | | | |
| "What do we get in return right, so if we decide to purchase credits, there's nothing that's going to be helpful in gaining more business and growing our business to offset that cost" | "Yeah it's hard to capitalize on things like that [sustainability initiatives or carbon offsets], from a business standpoint, you know capitalize either by turning it into something that literally adds to your bottom line but oftentimes it's something that just puts a shine on your corporate image, because you a lot of companies like ours and the consulting company world don't generate enough carbon to say like well we reduce our carbon footprint by 20% or something people would be like it was so small." | Benefits to company | |
| "Yeah well, I confessed not being educated on it [carbon offsets] and, from where I sit it's all bullshit until we go to electric cars and trucks. It's a very temporary band aid, and, you know, we need to get the electric vehicles." | "If you pay for credits, you know, for preventing deforestation, how do you know that that's actually occurring? I think that there's a lot of concerns around that. And, you know, at least to me the companies that I guess validate that information I don't know do they have credibility, I think all that's new, so I don't know." | Credibility of sustainability initiatives | |

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| "It [Eco Vadis reporting tool] gives us a ton of kind of dashboards and reports around [sustainability] performance and tracking. And it ensures that I can get the information in a way where we can report it back, the outcome back to our, you know, relevant stakeholders. And I don't have to then train 20 different people in accounting on how to load the data into a process and system so it's basically all automated."' | "The other thing we've done this we've also audit we've also surveyed our customer base to get those quantitative and qualitative information from our customer basis and whether or not they feel that we're sustainable and we started doing." | Data visualization and decision-making | |
| “I think that our leadership doesn't really think about that tool [sustainability] strongly. The leadership it's a much more elderly gentlemen, they come from old school thinking though. So, company our size with such mentality, it's very difficult to say that hey something that’s ecofriendly is the way to go.” | "There's a lot of skepticism out there as to how serious these [climate change] problems are when leadership from both influence handlers and senior government officials doesn't reflect the sense of urgency in their own personal lives, and I think that's a very big detriment. It's very hard to get people to turn the thermostat down two degrees lower or get people in business to understand what the impact is, when all of the people who are critiquing you are flying around in G fives and Falcon X900 by themselves or buying homes on the water and telling you it's going to rise." | Preconceived notions about sustainability | |

**Table 4**

***Data Coding Matrix and Grounded Theory Analysis (Full)***

| Interviewee | Illustrative Quotes | Categorical Focused Codes | Aggregated Theoretical Dimensions |
|---|---|---|---|
| I14 | "I do think all this stuff is very similar when you talk about sustainability, you talk about other social causes I think they're all how businesses interact are all based upon. How it affects their bottom line, whether it is because they get bad reputation or whatever." | Consumer pressures | Isomorphic pressures for sustainability |
| I9 | "There will be clearly identified expectations from consumers for sustainable solutions and if we can't put ourselves in a position to be supporting our customers who are dealing with consumers in providing that and be knowledgeable and those solutions, then that will become ultimately a threat to our business so there's no option." | Consumer pressures | Isomorphic pressures for sustainability |
| I17 | "Our strategy is more basic in many ways which is to grow the business, drive the margin in the business…we have to respond to what customers are interested in…we would weight more heavily in things with environmental impacts if it's important to our customers" | Customer pressures | Isomorphic pressures for sustainability |
| I17 | "Big customers and we have the predictable big customers--Walmart, Costco--it's important to them, then we'll have to make it important to us, otherwise we could lose that business." | Customer pressures | Isomorphic pressures for sustainability |
| I17 | "If you've got some good stories and some good sound bites and some progress in some areas on the sustainability agenda, I think you're Okay, with some of the bigger customers, I think, increasingly they've made commitments, and they need their suppliers to make and track against more specific commitments." | Customer pressures | Isomorphic pressures for sustainability |
| I4 | "Last year one of our biggest clients that bought a tremendous amount of fabricated foam from us....and they're shipping a lot of products around the world, and particularly to Europe. We worked with them on eliminating all the fabricated foam inserts and using paper-based products either honeycomb or corrugated inserts. The investment as far as tooling was about a hundred grand and they're going to get their return in about a year from the savings of not having to pay for the trash fees in Europe on delivery." | Customer pressures | Isomorphic pressures for sustainability |
| I3 | [our customers are in] Defense contracting and they are the polluters of the world, sustainability is not something they think about." | Customer pressures | Isomorphic pressures for sustainability |

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| I2 | "It's really only been and I would say we're late later to the party late to the party here but it's only been the last two or three years that we've really started to focus more internally in terms of how we think about recycling, how we think about transportation network design fuel consumption, those different types of topics and again a lot of that has been right or wrong customer driven because those customers, we started working with and some of these are like the most iconic brands from a sustainability perspective I don't want to go too much into the brand side. But you know when we started with them, focusing on how to make their products more sustainable, you know those relationships have now gone to them, asking us how we're running our own company our own internal operations in a sustainable way so again it's been you know recent end and primarily driven from the customer side." | Customer pressures | Isomorphic pressures for sustainability |
| I2 | "We've had more customer audit requests and again, these are you know very large global CPG companies as we get pulled into those discussions on the quality side it ends up being a dual discussion of quality and sustainability and then that's driven those folks to sort of be a little bit on the leading edge internally of identifying opportunities for improvements so to build on that. They might go through an audit with one of our customers on quality processes and then in our internal environmental processes and our own supplier management and other things, and then certain opportunities would get identified through those audits opportunities for improvement." | Customer pressures | Isomorphic pressures for sustainability |
| I2 | "And then we've got you know some of the most forward thinking you know companies that their branding is you know, the primary element of their brand is sustainability, where you know they chose us because we've made some super cool innovative ecologically friendly products but, but how we run our company wasn't as big to them four or five years ago it was just the products we could supply. How we run our company is now mission critical to them, which makes it, you know it's an opportunity for us in terms of for us to keep growing with our customers, we have to get you know massively better than we are today and accelerate and kind of close the gap of what needs to be done. The cost would be it's opportunity cost or it's going to be damaged customer relationships if we don't." | Customer pressures | Isomorphic pressures for sustainability |
| I12 | "Our number one thing you know, making sure that we make the production that the customer needs will supersede everything." | Customer pressures | Isomorphic pressures for sustainability |

