Abstract
Sustainability is critical to the future success of businesses; those that do not implement sustainability initiatives may lose customers, investors, and/or profits. This study examines barriers to corporate sustainability, measured through the four dimensions of the Prism of Sustainability (environmental, social, economic, and institutional), a framework of sustainability not commonly used in business research. An online survey of sustainability managers from a variety of industries in the United States distributed in the spring of 2021 yielded a total of 361 responses. Results reveal that lack of leadership and lack of governance were the most predominant barriers to corporate sustainability. Surprisingly, the most frequently cited barrier in the literature—resources—was not identified as a significant barrier for U.S. companies. The impact of the pandemic was also qualitatively explored to see if such constraints might have a nuanced effect on corporate sustainability efforts. This research expands the contexts in which the Prism of Sustainability is applied in business studies, highlighting it as a means to assess corporate sustainability. Results provide important managerial implications, highlighting the importance of measures to govern the organization’s sustainability effort and the critical role leadership plays. Sustainable management is a necessity for business, and therefore, addressing barriers to achieving it will be imperative for companies’ futures.

Keywords: corporate sustainability, prism of sustainability, barriers, pandemic

1. Introduction

1.1 The Problem

Current models of business operations are considered ineffective due to an increasing array of environmental, social, economic, and institutional challenges. Sustainability is critical to the future success of businesses, and a paradigm shift is no longer optional but required. We are in “the age of responsibility,” and stakeholders are demanding boards and CEOs improve their firms’ environmental, social, and governance (ESG) performance (Noreheim-Hansen, 2023; Sheehan et al., 2023). Many argue that businesses are uniquely positioned to lead the way to a transformative societal change toward sustainability and even regeneration, leveraging their influence and reach. Rasche et al. (2017) define corporate sustainability (CS) as “the integration of an enterprise’s social, environmental, ethical and philanthropic responsibilities toward society into its operations, processes and core business strategy in cooperation with relevant stakeholders” (p. 6). Furthermore, Mitnick et al. (2022, p. 192) state that CS is about “the moral purpose of business and its proper relationship to society.” CS goes beyond seeking to minimize negative impacts to understanding how a business can create a significant positive effect for environmental protection, social justice and equity, and economic growth and translating this into business strategy. Businesses that do not implement CS will likely be left behind; Dr. Conrath-Hargeaves argues that sustainability represents the “fifth revolution,” and companies that fail to embrace it may face dire consequences (Monash School of Business, 2023).

While the COVID-19 pandemic certainly brought a new set of challenges for many businesses around the world, it also presented an opportunity to rethink, re-strategize, and potentially change policies and operations toward a more sustainable model. Hatami and Segel (2021) point out that two primary goals for CEOs in the “next normal” should be centering strategies on sustainability and operating with purpose. Nevertheless, for most companies, this journey towards CS is filled with obstacles, including rising costs, lack of resources, supplier challenges, lack of expertise and clear metrics, pressures from consumers and employees, and leadership commitment, among others (e.g., Dasayanaka et al., 2022; Mangla et al., 2019; Yuen & Lim, 2016). Although barriers to CS
have been studied, there is no clear consensus on which of them are the most significant, and they often vary based on a company’s size, financial structure, or sector and can change over time (McGrady, Golicic, & Cottrell, 2022). Furthermore, external factors beyond the control of an organization, such as a pandemic, might provide additional barriers (Su et al., 2022). It is necessary to clarify these barriers for CS so that firms can create a strategy for overcoming them.

1.2 Importance of the Problem

The purpose of this study is to clarify the key barriers to CS, measured through the four dimensions of the Prism of Sustainability (Spangenberg, 2002), and it will contribute to business in three ways. First, it provides a broad empirical overview of how sustainability leaders perceive barriers to sustainability. Second, the Prism of Sustainability framework is applied, providing a holistic and parsimonious conceptualization of business sustainability as opposed to other business literature that relies on two or more theories to support sustainability efforts (McGrady, Golicic, & Cottrell, 2022). Lastly, this research highlights implications for corporate leaders and offers recommendations to address these barriers. To explain the barriers, we first discuss CS and its potential barriers, offering three research hypotheses. We then test these through an online survey. Finally, we provide implications from the results and propose strategies for businesses to overcome the potential barriers they may face.

1.3 Relevant Scholarship

Companies and their supply chains are increasingly held accountable by stakeholders for the economic, environmental, and social performance of their operations (Geissdoerfer et al., 2017). Interestingly, pressures for CS come not only from customers, employees, governments, communities, and shareholders but also from peer companies, ratings and rankings, and even social investors (Mefford, 2019). A survey that analyzed the opinions of more than 1000 global executives revealed that 99% of them considered sustainability issues critical to the future success of their businesses. Moreover, 94% of the executives believed they should link their company’s purpose to their role within society (Sanchez Planelles et al., 2021). Despite these encouraging results, the study revealed that only 21% of global executives believed their companies were contributing to the United Nations Sustainable Development Goals in a significant way, implying that barriers to CS still exist.

