

Sustainable Business: Practices, Trends, Benefits, Challenges, and Innovative Strategies

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Abstract

Sustainability has emerged as a crucial aspect in today's business world. This study explores sustainable business practices (SBPs) in the U.S., highlighting the concept, trends, benefits, and challenges, with a focus on the construction and food industries. It argues that despite the costs and hurdles, the benefits of SBPs often outweigh these challenges. The study emphasizes the need for a strategic approach to sustainability that perceives SBPs beyond just enhancing reputation, complying with regulations, or as short-term operational improvements. It also discusses the implications of these practices and suggests directions for future research.

Keywords: sustainability, ESG, corporate social responsibility, CSR, construction and food industries

1. Introduction

The concept of sustainability has emerged as a pivotal issue in the contemporary business landscape. As global challenges related to the environment, society, and economy intensify, sustainable business practices (SBPs) have attracted significant attention (Morioka et al., 2017; de Oliveira, Menezes, & Fernandes, 2023). Companies face increasing pressure from consumers, government regulators, employees, and other stakeholders to meet environmental, social, and governance (ESG) targets (Accenture, 2021; Flores - Hernández, Cambra - Fierro, & Vázquez - Carrasco, 2020). The emergence of SBPs represents a fundamental paradigm shift in corporate operations, engagement, and production.

Cooney (2009) suggests that SBPs encompass four key criteria: integration of sustainable principles into organizational decisions, provision of eco-friendly goods and services, surpassing traditional competitors in sustainability, and a strong commitment to environmental principles in business operations. de Oliveira et al. (2023) emphasize that SBPs should address present needs without compromising future generations' abilities to meet theirs. These practices include diverse initiatives aimed at fostering social responsibility and reducing carbon footprints, such as eco-friendly production, supply chain sustainability, sustainable product design, circular economy principles, and green marketing.

Currently, companies are evaluated not just on financial performance but also on their environmental and societal impacts, including those on future generations. Consequently, responsible and ethical business conduct is imperative. Embracing SBPs meaningfully can provide a competitive edge in the global market. Benefits include improved brand image (Haseeb et al., 2019), enhanced employee attraction and retention (Tessema et al., 2023), increased consumer and client base (Priyadarshini, Tiwari & Rajauria, 2021), positive environmental and societal impacts (de Oliveira et al., 2023), and improved company performance (Reiter, Schulze, & Somers, 2020). As León-Bravo and Caniato (2023) note, the emphasis on SBPs has spurred investments across products, processes, people, and stakeholders, leading to positive or minimal negative business, environmental, and societal impacts.

In the United States, the adoption of SBPs is growing, with about 80% of companies surveyed reporting on sustainability (Olson, 2022). However, this does not necessarily indicate widespread genuine adoption of SBPs. Manly et al. (2022) found that while approximately two-thirds of surveyed companies prioritize climate and sustainability, only 20% have made significant progress in achieving their sustainability goals.

There is a noticeable gap in research on SBPs in the U.S. construction and food industries. This study aims to fill this gap by discussing the trends, benefits, and challenges of SBPs in these industries and suggesting innovative strategies to overcome the challenges faced by U.S. companies in adopting genuine SBPs.

The methodology of this study is based on a comprehensive literature review using secondary sources, primarily sourced from the Web of Science database. Keywords and phrases such as sustainability, sustainable business, ESG, and corporate social responsibility were used to gather relevant literature, particularly focusing on the construction and food industries.

The paper is structured as follows: Following this introduction, Section Two delves into the concept, benefits, and challenges of SBPs, including case studies from the U.S. food and construction industries. Section Three proposes strategies for genuine SBPs, while Section Four presents the study's implications, conclusions, limitations, and directions for future research."

2. Literature Review

2.1 SBPs: Definitions and Concepts

Over the last three decades, Sustainable Business Practices (SBPs) have gained prominence in the business realm, emerging as a critical and timely issue. Definitions of SBPs vary among scholars. Alikhani, Torabi, and Altay (2019) view SBPs as environmentally friendly business practices that balance environmental concerns with profitability. According to Galvao (2008), SBPs represent as a three-legged stool of planet, people, and profit, emphasizing sustainable production and distribution with positive societal and environmental impacts. Crews (2021) expands this by considering SBPs as business models that create long-term shareholder value, integrating opportunities and managing risks from environmental, economic, and social developments. These definitions collectively highlight the integration of environmental, social, and economic factors into corporate operations and decision-making.