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| I14 | "The balanced scorecard wasn't off of altruistic means it was to have a balanced approach to adding to shareholder value. And even if today they tell you, you got to worry about your reputation score and all these different types of things it's not again for altruistic means you can say it in that way. But in the end it's because of tying it back to ultimately shareholder value right. I mean that's my belief is when you can tie those two things together and make them connect then it's very powerful.” | Financial industry pressures | Isomorphic pressures for sustainability |
| I12 | "Family businesses for years have ignored these initiatives [sustainability], because there was no immediate payback or there's no measurable payback and now they're looking at and saying the banks are saying well you know what maybe there isn't a payback on it, but, but if you want to borrow money from us, you better have something you're doing" | Financial industry pressures | Isomorphic pressures for sustainability |
| I9 | "Being able to define and articulate a sustainable value proposition has value not only to our customers, but also to stakeholders and other people that are interested, for, for instance, and investing in our business so you know there's significant value in that for us" | Financial industry pressures | Isomorphic pressures for sustainability |
| I19 | "There's a need in the growing consumer space, especially with the company of our size to have the ESG record that we can speak to market, it also helps with value creation for the next [M&A] transaction...The investment partners are driving it, I would say that it will have a would resonate well with our consumers and our customers." | Financial industry pressures | Isomorphic pressures for sustainability |
| I9 | "We found out about it [Eco Vadis] through our through a board meeting with our one of our prior investors and our current financial owner" | Financial industry pressures | Isomorphic pressures for sustainability |
| I10 | "If we were to objectively look at what kind of ecological footprint the E commerce industry has, in general, we have a lot of violation to make up for...a few items and giant boxes or sending out multiple shipments wouldn't be as efficient as if somebody went to a Target store...but the ecommerce the E commerce industry as a whole doesn't have a very clean nose with respect to its footprint." | Competitive pressure | Isomorphic pressures for sustainability |
| I17 | "I think, where you can drive productivity and eliminate waste it's a it's an obvious, you can you can take cost out of the system and that works for both profitability and sustainability, I think, if you have to change what you're doing and how you're packing things there's a clear cost right, we have to change the asset base in the business and have to change what we do that's the that's either managing a risk or dressing an opportunity right, if you think that customers are going to want you to do that and particularly if you think one | Competitive pressure | Isomorphic pressures for sustainability |

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| | of your competitors might be able to get in there, ahead of your do that ahead of you so." | | |
| I11 | "I believe there's definitely been a more recent trend in terms of being able not only to source material but source it in an ongoing basis where you're starting to see a lot more challenges with climate change, so I believe that there is a marketing aspect to sustainability that. The company then I'm a part of now definitely utilizes in their efforts to make sales, but also in an effort to maintain supply assurance I believe there's investment in time, energy and resources that goes back into some of these origins, where you know raw material spices are harvested." | Competitive pressure | Isomorphic pressures for sustainability |
| I14 | "European countries have a lot of historical relationships with either from trade or colonization or slave trade and colonization or whatever, maybe, but, that being Africa Indonesia, etc. so that was that connection, also to sustainability, which a lot of a lot of chocolate outside of her, she is really driven through Europe. You know, so that mentality was there that's the first place I ever actually heard the word sustainability again. That was a business that cost perspective with survival perspective it wasn't just about sustaining it was about surviving there they thought of the dramatic extreme risks of there being no cocoa in the world." | Competitive pressure | Isomorphic pressures for sustainability |
| I8 | "The [sustainability initiatives] wave started in Europe probably 10 to 15 years ago now it's just now coming more into the US. it's kind of easy for us, since we already had so much data and energy and inertia that as companies here asked about it were very well prepared for them, but it's still way behind where Europe is." | Competitive pressure | Isomorphic pressures for sustainability |
| I18 | "Oddly enough, we will be sharing this information [sustainability results] with ASTA, as you know, with COVID things have changed quite a bit I haven't been able to get to the ASTA meetings, for obvious reasons they've been canceled and the last one was very limited, but our goal was to really try and get more participation" | Competitive pressure | Isomorphic pressures for sustainability |
| I19 | "The number of people that bring up ESG you know, during the pitch and their new goals once at our size, I think we get a hall pass today for the lack of ESG initiatives I don't think that will be the case, three to five years from now." | Competitive pressure | Isomorphic pressures for sustainability |
| I16 | "What they [major brand customers] would be asking for is packaging that helps them achieve the goals that they have. You know, put out to the marketplace social media so company goals such as you know, they're | Technological innovations | Isomorphic pressures for sustainability |

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| | committing to having you know fully sustainable or recyclable packaging by a certain year, so you know a statement, such as we will provide recyclable or Compostable packaging by 2025 like that would be a common type of statement. and You know so then that drives a lot of RD activity through their supply chain." | | |
| I9 | "Technology will also be a solution to providing more sustainable, you know options, you know, there are ways that we can produce that are clearly more sustainable generated significance, and you know significantly reduced levels of waste." | Technological innovations | Isomorphic pressures for sustainability |
| I14 | "I think companies make very rational decisions around this [sustainability]…. it's got to be driven by one of those two or three things we talked about a regulation and economic incentive and a customer demand that we might want to create any of those things are reasons why we would do it." | Government and regulatory pressures | Isomorphic pressures for sustainability |
| I5 | "The production side of the research, the operation to recycle operations, I think the key stakeholders was definitely the government and the local industrial management company. So the practice of recycling is not new and good now, I think, but I think people have done it in a very low tech way and they don't have proper water treatment systems, and it has created a bad impression to the local authorities, and so we had to did a lot of explaining to overcome this initial impression, in fact, I mean for our system, we had to bring them to the site show them like this is our water treatment systems that costs like this much money and like we're not skimping on this, and at that point, then they allow us to discharge some of the water, even though that's very minimal and it's very pure." | Government and regulatory pressures | Isomorphic pressures for sustainability |
| I14 | "China is very savvy and you know we'll see over the next hundred years which system wins, I mean it is very clear that capitalism relative to socialism wins, you know because we prove that out in the last century, the question will be how does capitalism fare relative to a centrally allocated capitalistic model?" | Government and regulatory pressures | Isomorphic pressures for sustainability |
| I19 | "Two and a half years ago the state of California initiated a sustainability goal relative to post consumer resin, PCR that they mandated over five years, a certain amount of single use beverage plastic containers contain from a beginning, starting point of 15% PCR up to 50% PCR over the next five years...But this piece of legislation, failed to really carve out complexities around other licenses, I mean other resin types, such as HDPE which is ours http has a very limited supply base for PCR and it also has a very high cost and there's limited uses for the food packaging industry because of that constraint, so therefore when you start to look at | Government and regulatory pressures | Isomorphic pressures for sustainability |