In the United States, while 75% of Americans believe corporate sustainability is extremely important, the U.S. is lagging behind other countries (Ninia, 2019). The Sustainable Development Solutions Network (2023) reports that the U.S. (together with Brazil and The Russian Federation) rated the lowest out of the G20 countries in terms of support for the Sustainable Development Goals. On the other hand, a 2021 study by Honeywell revealed that 80% of companies in the U.S. had sustainability initiatives in place (Honeywell, n.d.). While many U.S. company leaders have expanded efforts towards sustainability in recent years, executives reported that the inability to generate sufficient demand for sustainability products was still a major challenge (despite the fact that 78% of U.S. consumers stated that a sustainable lifestyle is important to them) (Bar Am et al., 2023).

Nevertheless, numerous studies (e.g., Henisz et al., 2019; Singh Mann & Kaur, 2019; Pham et al., 2021; Raza et al., 2021; Sanchez Planelles et al., 2021) show that CS creates value for companies and supply chains. Busch and Schnippering (2021) show that the relationship between CS and financial performance is positive in over 800 studies on the impact of ESG. In the US, sustainable products growth was higher than products that were not sustainable (28% vs. 20% cumulative growth) in 2022 (Bar Am et al., 2023). Similarly, in a study of Chinese firms, Yang et al. (2019) found that sustainability reporting (through the Global Reporting Initiative) significantly increased firms’ profitability. CS can result in value creation through top-line growth, cost reductions, greater strategic freedom and government support, productivity increases, investment and asset optimization, an opportunity for internal innovation, improving environmental and supply risk, attracting and retaining employees, expanding audience reach, and brand loyalty, reducing production costs, garnering positive publicity, strengthening the company’s competitive advantage, and influencing new industry trends (Cote, 2021; Henisz et al., 2019). It is argued that companies that implement sustainable practices are more likely to differentiate themselves and report more benefits (Ioannis & Serafeim, 2019). Moreover, investors increasingly evaluate the degree of adoption of sustainable policies among the organizations in which they are looking to invest (Sanchez Planelles et al., 2021). Hence, there is a general agreement in the literature that although CS is not easy to achieve, it brings in a variety of positive impacts for companies. Company and leader innovation has been found to be critical elements in the journey toward sustainability (e.g., McGrady & Cottrell, 2018; McGrady, Golicic, & Cottrell, 2022).

A multitude of frameworks for sustainability has been developed through the years. This study utilizes the Prism of Sustainability (PoS) as a lens to assess barriers to CS. This construct incorporates four dimensions of
sustainability, which is a more comprehensive and parsimonious means than other manifestations of sustainability, and is specifically appropriate for studying CS (McGrady & Cottrell, 2018; McGrady, Golicic, & Cottrell, 2022). From the socio-cultural aspect, the company’s approach towards diversity and inclusion and employee wellbeing and development opportunities were considered. The economic dimension addresses the role companies play in the local economy, focusing on providing jobs for local people and supporting local organizations and activities. Environmentally, the focus is placed on minimizing waste, supporting alternative energy, obtaining environmental certifications, and maintaining the local environment. The institutional imperative concerns companies’ policies on CS with opportunities for involvement in decision-making and cooperation with local businesses and residents.

1.4 Hypotheses

Based on a review of literature on CS from 2000 to 2020, Dasanayaka et al. (2021) found that internal organizational barriers were the most cited by studies. The most significant one reported was the lack of resource availability, followed by a lack of employee engagement linked to low levels of knowledge, cultural issues, limited availability of technology, the size of the business, low levels of strategic orientation, and insufficient benefits. Khan et al. (2021) also highlighted lack of funds, lack of information, and lack of skilled personnel as the top barriers to CS. In a review of 28 journal articles from 2010 to 2021, Alizadeh (2022) noted that CS requires the capacity to devote time, knowledge, and facilities while no immediate financial returns can be expected. Hence, “insufficient cost/benefit ratio” and “external control” were the two most critical barriers identified, particularly for small and medium-sized enterprises.

Companies need resources to implement any activity tied to their operations. Nevertheless, businesses often have an inadequate budget for CS initiatives, and they choose to focus more on other projects that yield a high return on investment (Faisal, 2010). Other studies agree that companies do not receive sufficient financial support for CS implementation (Laudal, 2011). Therefore, financial constraint is considered a common hindrance to CS adoption, and in many cases, this was further exacerbated by the COVID-19 pandemic (Kumar et al., 2020).