The terminology surrounding SBPs is diverse, with terms such as "green business," "eco-friendly," "ESG (environment, society, and governance)," "CSR (corporate social responsibility)," "TBL (triple bottom line)," and "net zero" being commonly used. Hence, a key goal of SBPs is to mitigate or eliminate the negative environmental impacts of production, processing, packaging, distribution, consumption, and recycling of goods.

The concept of sustainability was notably advanced by the World Commission on Environment and Development of the United Nations in 1987 (Niemezyk et al., 2023). The Commission's report (also known as the Brundtland Report) advocated for sustainable development that satisfies present needs without compromising future generations' ability to meet their own. Since 1987, sustainability has broadened to encompass economic, environmental, and social issues. In 1994, Elkington introduced the 'triple bottom line' concept in sustainable business, emphasizing the three P's: Profit, People, and Planet (Carter & Rogers, 2008). Barney (1991) argued that for resources to be a source of sustainable competitive advantage, they must be valuable, rare, and not substitutable. Branco and Rodrigues (2007) supported the resource-based view, suggesting that a firm's social responsibility reputation can enhance relations with external parties (e.g., investors, suppliers, customers, employees, and bankers), thus integrating sustainability into business models is beneficial for addressing the needs of current and future generations of stakeholders and customers.

SBPs encompass several key components, including eco-friendly production, supply chain sustainability, sustainable product design, circular economy principles, and green marketing (EPA, 2023; Flores - Hernández et al., 2020; Leonard, 2011; Priyadarshini et al., 2021; Reiter et al., 2020). Eco-friendly production involves methods that conserve resources, reduce waste, and minimize emissions during the manufacturing process. Supply chain sustainability focuses on ensuring suppliers align with sustainability goals. Sustainable product design is about creating energy-efficient and environmentally friendly products. Circular economy principles aim to minimize waste through design for reuse and recycling. Green marketing involves communicating sustainability efforts to consumers through eco-labeling, sustainable packaging, eco-certifications, and targeting eco-conscious customers.

Stakeholders' increasing demand for transparency on social and environmental issues has spurred the adoption of Sustainability Reporting Tools (SRTs) by companies (Delmas & Blass, 2010; Folkens & Schneider, 2022; Siew, 2015). SRTs help companies track and report their progress in achieving sustainability goals. Several organizations developed different sustainability disclosure standard, including the Global Reporting Initiative (GRI), International Integrity Reporting Communication (IIRC), the Task Force on Climate-related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB), and the International Sustainability Standards Board (ISSB).

2.2 The Practices and Trends of SBPs in Food and Construction Industries

2.2.1 The Practices and Trends of SBPs in Food Industries

The food industry, encompassing companies involved in food production, processing, supply, and distribution, is confronted with the challenge of feeding an ever-growing global population. The current population exceeds 8 billion and is projected to reach over 10 billion by 2050 (World Population Review, 2023). Despite sufficient food production to feed the global population, billions of people do not have consistent access to three meals a day (World Food Program, 2020). The food supply chain, including producing, handling, storage, processing, packaging, and consumption, is plagued by significant food waste, adversely impacting air quality, energy management, waste control, and water management. Approximately one-third of food produced for human consumption, nearly 1.3 billion tons yearly, is wasted or lost globally (World Food Program, 2020). Food waste encompasses uneaten food and inedible parts going to various destinations, including composting, landfill, anaerobic digestion, and more (ReFED, 2023).

In 2021, the U.S. produced 91 million tons of surplus food, with 38 percent remaining uneaten (ReFED, 2023). Of this, around 18 percent was composted, and about 9 percent recycled into animal feed, while nearly 36 percent went to landfills. This food waste contributes to 6 percent of U.S. greenhouse gas emissions and consumes about 20 percent of the freshwater supply, highlighting its substantial environmental impact (ReFED, 2023). The World Wildlife Fund (2023) notes that 38 percent of all food in the U.S. goes unsold or uneaten, equating to a loss of around \$444 billion.

As shown in Figure 1, the effectiveness of sustainable food production systems hinges on the effectiveness of food production, processing, distribution, consumption, and recycling (Priyadarshini et al., 2021). The food industry has seen a rise in the implementation of SBPs, such as enhancing product distribution through technology, maximizing product usage, preventing food waste, using recyclable packaging, and reducing water and food waste in the production process (León Bravo, Moretto, Caniato, 2021). Additionally, recycling efforts include repurposing waste as energy and other products (The UN Sustainable Development Group, 2023).