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| | this as an ESG initiative because you're being enforced by a government per se you start to look at the benefits of compliance versus the penalties...I think it's a good example of how politicians can get involved in setting these mandates without understanding that the total impact by all the different fragments of the industry." | | |
| I6 | "On most government contracts, unless they would specifically write it [sustainability] in and that's quite rare specifically writing it down into a contract as a requirement, like you, must show us evidence of this. Typically, it's more like a feather in your cap for us." | Government and regulatory pressures | Isomorphic pressures for sustainability |
| I7 | "He's [our Chairman and CEO] personally involved with it, he's a member of the SSI that's the sustainability initiative in the food business...You need to meet the sustainability goals and being a member of the SSI and all that you need to have that transparency where those goals are being met." | Investor or owner interests | Agency and rational choice pressures for sustainability |
| I16 | "Well, financial you know trumps everything, I think in the end." | Investor or owner interests | Agency and rational choice pressures for sustainability |
| I17 | "The private equity firms are all working towards an EBITDA target and an exit, so I think if you can demonstrate that something that's in pursuit of a sustainability or environmental agenda is in sync with that goal, I think you can easily support it, I think if it would interfere with that goal, or it doesn't really support it, then I think you would not within a private equity environment, I think you would get less support." | Investor or owner interests | Agency and rational choice pressures for sustainability |
| I15 | "You're asking a company that the rules of a company is to maximize profit to be okay to be a charitable company itself and, and I think that you will only make sense or company to do that if they think that you have to pay taxes less and maybe there'll be a strategy that you want to do it, but effectively I don't think so." | Investor or owner interests | Agency and rational choice pressures for sustainability |
| I3 | "If we had to if we ran into a money crunch, do we just cancel all that stuff [employee sustainability initiatives]" | Investor or owner interests | Agency and rational choice pressures for sustainability |
| I5 | "So what's I think the first is I say the new investment piece, so I think, yes, definitely you have this new machines runs better, but obviously new machines use cleaner technology costs a lot more money, so I think when this technology first came out it used to cost like think over two times a normal machine that was a very hard decision for us, so we couldn't adapt it early. However, as the years move on and these the price of these technologies comes out it's become a much closer gap. So I think at some point could get to like 50% | Investor or owner interests | Agency and rational choice pressures for sustainability |

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| | premium at some point, even less than 50% premium depend on like the currency and that time, so it definitely helps us a lot in making the transition into the new equipment, so I think that would that would be the balance for us is to definitely have to look at the return on investment." | | |
| I12 | “If it's not something with a with a quick payback then, then it becomes something that you know becomes more of a just kind of convincing our board.” | Investor or owner interests | Agency and rational choice pressures for sustainability |
| I12 | "Scrap recycling is a huge initiative for us because recycling of the scrap is not just a revenue driver, I mean it's a big portion of our businesses" | Revenue growth | Agency and rational choice pressures for sustainability |
| I12 | "We've had a couple of customers ask us if they have an expectation of us being net neutral, and if I went to them and said hey you can you paying $1 for this part now, but you can pay $1.05 tomorrow and it'll be carbon neutral I don't see any customers willing to, I would be shocked." | Revenue growth | Agency and rational choice pressures for sustainability |
| I15 | "Doing recycle is more expensive than buying it outright...too expensive, or the market when the market wouldn't want to pay for it, therefore, we are not strategically positioned to focus on that." | Revenue growth | Agency and rational choice pressures for sustainability |
| I14 | "We can buy it for I’m sorry 9 million, or we can buy it for 9.5 million, which would you prefer so 9 million okay now if we tell you that the 9.5 million will be through a diversity supplier, do you want us to buy that from a diversity supplier. Well, not really I want the 9 million okay well, what about a 9.4 million versus the 9 million. Okay, no, we want the nine well, what about a nine point and you just start going down so at even money you'll want it okay all right, even money got it to even money." | Revenue growth | Agency and rational choice pressures for sustainability |
| I8 | "When companies look for a source, who can provide a sustainable product that has no impact on the environment we will be ready. Maybe it's not right now, right here today we may or may not reap benefits, but in the future, we hope that in the direction the world takes is definitely going in that direction, so we want to be future ready. We're obviously hoping for an ROI at some point on this, which we think it will be out there and that's in the form of more customers more volume coming to us with their confidence in our [sustainable products] program." | Revenue growth | Agency and rational choice pressures for sustainability |
| I18 | "It was always our policy to shrink wrap every pallet that came into the warehouse and we're trying to take another look at that, looking at the waste and even though it does get recycled it's still a product that has to be manufactured so we're trying to convince people that | Increasing profits | Agency and rational choice pressures for sustainability |

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| | they don't shrink wrap it if you don't need to you know let's you know, try and let that product brief if you can. We've been reaching out to clients trying to get more and more product come in palletized so that we don't have to do that additional work here, as we unload it saving resources here as well" | | |
| I14 | “One of their [large confectionary CPG] principles is about not wasting anything…they’ve being doing that in the late 90’s and probably well before that.” | Increasing profits | Agency and rational choice pressures for sustainability |
| I17 | "From an environmental sustainability perspective, then you know we I think we are trying to drive productivity, which has a you know when with environmental sustainability, I think a lot of the time, so if you reduce the number of sites or reduce your length of your journeys to customers by having more places to produce, which is something we've done, then I think that has an environmental impact" | Increasing profits | Agency and rational choice pressures for sustainability |
| I1 | "ROI is going to be first across the board, if I can make the case that meeting any particular sustainability goals, whether, whether it be the companies or mine or my teams, if I can make the case, it will increase the Roi then all the better ideally these numbers don't compete with themselves, but just flat out dollars Roi is always going to win." | Increasing profits | Agency and rational choice pressures for sustainability |
| I6 | "Oftentimes that might be more on the trucking company to address their carbon offset as part of their own PR and then they just pass those costs on to me on a slightly elevated cost to ship me stuff." | Increasing profits | Agency and rational choice pressures for sustainability |
| I19 | "Purely cost, they [waste reduction initiatives] weren't geared towards any ESG initiative per se, knowing that there were ESG benefits to it." | Increasing profits | Agency and rational choice pressures for sustainability |
| I19 | "I'm sure there would be a balance between the overall effects on profitability and how that translates to value creation or you know loss of value creation and what does it mean long term." | Increasing profits | Agency and rational choice pressures for sustainability |
| I19 | "I guess the most successful one was we optimized our export carton out of Asia to increase our utilization per HC container by like 30% and I think we were able to eliminate a total of like 54 containers shipping from Asia, so you can do the math and translate that to the carbon footprint reduction set is the one that's most linear to me that I can think of...that's also about a million dollars at today's rates." | Increasing profits | Agency and rational choice pressures for sustainability |
| I1 | "As long as what I’m investigating or proposing doesn't cost the company more money than I have the ability to implement anything I just need to fully vet it, I will work with our transportation and logistics Vice President, make sure that he's on board with it" | Personal motivation | Agency and rational choice pressures for sustainability |