Businesses also rely on people—employees as well as supply chain partners—as resources. Insufficient human resources are a critical barrier to sustainability implementation in businesses (Graafland & Zhang, 2014). Employee knowledge and understanding of CS have been highlighted as barriers (Latapi et al., 2021; Moktadir et al., 2018; Murillo-Luna et al., 2011; Trianni et al., 2017). Stakeholder relationships are a critical aspect of CS (Sumanasiri, 2020). Companies struggle to implement initiatives without the support of their supply chain partners; indeed, a company’s efforts can only be as successful as the weakest link in its chain (Gurzawska, 2020). Thus, their relationships with suppliers and customers are important to be truly sustainable. Literature has noted that these relationships can be an enabler or barrier depending on whether or not the firms in the supply chain work together or not (Ellram & Golicic, 2015; Mangla et al., 2019). Mefford (2019) highlights viewing CS efforts as a win-win in obtaining cooperation for sustainability among suppliers. Based on this, we hypothesize:

H1a: A lack of financial resources negatively impacts CS.

H1b: A lack of employee resources negatively impacts CS.

H1c: A lack of supply chain relationship resources negatively impacts CS.

Governance policies are essential to promote greater awareness about CS and ensure that companies incorporate environmental and social aspects in their activities. At an organizational level, Latapi et al. (2021) point out that the company’s structure and internal organizational systems, such as corporate culture and values, as well as reward systems, flexibility, adaptability, and strategic capacity, can be barriers to CS. Mefford (2019) corroborates that implementing sustainability programs into the corporate culture and strategy is one of the major challenges for CS. Hunoldt et al. (2018) also highlight that an organization’s characteristics influence the intensity of CS strategies, and ultimately the application of such strategies affects organizational behavior over time. Considering that CS is largely a voluntary practice, policy incentives and/or measures are needed to boost CS implementation. A lack of clear metrics for CS is, therefore, also a common barrier in the business world (Yuen & Lim, 2016). Thus, we hypothesize:

H2: A lack of governance in the form of policy metrics negatively impacts CS.

Leadership is the way management establishes the organization’s vision, goals, and processes (Plachy et al., 2022). Company leadership is key to implementing any initiatives, particularly CS (McGrady, Golicic, & Cottrell, 2022). In one study, Klein et al. (2022) found that the implementation of circular economy models was not embraced because it was not identified as a priority by the leadership in the organizations. Pinto and Allui (2020) found a lack of management commitment as a substantial barrier to CS. Wongsnuoppaprat and Chunyang
(2021), in a study including China, Thailand, Vietnam, Singapore, India, and Iran, also found leadership and management to have a significant impact CS, corroborating findings by Ling, Cheng and Yi (2023). Therefore, it is important for innovative business leaders to be at the forefront of sustainability initiatives implementation, as this will likely result in the greatest impact on sustainability in their companies and supply chain (McGrady, Golicic, & Cottrell, 2022). Finally, we also hypothesize:

**H3: A lack of leadership negatively impacts CS.**

The COVID-19 pandemic brought unprecedented disruptions to economies and organizations around the world. Business closures, employee layoffs, supply chain disruptions, concerns about employee health, reductions in demand, and financial fragility were some of the common negative impacts firms experienced (e.g., Bartik et al., 2020; Su et al., 2022). From a social perspective, the changes in work styles (e.g., telecommuting) during the pandemic affected the mental health of employees, causing anxiety, depression, and job insecurity, among others (Chong et al., 2020; Venkatesh et al., 2021). Furthermore, working from home expanded work and family conflicts and, in many cases, reduced communication and work efficiency, affecting corporate performance (Su et al., 2022). Some other strategies companies adopted to cope with COVID-19 included switching to online recruitment, expanding supply chains, advancing online distribution channels, and resuming business but with great caution (Zhang et al., 2022)

Although the COVID-19 pandemic has brought an enormous shock to organizational sustainability, it is important to note that, in many cases, it also offered businesses a great opportunity to advance CS (He & Harris, 2020). Su et al. (2022) summarized that the best strategy to attain resilience was to transition to e-commerce, online promotion, online sales, and logistics. Furthermore, Pan and Zhang (2022) point out that donating financial aid, investing in corporate sustainability, adhering to consumer ethics, and engaging in innovative thinking were the key management, institutional, and governance factors leading to more sustainable business practices following the pandemic. While the pandemic impacted CS efforts, the literature on this is still too young to definitively develop a hypothesis on the direct relationship between the two; however, we explored this to enable future studies on the impact of major business disruptions. The variables studied and their relationships are summarized in the proposed model in Figure 1.