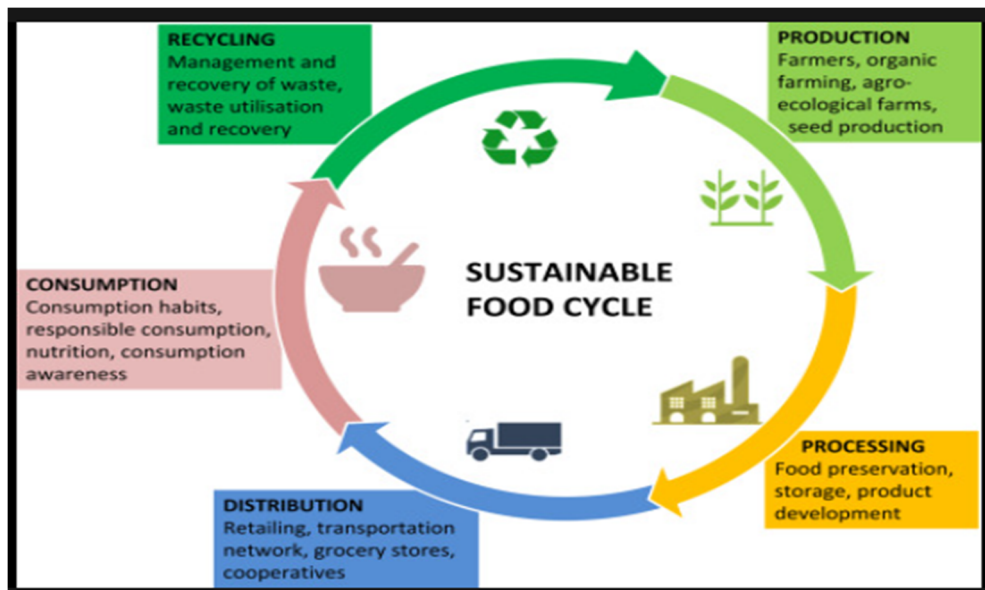


Figure 1. Sustainable food production systems

Divert Inc, an American-based company, exemplifies innovative approaches in the food industry by using novel packaging and supply chain processes to preserve food and convert waste into new products. It provides comprehensive solutions that include (a) enhancing food freshness at retail, (b) recovering edible food for donation or repurposing, and (c) converting inedible food into renewable energy (Strailey, 2023).

Several U.S. companies, ALDI, Bob's Red Mill, Sodexo USA, Ahold Delhaize USA, Walmart, Inc., Aramark, Compass Group USA, Lamb Weston, Fresh Produce Bompany, Raley's Del Monte, have introduced various aspects of SBPs and joined the U.S. Food Waste Pact, committing to a collective goal of reducing food waste by 50 percent by 2030 (World Wildlife Fund, 2023). This pact requires participants to measure, report, and engage in

working groups and pilot projects to develop and scale effective solutions.

This study argues that while recent progress in SBPs within the food industry is encouraging, further efforts are needed to meet the 2030 goal of halving food waste. Addressing food waste is a systemic challenge that necessitates a comprehensive response involving multiple stakeholders, from farmers and transporters to food manufacturers, retailers, and consumers.

2.2.2 SBPs in Construction Industry

The construction industry, a crucial sector with a market size nearing ten trillion U.S. dollars, significantly contributes to the national economy and is expected to grow alongside the global population (Barbosa, Woetzel, & Mischke, 2017). This industry includes companies engaged in building, repairing, and maintaining structures and roads, as well as related manufacturing and trade activities. Its scope covers planning/design, materials manufacturing, construction, usage, and the demolition of buildings and infrastructure.

The environmental impact of the construction industry is substantial, characterized by considerable waste generation, high water consumption, and air pollution (Blanco et al., 2021; EPA, 2023; Sadler, 2021). The Energy Protection Agency (2023) reports that construction accounts for 30 percent of all U.S. greenhouse gas (GHG) emissions. Globally, it is responsible (directly or indirectly) for about 40 percent of carbon emissions from fuel combustion and 25 percent of overall GHG emissions (Blanco et al., 2021). These emissions primarily stem from building operations (about 70%) and raw-material processing (about 30%). The sector also accounts for approximately 50 percent of global raw material consumption and is a significant waste producer (Reiter et al., 2020). Buildings, once constructed, require energy for heating, lighting, appliances, and air conditioning, and often experience heat loss due to poor insulation.