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| I18 | "We encourage our employees to carpool which most to which obviously is a tremendous benefit for everybody involved and then one of the most important things we've done back in 2019 and thing I'm most proud of is we've created a charity it's called the Glendale family foundation, and with this charity it is our goal and intent with this charity to help communities and families that are in need". | Personal motivation | Agency and rational choice pressures for sustainability |
| I15 | "Yeah, it's like oh you save you save 20 grand it's not going to make a [difference] because it wouldn't make me, be a hero when I do my year and evaluation to my boss." | Personal motivation | Agency and rational choice pressures for sustainability |
| I18 | "I was brought up with very, very little my mother was in an orphanage when she was a child, so we grew up with very, very limited means so I'm proud that what we've built as a family, and I think it's our duty to give back where we can and that's one of the things that we always stress upon each other as a group, and you know as our team, and both in my private life and in my business life." | Personal motivation | Agency and rational choice pressures for sustainability |
| I5 | "I think, for me personally I'm being like the second generation with my parents is the founder of a company, so I think, since, for some reason for me I've always think about sustainability, especially with plastics, because I remember keep asking my parents like you know all these plastic like where does it come from and it said it's come from oil and I'd heard them boy I mean is that going to last forever so for some reason it just have always been at the top of mind." | Personal motivation | Agency and rational choice pressures for sustainability |
| I13 | "Everything we try to do we try to have a dollar payload associated with it, it's very important to us that we don't just virtue signal sustainability" | Branding or company purpose | Agency and rational choice pressures for sustainability |
| I13 | "Being able to get highest quality efficacious product out of the fields into our factories, then be able to manufacture them correctly and then out to our customer base in a timeframe that they need more the support their growth...Know we've been we've been doing this before it was a soundbite we recognize this a long time ago." | Branding or company purpose | Agency and rational choice pressures for sustainability |
| I13 | "I think our success in the market dominance in the market is a direct reflection of our focus on sustainability." | Branding or company purpose | Agency and rational choice pressures for sustainability |
| I10 | "You know, in a way that we are, we have a very clear conscious conscience with respect to not Greenwashing something, and so that that that very much means that if an item takes two months longer to develop to nickel plate instead of chrome plate, and nobody knows, but us, we still do it. Our brand is also very, very minimal | Branding or company purpose | Agency and rational choice pressures for sustainability |

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| | so it's not something we broadcast on our packaging at all. It's something that we feed into our social media marketers that we're partnered with and it sometimes appears in our blogs, but we're conscious of not being preachy either." | | |
| I15 | "But the majority of the consumer in America is still quite sensitive to pricing itself so if you can buy let's say a chair, that is $50 extra because it's much more recyclable...The consumer might not be willing to pay for that $50 premium despite ECO friendly because it doesn't bring them benefits with the extra spent dollars, that they have to shave off from their pocket." | Costs versus payoff | Resources for sustainability |
| I18 | "In 2013 is when I purchased my first building, whereas prior to that we were leasing exclusively so, when you're leasing a facility, you have a limited opportunity to make an impression let's put it that way, and make changes once you own the building, you can make changes that have real value for your business and for the benefit of others." | Costs versus payoff | Resources for sustainability |
| I13 | "You want to make the decisions that are least impactful but have the best benefit for the business from a return on time or return on cost of investment. And then, once you get past those then it becomes where do we have the best impact for the business from a strategic perspective" | Costs versus payoff | Resources for sustainability |
| I1 | "If you're working for a company that largely sells wholesale, they don't really have a way to monetize those investments [in sustainability initiatives]" compared to a company with a large marketing department | Costs versus payoff | Resources for sustainability |
| I6 | "A lack of training or awareness, or why, why does that happen. oftentimes it's individuals that are just being lazy quite frankly that it's easier for them, while the truck is there, they just start throwing everything in the truck." [instead of recycling] | Costs versus payoff | Resources for sustainability |
| I2 | "What the priorities need to be, because I think in this in this topic, you can boil the ocean or attempt to boil the ocean and get really nothing done and so we've really been trying to focus on, you know what are the two or three things internally that could make a huge a huge difference, I think that. We have historically right or wrong looked at those areas of sustainability that would also drive efficiency for the customer and or the company so as an example.  Light weighting of our resin use the just a redesigning products to have lighter weights have less usage of resin which has a great sustainability benefit. Enhancing streamlining optimizing the transportation network, you know which obviously reduces carbon footprint, but also drives you know operational savings for ourselves and for | Costs versus payoff | Resources for sustainability |

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| | customers. And then I think recycling initiatives, where you know there's a sustainability benefit, but there may also be economic benefit, and I think so we've sort of looked at things that had maybe dual benefits as opposed to just a straight, this is more sustainable " | | |
| I5 | "Solar panel is definitely not as successful as we wanted to be and I think partially partial, that is, I think, maybe the managers, in addition to collect the berries and the lack of like a berry capability, I said, I think, part of the decision was the managers was very enamored with the idea of it like solar panel and then it's like completely clean energy that they completely forget to dig deeper into the economics on it and a practicality of like the power just needs to be stable, you know I can't just rely on something that's good for four hours in the afternoon and expect that to run the machines that are supposed to churn our products 24 hours a day." | Costs versus payoff | Resources for sustainability |
| I16 | "It [sustainability initiatives] extends within our company in a way to extends beyond the managers and executives we've also rolled down things into our facilities and try to involve our staff and associates, you know, right through manufacturing, so they have the opportunity to be involved with green teams and other ways that even at the local level, they can contribute to you know, a sustainable business." | Sustainability manager or team | Resources for sustainability |
| I9 | "A key enabler would be having the resources required to you know begin to go down this road right without that resource everything I just said won't happen. So, so that resources, a key enabler to being able to execute will continue to engage outside and other resources and there's no question will be influenced by our operating board." | Sustainability manager or team | Resources for sustainability |
| I10 | "Every one of us who does product development at the company knows what choices are better choices for sustainability than other choices and has the knowledge resources and passion that it would take to actually execute that...number one is to recruit for that skill set within people who are responsible for the product, to begin with." | Sustainability manager or team | Resources for sustainability |
| I5 | "So, the decision is definitely less structured than in a larger corporation" | Sustainability manager or team | Resources for sustainability |
| I13 | "Sustainability is not only in the aggregate of the product, but it's also in the people...And we work very hard to make sure that we educate all of our collectors worldwide, and now we are with over a quarter million people are involved on a yearly basis and bring a | Time commitment of executives | Resources for sustainability |