![Figure 1. Hypothesized model](image)

**2. Method**

**2.1 Research Design**

A quantitative explanatory survey was most appropriate to test the study hypotheses regarding barriers to the implementation of CS. The survey design followed Dillman’s total design methodology (2007) and utilized a survey distribution service to obtain a suitable number of completed responses for the study variables (Hair et al., 2016).
2.2 Research Sample Characteristics

Sustainability managers at various levels from U.S. companies were targeted for the survey. Data records in which respondents indicated a lack of familiarity with company sustainability practices were excluded to mitigate the potential false reporting bias. Item responses received in later survey waves were tested against responses received in earlier ones with no significant differences, alleviating concerns for nonresponse bias (Armstrong & Overton, 1977). Respondents held management positions from supervisors to executive levels. They represented both private and public companies from various industries and sizes (measured by revenue and number of employees). Table 1 provides the final sample demographic information on the participants and their companies.

Table 1. Sample demographic information

<table>
<thead>
<tr>
<th>Management Position</th>
<th>Supervisor 28%</th>
<th>Manager 28.5%</th>
<th>Director 18.3%</th>
<th>Executive 25.2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Financial Structure</td>
<td>Private 55.1%</td>
<td>Public 44.6%</td>
<td></td>
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</tr>
<tr>
<td>Company Size (# of employees)</td>
<td>&lt;100 18.8%</td>
<td>101–500 20.2%</td>
<td>501–1000 26.6%</td>
<td>1001–5000 23.3%</td>
</tr>
<tr>
<td>Company Revenue (SM)</td>
<td>&lt;1 7.8%</td>
<td>1–100 47.9%</td>
<td>101–500 19.1%</td>
<td>501–1000 13%</td>
</tr>
<tr>
<td>Industry</td>
<td>Tech 31.3%</td>
<td>Services 25.5%</td>
<td>Industrial 10.8%</td>
<td>CPG 13.6%</td>
</tr>
</tbody>
</table>

2.3 Survey Measures and Data Collection

Survey items were adapted from the literature on the sustainability barriers of resources, governance, and leadership (Arevalo & Aravind, 2011; Laudal, 2011; Mangla et al., 2019; Yuen & Lim, 2016) and empirical studies using the Prism of Sustainability (Huayahuaca et al., 2010; McGrady & Cottrell, 2018; McGrady, Golicic, & Cottrell, 2022). The original survey included sixty-one total items for ten variables utilizing a 7-point agreement scale. Two open-ended questions on changes due to the pandemic and whether these would be permanent were also included to explore if the constraints of the pandemic hindered sustainability.

An online survey was distributed between September and October 2020 using Qualtrics. During the four weeks the survey link was live, 435 responses were collected. Manual data cleansing found numerous issues with the data records, ranging from completion in less than three minutes to repeated answers to nonsensical entries in the open-ended questions, which reduced the responses to 254. Due to the issues with the data and the lack of concern from the survey distribution company, these data were used as a survey pretest, and more data using a different provider were later collected. The exploratory factor analysis conducted in SPSS found statistical issues with some of the items. Items that cross-loaded on other variables were removed; the remaining variables and items were sufficient to theoretically represent the constructs.

Alchemer was hired to conduct the final online survey, and data were collected in April and May of 2021. Four waves and manual cleansing for bogus responses were again needed to obtain 361 completed responses. Additional controls were used in data collection and cleansing with Alchemer; therefore, more reliable data was received. Factor analysis found two items that continued to cross-load, and these were removed for the final model analysis. Because one respondent was used for each completed survey, common method bias could be a concern. There were variations in the phrasing of a few of the items to help alleviate this in the design. Harman’s one-factor analysis on all data ex post was used. An unrotated principal components factor analysis identified eight factors explaining 63% of the total variance. The first factor accounted for 33% of the variance. Because no single factor accounted for more than 50% of the variance in the data, common method bias was not a threat to the validity of the findings (Podsakoff et al., 2003). Additionally, a multicollinearity check on the data revealed that all VIF values were smaller than 3.3, adding to the support that no methodological bias existed (Hair et al., 2019).

3. Results

3.1 Statistics and Factor Analysis

Factor loadings of all retained items, along with reliability results and average variance extracted support construct validity for the sustainability barriers and PoS items (Tables 2 and 3; Hair et al., 2019). A comparison
of the shared variance among indicators of a construct (i.e., AVE) with the variance shared between constructs provided evidence for discriminant validity (Fornell & Larcker, 1981). The square root of AVE for each construct was greater than the correlation with other constructs (Table 4) with one exception: governance policies did not discriminate from governance measures or leadership. It was determined that the variable was somewhat redundant and could be removed. Overall, assessments of reliability and validity provided evidence that measurement was sufficiently robust to support valid testing of the hypotheses in the SEM model.