Sadler (2021) outlined seven sustainable construction principles contributing to a greener built environment while reducing carbon footprints: sustainable design, energy efficiency, durability, indoor air quality, waste reduction, sustainable building materials, and water conservation (Figure 2).

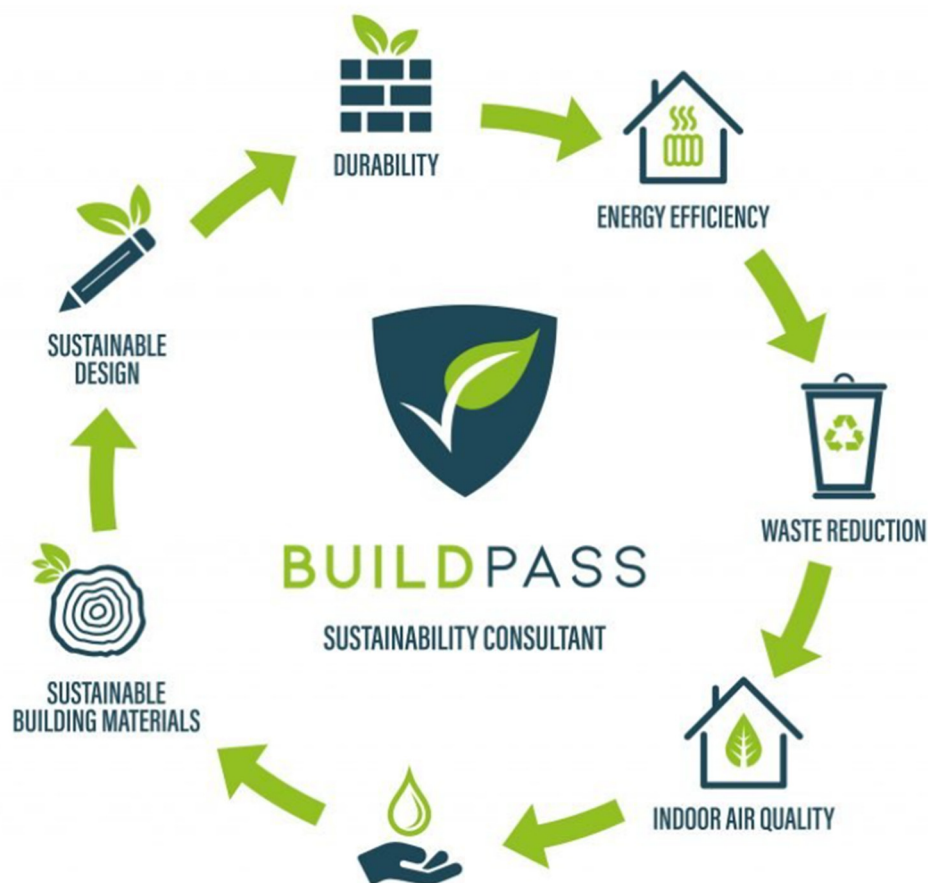


Figure 2. Seven principles of sustainable construction

There is a growing recognition among construction companies of the value of green and sustainable buildings. In 2021, U.S. construction companies invested over \$86 billion in green building projects, aiming to reduce the environmental impact of buildings and create energy-efficient, healthier, and more comfortable living and workspaces (Mariotti, 2023).

Recent positive changes in the construction industry's lifecycle, encompassing planning/design, materials manufacturing, construction, usage, and demolition (Blanco et al., 2021), reflect an increased adoption of SBPs. These practices include reducing demand for main resources through design and process optimization (e.g., improved building footprints, reduced waste), expanding closed-loop circularity for construction materials (e.g., reduced recycling-yield losses and increased usage of scrap material) (Sadler 2021); altering concrete and steel processing methods (Reiter et al., 2020); shifting to more energy-efficient materials and equipment (e.g. substitution by higher-performing materials, low-carbon materials, and electrification of heavy machinery) (Blanco et al., 2021); lowering emissions during construction material production (e.g., technology advancements, increased efficiencies, and electrification equipment) (Sakshi, Cerchione, & Bansal, 2020); using recyclable and renewable materials in building projects to lower toxic waste energy consumption (Niemczyk et al., 2023); viewing ESG as their main framework that guides their practices and performance on various sustainability and ethical issues (Leiva-Brondo et al., 2022). Additionally, practices like limiting the materials utilized to lower waste, constructing green buildings, monitoring waste management (e.g., separating & recycling waste), using lighter, renewable, and robust building materials are pushing traditional practices towards greater environmental friendliness. Jackson (2023) further highlights the importance of environmentally conscious building design, improved waste disposal methods, sustainable building materials, and reduced fuel consumption in the sustainability efforts of construction companies.