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| | product to market for us, so we want to make sure that they understand that they're important that we can sustain them” | | |
| I15 | "I don't have the capacity to think about that stuff so because we don't have the time to deal with that, we want to focus on how do we increase the top line and bottom line." | Time commitment of executives | Resources for sustainability |
| I3 | "We would probably send a request to the HR director and he would get with the company President because we micromanage and everything goes through the company President for something like this [sustainability initiatives]." | Time commitment of executives | Resources for sustainability |
| I2 | "We've recently hired and made our general counsel also the chief sustainability officer we're building out that team that specifically focused on the internal operational elements and how we drive more efficiency and sustainability there I interact with outside consultants, that we would work with on specific initiatives." | Time commitment of executives | Resources for sustainability |
| I18 | "Team of about five key people who work hand in hand with me, and these are the people that helped run the operation and we collectively come up with ideas [including sustainability initiatives] in our quarterly meetings, and we always make it a point that you know next meeting, three months from now, we gotta we gotta do something different, we got to be proactive, we got to be the best and that's something that we continue to do and I’m very proud of my team." | Time commitment of executives | Resources for sustainability |
| I1 | "At the risk of stereotyping, this is a marketing heavy company and it's a youth heavy company outside of that top line of the CEO and department heads everybody’s probably mid 30s or younger and sustainability is clearly a component of their lives, most of the marketing team is here in southern California" | Awareness of sustainability | Executive awareness and perception of sustainability |
| I12 | "I came into a company that had been here for 40 years and I think I came my role came in as much more of an outsider because I came from a different area of the country, I came from a much larger company than we are today, and so I think I was, I was being looked to be someone who can lead a little bit of initiative and maybe put a little more effort towards the sustainability." | Awareness of sustainability | Executive awareness and perception of sustainability |
| I18 | " Program called Community Solar and what this does is we're kind of leasing our roof available roof space to an outside company and whereby the generation is used for the local community to reduce the cost for those who are in need and that's something we're negotiating on now, and we look to hope to have this completed in early 22 or mid 2022." | Awareness of sustainability | Executive awareness and perception of sustainability |

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| I19 | "To be frank, we don't have a sustainability mission or goal it's one of the initiatives that will be working on this, this coming year...The initiative that we've done kind of haphazardly or without a lot of organization around this bottle lightweighting, reducing our packaging footprint and waste related initiatives." | Awareness of sustainability | Executive awareness and perception of sustainability |
| I14 | "Supplier diversity has been there again since the late 90s, and until my last days in procurement, it was something that companies would spend time on for more social cause…Besides the altruistic benefits, there were the benefits of expanding supplier base the benefits of oh our supplier base should represent what our customer base looks like and it will bring innovation and all those types of things. And the truth is it really didn't do many of those things I'm not saying to do it at all and I don't want anyone to take that impression, but it really didn't do many of those things." | Awareness of sustainability | Executive awareness and perception of sustainability |
| I9 | "And the cool thing about things like CDP and some of the other reporting they actually are pretty smart because they force you to ask a series of questions that if you're serious about it can begin to open your eyes and there are you know there's a lot of implications in you know product packaging and consumer behavior that will have an impact on our business to where people will just use useless packaging." | Awareness of sustainability | Executive awareness and perception of sustainability |
| I4 | "We're a smaller company, which [CO2 emissions and carbon offsets] is something that's not part of our company's awareness." | Awareness of sustainability | Executive awareness and perception of sustainability |
| I16 | "Today, what do we get in return right, so if we decide to purchase credits [for CO2 emissions] there's nothing that tells us that that's going to be helpful in gaining more business and growing our business to offset that cost." | Benefits to company | Executive awareness and perception of sustainability |
| I13 | "You want to make the decisions that least impactful but have the best benefit for the business from a return on time or return on cost or investment And then, once you get past those then it becomes you know where do we have the best impact for the business from a strategic perspective on a four or five year" | Benefits to company | Executive awareness and perception of sustainability |
| I15 | "I have to be honest, I don't think that we're trying to right now, but it doesn't come as a number one initiative of sustainably for a company like ours. And quite embarrassing to share this but because seven years ago that business was less than hundred million dollars, though, and For the past seven years we've been growing tremendously and we've been having more growing pains that this wasn't the focus as a company during this past seven years, as I was here." | Benefits to company | Executive awareness and perception of sustainability |

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| I12 | "I think our company was still a little bit behind the times and I'm and I'm we're trying to push towards that, right now, where we're not just printing things for the sake of printing them are generally creating and generating waste for this for this for no real gain." | Benefits to company | Executive awareness and perception of sustainability |
| I16 | "Some of our last investments in new printing presses we specifically outfitted them to allow us to produce recyclable packaging, so they have the operating controls to allow us to run recyclable polyethylene material, for example, and older technology or other presses that could have been purchased at the same time don't have that capability, so you know now having those lines in our facilities were able to produce material that now meets and allows our customers to meet their goals right, so I think that's an example of being successful with the choice that we made in the purchase process... If you make some of those decisions like is this necessary isn't it necessary, will it be beneficial to us in the long run and you know, those are you know that's one example in our business where we made that choice and it's resulting in commercial sales and revenue, as a result of that decision." | Benefits to company | Executive awareness and perception of sustainability |
| I1 | "It turns out that there's actually the packaging was designed to have a really big presence on the shelf in American retail stores and they don't need to be nearly that big so we're going down or reducing the deadline will be able to get more product in every container will usually ship 40HC containers and because we hit the volume before the weight so reducing that will have a direct impact on how many containers, we need a year, we can bring in more per segment, we can reduce the packaging inside which ultimately should reduce the waste and we reduce our costs to so it never hurts." | Benefits to company | Executive awareness and perception of sustainability |
| I4 | "Some of the stuff that we make and sell is so effective and cost-driven that it's hard to replace it with something that's sustainable on green just because it doesn't function as well and the cost impact is so big." | Benefits to company | Executive awareness and perception of sustainability |
| I10 | "It [carbon offset program] doesn't buy me much with respect to an organization's efforts I would want to see something else...for example a list of banned ingredients...a published visible metric for the reduction of plastics and our packaging or reduction of overall tonnage of packaging. So, carbon offset programs if that's all they've got is a concern because that feels like Greenwashing to me." | Benefits to company | Executive awareness and perception of sustainability |