Table 2. CS dimension construct validity results

<table>
<thead>
<tr>
<th>Scale/Item</th>
<th>Fact 1</th>
<th>Fact 2</th>
<th>Fact 3</th>
<th>Fact 4</th>
<th>Cronbach Alpha</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic Sustainability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.751</td>
<td>0.834</td>
</tr>
<tr>
<td>My company diversifies the local economy</td>
<td>0.632</td>
<td></td>
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<tr>
<td>My company creates jobs for local people</td>
<td>0.659</td>
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<tr>
<td>My company creates new markets for local products/services</td>
<td>0.736</td>
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<tr>
<td>My company is a strong economic contributor to the local community</td>
<td>0.763</td>
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<tr>
<td>My company supports local organizations and activities</td>
<td>0.744</td>
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<tr>
<td><strong>Institutional Sustainability</strong></td>
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<td>0.815</td>
<td>0.877</td>
</tr>
<tr>
<td>Community residents have an opportunity to be involved in our sustainability decision making</td>
<td></td>
<td></td>
<td></td>
<td>0.771</td>
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</tr>
<tr>
<td>Our sustainability policies are developed in cooperation with local businesses in the region</td>
<td></td>
<td></td>
<td></td>
<td>0.784</td>
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<tr>
<td>There is sufficient information available about our sustainability efforts</td>
<td></td>
<td></td>
<td></td>
<td>0.855</td>
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<tr>
<td>The information distributed by our company accurately reflects the company’s sustainability efforts</td>
<td></td>
<td></td>
<td></td>
<td>0.789</td>
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<tr>
<td><strong>Socio-Cultural Sustainability</strong></td>
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<td></td>
<td>0.675</td>
<td>0.801</td>
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<tr>
<td>My company promotes diversity and inclusion in the workplace</td>
<td></td>
<td></td>
<td></td>
<td>0.580</td>
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<tr>
<td>My company encourages our employees to be sustainable</td>
<td></td>
<td></td>
<td></td>
<td>0.814</td>
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<tr>
<td>My company takes good care of our employees</td>
<td>0.695</td>
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<tr>
<td>My company creates development opportunities for our employees</td>
<td></td>
<td></td>
<td></td>
<td>0.735</td>
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<tr>
<td><strong>Environmental Sustainability</strong></td>
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<td></td>
<td></td>
<td>0.823</td>
<td>0.875</td>
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<tr>
<td>My company tries to minimize environmental waste and pollution</td>
<td></td>
<td></td>
<td></td>
<td>0.761</td>
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<tr>
<td>My company puts efforts in maintaining the local environment</td>
<td></td>
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<td>0.750</td>
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<tr>
<td>My company invests in environmentally sustainable technology/processes</td>
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<td></td>
<td>0.775</td>
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<td>My company tries to use alternative/efficient energy sources (e.g., solar, wind, or other renewable energy)</td>
<td></td>
<td></td>
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<td>0.814</td>
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<tr>
<td>My company has or is pursuing environmental certifications (e.g., LEED, ISO14000, carbon neutral)</td>
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<td></td>
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<td>0.720</td>
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</tbody>
</table>
Table 3. Barriers construct validity results

<table>
<thead>
<tr>
<th>Scale/Item</th>
<th>Fact 1</th>
<th>Fact 2</th>
<th>Fact 3</th>
<th>Fact 4</th>
<th>Fact 5</th>
<th>Cronbach Alpha</th>
<th>Composite Reliability</th>
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<tbody>
<tr>
<td>Resources Cost</td>
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<tr>
<td>We associate CS with unavoidable expenses</td>
<td>0.108</td>
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<td></td>
<td>0.795</td>
<td>0.831</td>
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<tr>
<td>We do not have sufficient financial resources for CS</td>
<td>0.839</td>
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<tr>
<td>We feel that CS implementation is too time-consuming</td>
<td>0.776</td>
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<tr>
<td>We lack the time to implement sustainability</td>
<td>0.857</td>
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<tr>
<td>We have difficulty obtaining information about implementing sustainability</td>
<td>0.795</td>
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<td>Resources People</td>
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<tr>
<td>Our employees do not have enough knowledge about CS to implement</td>
<td>0.858</td>
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<tr>
<td>We do not have the relevant expertise for CS implementation</td>
<td>0.885</td>
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<tr>
<td>We do not have adequate training for CS implementation</td>
<td>0.892</td>
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<td>Our employees do not have the necessary skills for implementing sustainability</td>
<td>0.862</td>
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<tr>
<td>We do not have adequate manpower to implement sustainability</td>
<td>0.828</td>
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<tr>
<td>Resources Relations</td>
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<tr>
<td>We feel that our suppliers are not actively involved in CS activities</td>
<td>0.788</td>
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<tr>
<td>We feel that our customers are not actively involved in CS activities</td>
<td>0.849</td>
<td></td>
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<tr>
<td>We do not have strong enough relationships with suppliers to implement CS</td>
<td>0.875</td>
<td></td>
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<tr>
<td>We do not have strong enough relationships with customers to pursue sustainability</td>
<td>0.869</td>
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<tr>
<td>Governance Measures</td>
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<tr>
<td>We do not have metrics to quantify CS benefits</td>
<td>0.880</td>
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<tr>
<td>We do not have internal controls to monitor and enforce CS</td>
<td>0.889</td>
<td></td>
<td></td>
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<tr>
<td>We lack benchmarking standards to compare our CS performance</td>
<td>0.840</td>
<td></td>
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<tr>
<td>We are unable to monitor whether our sustainability requirements are met</td>
<td>0.861</td>
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<tr>
<td>We do not have a good way to measure our sustainability performance</td>
<td>0.895</td>
<td></td>
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<tr>
<td>Leadership</td>
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<tr>
<td>CS is not part of our company’s vision and/or mission statement</td>
<td>0.803</td>
<td></td>
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<tr>
<td>Our day-to-day decisions do not align with our sustainability strategy</td>
<td>0.805</td>
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<tr>
<td>Our leadership appears to resist sustainability</td>
<td>0.726</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Our top management does not support CS implementation</td>
<td>0.839</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Top leadership believes in CS [R]</td>
<td>0.560</td>
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</tbody>
</table>

Table 4. Discriminant validity results

<table>
<thead>
<tr>
<th>ResCost</th>
<th>ResPeople</th>
<th>ResRelation</th>
<th>GovMeasure</th>
<th>LeaderShip</th>
<th>EconSust</th>
<th>SocSust</th>
<th>EnvSust</th>
<th>InstSust</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.733</td>
<td>0.697</td>
<td>0.619</td>
<td>0.650</td>
<td>0.625</td>
<td>-0.228</td>
<td>-0.232</td>
<td>-0.293</td>
<td>-0.293</td>
</tr>
<tr>
<td></td>
<td>0.865</td>
<td>0.739</td>
<td>0.732</td>
<td>0.634</td>
<td>-0.25</td>
<td>-0.232</td>
<td>-0.293</td>
<td>-0.293</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>0.763</td>
<td>0.671</td>
<td>-0.273</td>
<td>-0.232</td>
<td>-0.293</td>
<td>-0.293</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>0.873</td>
<td>0.726</td>
<td>-0.232</td>
<td>-0.232</td>
<td>-0.293</td>
<td>-0.293</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.753</td>
<td>-0.232</td>
<td>-0.232</td>
<td>-0.293</td>
<td>-0.293</td>
</tr>
</tbody>
</table>

Note. *All correlations significant at p < .001, square root of average variance extracted right justified on the diagonal.
3.2 Analysis of Hypotheses

Smart PLS V3.2.9 was used to analyze the study hypotheses. This structural equation modeling (SEM) program using variance-based partial least squares was used over alternative estimation methods due to the complexity of the proposed model (Peng & Lai, 2012). Additionally, while we started with sufficient data records for other SEM analysis methods, we did split the sample for some of our control variable and post-hoc model tests; PLS works well with smaller sample sizes and does not require a specific data distribution as does maximum likelihood (Chin & Newsted, 1999; Reinartz, Haenlein, & Henseler, 2009). Both standard analyses and bootstrap techniques were applied to determine path estimates, significance, and model fit. The significant paths and explained variance of the outcome variables are shown in Figure 2. Surprisingly, results did not find support for H1 (lack of resources was not a barrier to CS). H2 was partially supported; lack of governance impacts the CS measures of environmental and institutional sustainability. And H3 was fully supported. Goodness of fit of the overall model was evaluated using the $R^2$ and SRMR indices. R square values for the dependent variables were greater than the minimum threshold of 0.1, and the SRMR was less than 0.08.

![Figure 2. SEM model results](image)

3.3 Control Variable and Post Hoc Analyses

Additional models were run to test four control variables, including size, revenue, and structure of the firms, as well as management level of the respondents, as these are typical controls that might impact sustainability efforts. A control model with just those variables as predictors demonstrated a worse fit and much lower variance explained in the outcome variable. The full model, including the control variables, showed an increase in variance for the outcome variable over the theoretical model; this was explored further because the management level of the respondent showed significant paths to the outcome measures, and size of the company significantly impacted one dimension of CS (the environmental dimension). The full model with only the size control showed no difference in explained variance. As a result, size, revenue, and structure were excluded from further analysis. The increase in variance came from adding the management level control; thus, that was examined further in a *post hoc* analysis.