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| I18 | "Back in 2013 we purchased our main facility in Edison and at that time we immediately put a solar project up on the roof where we're using the natural resource of the sun to obviously, create a green footprint and reduce our energy consumption off the grid that was one of the first things we did, secondly we've installed an ozone system converting oxygen or two in two or three, which is a simplified way of purifying the air. Being in the Spice trade, this is integral to have a clean air, clean air being admitted from our facility so that was one of the great things we've done, which has been beneficial to the Community and to the environment, additionally we've transitioned over to led lighting so that less consumption on the grid and also these lighting also has sensors so that they'll obviously turn off in a short period of time when that section of the warehouse is not in use...we've also installed rooftop fans, where we have variable speed controls which further reduces our energy consumption. Moving into cooling and HVAC see we've entirely upgraded all of our HVAC units to the most energy efficient units available at this time we've upon doing the solar project we've changed our roof and had an insulated roof, but on before we put the edm roof on. As it comes to computer systems, our computer system allows us to be paperless...Food safety, we have a policy where no pesticides utilized so that's actually a great benefit to environment there's no run off. With regard to that we've also upgraded our entire yard with concrete and improve our storm system, so the water runoff is enclosed in a small area. When, as far as equipment goes we've transitioned our fleet in the warehouse to 50% electric 50% propane. And as far as our trucks we've upgraded to new models that have that all meet current emission standards in our yard, we have a no idling policy. We also for our vehicles you'd food grade lubricants and, lastly, we have a recycling program for both our office waste and our warehouse waste as far stretch wrapped in plastic and pallets. | Benefits to company | Executive awareness and perception of sustainability |
| I16 | ”What do we get in return right, so if we decide to purchase credits, there’s nothing that’s going to be helpful in gaining more business and growing our business to offset that cost” | Benefits to company | Executive awareness and perception of sustainability |
| I6 | "yeah it's hard to capitalize on things like that [sustainability initiatives or carbon offsets], from a business standpoint, you know capitalize either by turning it into something that literally adds to your bottom line but oftentimes it's something that just puts a shine on your corporate image, because you a lot of companies like ours and the consulting company world don't generate enough carbon to say like well we reduce | Benefits to company | Executive awareness and perception of sustainability |

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| | our carbon footprint by 20% or something people would be like it was so small." | | |
| I2 | "Possible day right like I'm paying 25 I'm not but let's say the market price is 25,000 bucks a container and it used to be 2500 bucks a container. You know if you'd said to me, two years ago, would you pay $25,000 a container you'd be like well that's insane I'm not going to do that. But I've had customers pay $100,000 to air freight stuff...Where people like well I don't want to spend 50 bucks or the hundred bucks or whatever it ends up being, but I need to be carbon neutral for these customers, and so I gotta do it. I actually don't think we're that far away from that...I think the biggest concern for me and probably for everyone is how much of it is Greenwashing." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I13 | "Know we've been we've been doing this [sustainability] before it was a soundbite, we recognize this a long time ago." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I13 | "Something we should be factoring in is the impact a lot of these NGOs have…part of this greening is the absolute abject cynicism there is when your companies or people are being Twittered to death and you got people commuting to these forums [COP26 and World Economic Forum] in private jets...there's a lot of skepticism out there as to how serious these problems are when leadership from both influence peddlers and senior government officials doesn't reflect the sense of urgency in their own personal lives | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I3 | "Yeah well, I confessed not being educated on it [carbon offsets] and, from where I sit it's all bullshit until we go to electric cars and trucks. It's a very temporary band aid, and you know, we need to, we need to get the electric vehicles." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I14 | "On paper, it [carbon offsets] seems like a good idea because you create a market incentive to do it, but again when it comes to climate it can't just be about the US or in Europe doing it you've got to have the world involved and you've got, especially of like China and India, and those companies in the entire [world]". | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I16 | "If you pay for credits you know, for preventing deforestation, how do you know that that's actually occurring? I think that there's a lot of concerns around that. And you know at least to me that the companies that I guess validate that information I don't know do they have credibility, I think all that's new I, so I don't know." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |

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| I11 | "There I was aware of a project in which hospital was built near a village, to provide you know services for the entire village, once again, who is we're dedicated to particular crops and, in particular regions where there was plentiful supply. If investments like this aren't maintained and monitored and audited they can sometimes fall by the wayside corruption can take place. If the subsidizing of you know, these buildings or of the people who are in service in those buildings is not truly transparent then these types of sustainability projects or well intended gifts to a community in order to provide that cooperation and build trust they can basically, work in the inverse and show that there was no not enough follow through and what was once considered a great idea has only lead to corruption and detriment." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I13 | "There's a lot of companies that combined offsets from other companies and they continued to pollute so it's you know to me it's like juicing a horse before a race just doesn't make it we don't view it as something that we're interested in in terms of carbon offsets." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I16 | "If you pay for credits for preventing deforestation, how do you know that that's actually occurring. I think that there's a lot of concerns around that. And you know at least to me that the companies that I guess validate that information I don't know do they have credibility, I think all that's new I, so I don't know." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I1 | "They [carbon offsets] seem untraceable to me, you know I would see the expenditure, but I would have no way personally of understanding, whether or not anything was actually done to offset on me know you know somebody planting trees or somebody matching down fibers instead of burning them like I would have absolutely no way to know if the source that we were buying them from was held accountable and how that works." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |
| I5 | The right way to look at sustainability, for the sake of making it sustainable...Maybe companies who are just doing this for the sake of publicity and I think it doesn't last or maybe just very on the surface level so, for example, like you know if a company that this one initiative that I've heard recently like they just collect all toothbrushes and transform it into like new toothbrushes. But before they actually been doing this for a long time, however, it does is a very small percentage like maybe they collect like one or 2% of the 2% ever been discarded, and then they do just enough to be able to say it on their corporate sustainability page." | Credibility of sustainability initiatives | Executive awareness and perception of sustainability |