The data set was split apart to test models comparing upper (director and executive) vs. lower (supervisor and manager) management levels. We particularly thought this might explain the surprising lack of support for the first hypothesis (lack of resources). Lower-level managers explained more variance in the economic dimension of CS (.156 vs. .127) but lower variance in the other outcome variable dimensions. This also reduced the significance for H2 and H3 and still did not support H1. The upper-level managers explained significantly more variance in all outcome dimensions (.151 vs. .127 economic, .238 vs. .166 environmental, .336 vs. .230 social, and .224 vs. .183 institutional), and resulted in significant pathways related to H1b—from people resources to the dimension of social sustainability (-.308) and H1c—from relationship resources to the dimension of economic sustainability (+.257). Upper-level managers likely have more concerns for resources and finances as well as more knowledge of company practices. Interestingly, a lack of relationship resources positively impacts the economic sustainability dimension; perhaps relying on partners is perceived as hurting efforts to impact the
community financially. The level of management clearly impacts views on corporate sustainability, and these post hoc results should be explored further in future research.

3.4 Ancillary Exploration

When asked if their company’s sustainability practices had changed due to the pandemic (yes or no), 15.8% of respondents said they had. This seemed a bit low; it is possible that some were not aware of changes or that some did not want to discuss any changes (or fill in answers to the open-ended questions). Of the 57 who experienced changes, 80.7% described a positive effect on sustainability, though more than half of these were working less/virtually, so therefore not purposefully positive. Others noted that their company was recycling more, reducing waste, and reducing energy usage; a handful noted that they purchased more sustainable materials. Only 19.3% said the company was producing more waste (due to higher use of disposable materials) or their initiatives were on hold. It was assumed that the pandemic might be more of a barrier to CS due to the financial hardships many faced. However, this did not seem to be the case; companies were perhaps more mindful of their practices and realized that sustainability helps reduce costs. Participants were also asked whether they believed the changes they observed were temporary or permanent. Among those who experienced changes, 45.6% responded that the changes would remain in place due to the positive outcomes. While these results are just exploratory and not tied to our quantitative results, we offer a tentative proposition for further exploration that the pandemic disruption was potentially not a barrier to CS.

4. Discussion

The research results demonstrated that a lack of resources was not a barrier to CS (H1a, H1b, and H1c were not supported), a lack of governance was a barrier to two aspects of CS (H2 was partially supported), and a lack of leadership was a barrier to CS (H3 was supported). It was surprising that the most frequently cited barrier in the existing literature—resources—was not significant here. When upper management results were isolated from lower levels of management, a lack of people resources and relationship resources impacted one aspect of CS. Perhaps this is an artifact of the data being collected during the pandemic when companies were concerned about a general lack of resources. Or, possibly, organizations have finally begun to embrace the value of sustainability, overriding any initial investments that might be necessary (i.e., the benefits are worth any cost). The research was conducted with a wide variety of industries in the U.S., and size, revenue, and financial structure did not have an impact on the results. Extant studies cited often examined a specific sector or size of a company; the different results could conceivably be due to this focus. Because the current sample was broader, the results are informative, thought-provoking, and fairly generalizable to all organizations in the U.S.

4.1 Theoretical Implications

4.1.1 Prism of Sustainability

The study findings have implications for theory in sustainability. Brown et al. (2022) point out that CS research is still fragmented and limited and lacks terminology clarity. This lack of theoretical foundation has been identified as the most critical reason for ineffective business actions to improve the environment and society (Pazienza et al., 2022). Considering sustainability's wide scope and complexity as a concept (Amini, 2014), its magnitude needs to be assessed through tangible and measurable indicators (Castaneda, Arroyo, & Loza, 2020). Business research has typically relied on a single dimension of sustainability (e.g., environmental) but has more recently evolved to address the triple bottom line (e.g., Carter & Rogers, 2008; Rajeev et al., 2017). The finance and accounting disciplines have begun to explore ESG (environmental, social, and governance) in the context of smart investing (Li et al., 2021); this stream ties corporate governance to financial performance. The current research relied on the prism of sustainability to measure CS, which has been used primarily in disciplines outside of business but incorporates an institutional dimension (Cottrell, Vaske, & Roemer, 2013; Spangenberg, 2002). With its environmental, social, economic, and institutional dimensions, the PoS essentially combines the triple bottom line with ESG factors, and it was established and empirically tested earlier than the sustainability dimensions typically used in business research. The PoS has recently been applied in business to examine CS (McGrady, Golnic, & Cottrell, 2022), and the current study further expands the contexts in which the PoS can be used. Because it encompasses the triple bottom line and ESG, the PoS presents CS more holistically and provides a new framework for assessing CS that could, hopefully, help businesses make better decisions regarding sustainability initiatives.

4.1.2 Barriers to Sustainability

The current research is also an extension of other work on barriers to sustainability. Results confirmed that a lack of leadership and governance are major barriers. And though it was not significant in the overall sample,
inadequate people resources (i.e., employees) were a barrier to CS for upper-level managers. These findings agree with literature that has examined these barriers in prior studies (Arevalo & Aravind, 2011; Laudal, 2011; Yuen & Lim, 2016; Ling, Cheng, & Yi, 2023). Additionally, the research builds on the work of Garavan et al. (2010), who categorized barriers to CS according to three levels—the individual level, organizational level, and institutional level. Latapi et al. (2021) tested this conceptualization in the EU energy sector and classified leadership as an individual-level barrier, resources at the organizational level, and governance barriers at the institutional level. Their findings further note that the individual barriers are direct barriers in that the company has more control to combat their influence, while a lack of resources and governance are indirect, which can be more difficult for a business to overcome. This study's results support the individual level—insufficient leadership—as the most predominant obstacle, corroborating Greenbaum (2022), who highlighted a need for leaders and board members to build their competencies surrounding sustainability.