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| I13 | "I want to know you know, we want to know exactly what our usages and not just how much light will use or how much electricity use or how many coffee cups we're throwing out...we want to understand exactly what our impact this as a corporation, so that we can target cogently areas to fix or to improve on." | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I13 | "In terms of and also aggregates that there's a lot of good software programs out there. That you know, instead of my it guys are completely consumed by ready what a million other things if I plus this on them. They would have been in revolt right so there's a lot of third-party guys that are relatively inexpensive that you know compile it and have a template that we could use and we've picked one of them globally that helps us" | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I16 | "I believe you know it starts with data and information sharing and that's a tool [Eco Vadis] that allows that." | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I16 | "We use a third-party consulting firm to help us aggregate and analyze our data." | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I4 | "We currently don't have a process for that, evaluating which sustainability goals were important. Basically, running off our intuition and making decisions at the moment." | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I2 | "What is most efficient in terms of offsetting you know that the, how do you reduce that overall CO2 footprint and that offsets would be looked at as part of the mechanism of doing that, obviously, other parts of that include you know how you can onshore versus offshore how you can move production closer to filling points etc. and that's an ever changing game for us because customer filling points are changing daily even on the same products, at the same customers, and so I think we would look at it well, we will look at it as being you know part of the mix of how we reduce that overall carbon footprint and I think, once we have this baseline established there will be a huge amount of focus on just straight reduction of that footprint and I, and I expect offsets to be strongly in that next alongside you know what we can do on the actual supply chain footprint optimization itself...You know job one is reduce the production of CO2 right and you do that through reducing miles and optimizing the footprint." | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I9 | "It [Eco Vadis reporting tool] gives us a ton of kind of dashboards and reports around performance and tracking. And it ensures that I can get the information in a way, where we can report it back to the outcome back to our you know relevant stakeholders and I don't have | Data visualization and decision-making | Executive awareness and perception of sustainability |

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| | to then train 20 different people in accounting on how to load the data into a process and system so it's basically all automated." | | |
| I10 | "We put a quarterly metric out there, of identifying items to redevelop to make them more sustainable and operational product reviews on quarterly basis to actually achieve the redevelopment of those certain number of items." | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I10 | "The other thing we've done this we've also audit we've also surveyed our customer base to get those quantitative and qualitative information from our customer basis and whether or not they feel that we're sustainable and we started doing." | Data visualization and decision-making | Executive awareness and perception of sustainability |
| I15 | "I think that our leadership doesn't really think about that tool [sustainability] strongly I think that's. The leadership it's a much more elderly gentleman stuff they come from old school thinking, though, so company our size with so mentality it's very difficult to say that hey something that's ecofriendly is the way to go." | Preconceived notions about sustainability | Executive awareness and perception of sustainability |
| I15 | "But the majority of the consumer in America is still quite sensitive to pricing itself …The consumer might not be willing to pay for that chair despite ECO friendly because it doesn't bring them benefits with the extra thousand dollars, that they have to shave off from their pocket." | Preconceived notions about sustainability | Executive awareness and perception of sustainability |
| I13 | "There's a lot of skepticism out there, as to how serious these problems are when leadership from both influence handlers and senior government officials doesn't reflect the sense of urgency and their own personal lives, and I think that's a very big detriment. It's very hard to get people to turn the thermostat down two degrees lower or get people in business to understand what the impact is, when all of the people who are critiquing you are flying around in G fives and falcon X nine hundreds by themselves and or buying homes on the water and telling you it's going to rise." | Preconceived notions about sustainability | Executive awareness and perception of sustainability |

# APPENDIX A: IRB APPROVAL LETTER

**Pepperdine University**
**24255 Pacific Coast Highway**
**Malibu, CA 90263**
**TEL: 310-506-4000**

**NOTICE OF APPROVAL FOR HUMAN RESEARCH**

Date: October 12, 2021

Protocol Investigator Name: Igor Estraykh

Protocol #: 21-07-1625

Project Title: Green and (ir)rational? The influence of information framing on executive decisions about sustainability investments (carbon offsets) in for-profit firms.

School: Graziadio School of Business and Management

Dear Igor Estraykh:

Thank you for submitting your application for expedited review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. As the nature of the research met the requirements for expedited review under provision Title 45 CFR 46.110 of the federal Protection of Human Subjects Act, the IRB conducted a formal, but expedited, review of your application materials.

Based upon review, your IRB application has been approved. The IRB approval begins today October 12, 2021, and expires on October 11, 2022.

The consent form included in this protocol is considered final and has been approved by the IRB. You can only use copies of the consent that have been approved by the IRB to obtain consent from your participants.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Please be aware that changes to your protocol may prevent the research from qualifying for expedited review and will require a submission of a new IRB application or other materials to the IRB. If contact with subjects will extend beyond October 11, 2022, a continuing review must be submitted at least one month prior to the expiration date of study approval to avoid a lapse in approval.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/irb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chair

cc: Mrs. Katy Carr, Assistant Provost for Research

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## APPENDIX B: RESEARCH INSTRUMENTS

*Introduction*

- To start off, I am interested in learning about your role and company.
    - Can you describe your current role and your company please?
    - How long have you served in your current role and with the company?
    - What is your company's business model and industry? (manufacturing, service, B2B, B2C, etc.)
    - How large is your company in terms of annual revenue and number of employees (less than $10M/10 employees, $10-100M/10-100 employees, $100M-$1B/100-1000 employees, or larger than $1B/1000 employees?)
    - Have you worked at a large firm previously? ($1B revenue/1000+ employees)
    - What types of sustainability initiatives does your company engage in?
    - What is your role in the sustainability initiatives and decision making?

*Sustainability investments*

- Next, I would like to ask you a few questions about your company's sustainability efforts.
    - How does your company evaluate sustainability investment decisions? Specific criteria? Who makes decisions?
    - What are the titles and roles of the individuals involved in identifying, analyzing, and making sustainability related decisions at your firm?
    - Which other stakeholders participate in decisions?
    - Does your company evaluate annual investments differently than recurring investments? Are there annual sustainability targets or budgets?
    - Do you report your sustainability goals or results to your board? Externally?
    - Do you have a dedicated sustainability manager or team? If so, how big is the team and what are their responsibilities? If not, who is responsible for the company's sustainability practices and investment decisions?
    - Is sustainability and specific goals tied to manager and executive compensation?
    - Do managers and executives feel personally responsible for the firm's carbon sustainability program? Other employees?
    - How does your company prioritize or evaluate competing needs of the different stakeholders when making sustainability decisions? For example, financial goals that the CFO is responsible for versus a sustainability officer/other stakeholders.
    - Can you describe a specific sustainability investment that was successful? What defined success and why was it successful?
    - Can you describe a specific sustainability investment that was unsuccessful? Why was it unsuccessful?
    - Do you think sustainability is a cost or opportunity for your firm?
    - How does your firm look at the role of sustainability in building brand equity, employee engagement, and external stakeholder management?

- Now, I would like to ask you a few questions specifically about CO2 emissions and carbon offsets.
    - How does your company track and evaluate CO2 emissions? If yes, can you describe specific examples? If not, why not?
    - Is there any internal or external reporting about CO2 emissions? Can you provide specific examples?
    - Are CO2 emissions and specific goals to reduce emissions tied to manager and executive compensation?
    - Do managers and executives feel personally responsible for the firm's carbon footprint? Other employees?
    - How does or would your company evaluate investments in carbon offsets?
    - Do you know how much CO2 emissions your firm has annually and what carbon offsets would cost for those emissions?
    - Have you worked with a 3rd party carbon offset administrator in the past or now? Are you aware of them and the cost of carbon offsets?
    - Would your firm be willing to absorb the cost of $7/MT, how about $50/MT?
    - What concerns do you have with carbon offsets?

*Conclusion*

- Great. Thank you. The last thing I want to ask is: Is there anything I have not asked you about sustainability investment decisions and carbon offsets that we should discuss?

[*In ending:* Thank you so much for your time! It was so helpful and interesting to learn about how you and your company make sustainability investment decisions and view carbon offsets.]

## APPENDIX C: RECRUITMENT MATERIAL AND CONSENT FORMS

**IRB #: 21-07-1625, Igor Estraykh**

**Participant Study Title:**
***Corporate sustainability investments in carbon offsets***

**Formal Study Title:**
***Green and (ir)rational? The influence of information framing on executive decisions about sustainability investments (carbon offsets) in for-profit firms.***

**Authorized Study Personnel**
**Principal Investigator:** Igor Estraykh, MBA, MS, EDBA candidate. Cell: (310) 774-0003

**Key Information:**
***This study is exploring how firm executives and managers learn about, evaluate, analyze, and make decisions about sustainability investments in carbon offsets for CO2 emissions.***

If you agree to participate in this study, the project will involve:
Males and Females between the ages of 18-70.
Procedures will include a 30-60 minute virtual interview over Zoom.
There are/are no risks associated with this study.
There is no compensation for your participation.
You will be provided a copy of this consent form.

**Invitation**
You are invited to take part in this research study. The information in this form is meant to help you decide whether or not to participate. If you have any questions, please ask.

**Why are you being asked to be in this research study?**
You are being asked to participate in this study because you are involved in corporate sustainability investment decisions.

**What is the reason for doing this research study?**
The purpose of this study is to explore how decision makers in for-profit corporations evaluate and make investments in voluntary firm carbon offsets.

**What will be done during this research study?**
Participation in this study will involve answering a set of interview questions about your perspective and experience with sustainability investment decisions. We anticipate the interview will take between 30-60 minutes.

**How will my [data/samples/images] be used?**
Your interviews will be recorded, transcribed, made confidential and the data will be analyzed by the researcher at Pepperdine University.

**What are the possible risks of being in this research study?**
The possible risks of being in this research study are minimal. It is possible that interviewees would experience boredom or fatigue, though this is not expected. This research presents risk of loss of confidentiality, which will be mitigated through anonymization of raw data and protection of digital information.

**What are the possible benefits to you?**
You are not expected to get any direct benefit from being in this study. This research can contribute to knowledge about how corporations make sustainability investment decisions and carbon offsets.

**What are the alternatives to being in this research study?**
You can decide not to be in this research study, or you can stop being in this research study ("withdraw') at any time before, during, or after the research begins for any reason. Deciding not to be in this research study or deciding to withdraw will not affect your relationship with the investigator or with Pepperdine University.

**What will being in this research study cost you?**
There is no cost to you to be in this research study.

**Will you be compensated for being in this research study?**
There is no compensation for your participation in this study.

**What should you do if you have a problem during this research study?**
Your welfare is the major concern of every member of the research team. If you have a problem as a direct result of being in this study, you should immediately contact one of the people listed at the beginning of this consent form.

**How will information about you be protected?**
Reasonable steps will be taken to protect your privacy and the confidentiality of your study data. The data will be stored electronically through a secure server and will only be seen by the research team during the study and for 1 year after the study is complete.
The only persons who will have access to your research records are the study personnel, the Institutional Review Board (IRB), and any other person, agency, or sponsor as required by law. The information from this study may be published in scientific journals or presented at scientific meetings but the data will be reported as group or summarized data and your identity will be kept strictly confidential.

**What are your rights as a research subject?**
You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study.
For study related questions, please contact the investigator(s) listed at the beginning of this form.
For questions concerning your rights or complaints about the research contact the Institutional Review Board (IRB):
Phone: 1(310)568-2305

Email: gpsirb@pepperdine.edu

**What will happen if you decide not to be in this research study or decide to stop participating once you start?**

You can decide not to be in this research study, or you can stop being in this research study ("withdraw') at any time before, during, or after the research begins for any reason. Deciding not to be in this research study or deciding to withdraw will not affect your relationship with the investigator or with Pepperdine University.

You will not lose any benefits to which you are entitled.

**Documentation of informed consent**

***Use the following standard clause if you are obtaining signed/written consent***

You are voluntarily making a decision whether or not to be in this research study. Signing this form means that (1) you have read and understood this consent form, (2) you have had the consent form explained to you, (3) you have had your questions answered and (4) you have decided to be in the research study. You will be given a copy of this consent form to keep.

**Participant Feedback Survey**

To meet Pepperdine University's ongoing accreditation efforts and to meet the Accreditation of Human Research Protection Programs (AAHRPP) standards, an online feedback survey is included below:

https://forms.gle/nnRgRwLgajYzBq5t7

The approximate number of subjects involved in the study; 30

Dear [Name],

My name is Igor Estraykh, and I am a doctoral student in the Graziadio Business School at Pepperdine University. I am conducting a research study examining carbon offset corporate social responsibility (CSR) investments and you are invited to participate in the study. If you agree, you are invited to participate in a virtual interview. The interview is anticipated to take no more than 60 minutes and will conducted over a recorded Zoom videoconference call.

Participation in this study is voluntary. Your identity as a participant will remain confidential during and after the study. Your personal information will be anonymized for the research data analysis, and the results of the study will be reported in a summary format, so that no one will be able to associate you with your responses.

If you have questions or would like to participate, please contact me at igor.estraykh@pepperdine.edu.

Thank you for your participation,

Igor Estraykh
Pepperdine University
Graziadio Business School
Executive DBA Student