Finally, results also speak to theory on managerial orientations within firms; Beske (2012) argues that a sustainability orientation is important for the implementation of sustainability. This type of mindset within the organization and its leaders is needed for a company to evolve its sustainability efforts. The orientation is an organizational view; however, it requires upper management to support it (Mazutis, 2013). Thus, it is understandable that leadership is a primary barrier along with the governance established and enforced by those leaders.

4.2 Managerial Implications

The results have implications for managers, particularly those leaders in higher-level positions. Findings demonstrated that a lack of leadership is the biggest barrier to CS. Upper management needs to support CS and incorporate it into the overall company and business unit strategies for it to be implemented successfully. Sheehan et al. (2023) argue that sustainability starts at the top by focusing on the “g”—governance—in the ESG model. Investors want to know that everyone at the table has a clear understanding of sustainability. Greenbaum (2022) points out that leaders should educate themselves and build their ESG competency because ESG starts at the top; those who want to stand out as a leader today and in the future should build deep knowledge and understanding of the business impact of sustainability. Once that foundation is established, boards of directors and executive-level management should set the tone and provide inspiration, guidance, and policies necessary for a transition from a shareholder value to a stakeholder-value mindset. Leaders need to set an example for the rest of the company with respect to practices in this area. Additionally, management should set controls and measures to govern the organization’s sustainability efforts while also being nimble and willing to adapt to different courses of action if it strives to advance its CS (Risi et al., 2023). Results also demonstrated that a lack of employee knowledge and training could negatively impact sustainability efforts within the company. Thus, it is not only important to ensure upper management genuinely supports CS, but it is also imperative that there is a shared understanding of what sustainability means to the company and the initiatives that would be appropriate for the organization. If these do not exist, it may send a negative message to stakeholders and likely thwart efforts to be more sustainable. Communities and society, as stakeholders that drive change, have an important role to play—by putting pressure on businesses and also on governments for policy change and transformation (Fukukawa & Moon, 2004). Through the enactment of innovative guidelines and regulations, governments can “steer” society toward more sustainable practices (Bramwell et al., 2017). McGrady and Cottrell (2018) highlight that while government mandate is essential, pressure at the corporate level can be much more powerful. Hence, considering their influence and reach, large businesses are truly positioned to lead the way to a transformative societal change toward sustainability (McGrady & Cleveland, 2023).

Intuitively, it was thought that the pandemic would impede sustainability efforts and act as a barrier. A few respondents noted that initiatives were paused. However, the study results revealed that the pandemic actually positively impacted sustainability efforts. Some of this was unintentional (e.g., less employee travel), but some decisions were purposeful to reduce waste and save money. This reinforces the argument in business that sustainability actions can reduce the usage of resources. Therefore, the lesson for managers is that sustainability can help organizations during constrained times. We likely will not see another disruption as big as the COVID-19 pandemic anytime soon; however, companies experience smaller interruptions to business regularly. Implementing CS is important for many reasons, and it could also help companies weather disruptions in achieving their strategic objectives.

4.3 Limitations and Future Research

As with all study recommendations, we acknowledge that companies are unique and may face other challenges related to CS. We only included respondents from the U.S. in the survey. Further research should expand the
sample to other countries as sustainability is increasing in business globally. We drew tentative conclusions from
the open-ended questions regarding the impact of the pandemic on sustainability efforts; more research is needed
to explore the impact of this on the implementation of CS further. We did not find any impacts based on the size,
structure, or industry of the organization, but it could be explored if there are certain types of organizations
where barriers play a larger role in inhibiting CS practices. Perhaps a tool could be created and/or utilized to
analyze the potential for the presence of barriers not only in different types of organizations but for various types
of CS initiatives. Business for Social Responsibility (BSR) and the Global Reporting Initiative (GRI) use
sustainability gap analyses, risk assessments, and reporting frameworks to identify potential issues and
guidelines to overcome barriers. These could serve as a foundation for examining current CS efforts along with
leadership aspects and governance metrics within an organization. Following a comparison to benchmarked best
practices, a scorecard specific to the organization and its sustainability practices could be used to track
performance as well as progress in overcoming any barriers that exist. When we truly learn all aspects of barriers
to CS, we will be able to weave CS more fully into the business strategy of global organizations and their supply
chains.

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