2.3 Benefits and Challenges of SBPs

2.3.1 Benefits of SBPs

Incorporating principles of SBPs genuinely can offer several benefits:

- **Improves a company's image and brand**

Companies focusing on sustainability and long-term success through SBPs are likely to enhance their image and brand (Flores - Hernández et al., 2020; Haseeb et al., 2019; Loučanová et al., 2021). Thus, it improves their ability to recruit and retain top talent and attract more customers and clients.

- **Attracts, retains, and motivates qualified employees**

Companies with SBPs are more likely to attract, motivate and retain diverse qualified employees because most of the current workforce prefers working with companies that positively impact the environment and society (Tessema et al., 2023). Employees in such organizations are found to be happier, feel more cared for, and are more productive (Burkus, 2016). This engagement in SBPs fosters creativity and intrinsic motivation, adding value and purpose for the workforce.

- **Attracts more customers and clients**

Companies with SBPs attract more customers, particularly among younger generations like Generation Z and Millennials, who are increasingly conscious of sustainability and environmental impact (Fabbriizzi et al., 2016; Leiva-Brondo et al., 2022). This shift affects their purchasing habits and the overall perception of the brand. Also, customers benefit from it. For instance, green buildings have shown an average operating cost savings of 10.5 percent in the first year (Mariotti, 2023).

- **Positively impacts the environment**

Companies practicing SBPs contribute to the environment and society through eco-friendly production, supply chain sustainability, sustainable product design, circular economy principles, and green marketing (de Oliveira et al., 2023; Reiter et al., 2020; Sakshi et al., 2020). These practices help in addressing climate and other environmental risks. For example, in the construction industry, the shift to renewable technologies in heating and support for the net-zero pathway has had a positive environmental impact (Reiter et al., 2020). Also, although green buildings cost between 1 percent and 12 percent more than (a similar) non-green building project, they can reduce water consumption by 20 percent to 30 percent and CO₂ emissions by up to 35 percent (Mariotti, 2023).

- **Positively impacts companies' performance**

SBPs can lead to enhanced company performance through various factors like tax benefits, attracting and retaining a capable workforce, gaining more consumers and clients, introducing innovative business methods, efficient ESG disclosures response, and attracting more potential investors (Flores - Hernández, et al., 2020; Nikolaeva & Bicho,

2011; Tanriverdi & Venkatraman, 2005). These factors contribute to both short-term outcomes and organizational resilience, reducing expenses through improved resource efficiency, lower energy costs, and waste reduction.

2.3.2 Challenges of SBPs

Despite the numerous benefits, SBPs also present several challenges:

- **Lack of the ability or willingness to genuinely implement SBPs**

The implementation of SB initiatives often necessitates significant investments in new tools, systems, or processes. Many companies, however, either do not have the will or the capacity to introduce SBPs (Kauppi & Hannibal, 2017; León-Bravo & Caniato, 2023; Meixell & Luoma, 2015). These companies may have already invested in older technology and, as a result, lack the ability or willingness to adopt the latest technology due to the significant resource allocation required for adopting new technologies that may lead to sustainability (Leonard, 2011). Transitioning to more sustainable business practices may require revamping products, systems, or processes to accommodate new methods, also necessitating substantial investment in new technology. However, many companies are either unable or unwilling to make such investments (Belz & Binder, 2017; Poelloe, 2010). Consequently, transitioning from unsustainable to sustainable practices poses a significant challenge.

- **Lack of ability or willingness to measure and track their progress on SBPs**

Another challenge is the inability or unwillingness of companies to effectively measure and track their progress in sustainability. Some companies have been accused of using SBP (greenwashing) information merely for marketing purposes without making meaningful changes (Delmas & Blass, 2010). This marketing suggests green practices without genuine implementation. Furthermore, due to the difficulty in verifying the accuracy of SBPs or sustainability performance, many companies provide inaccurate ESG reports. For instance, while about two-thirds of surveyed companies consider climate and sustainability their top priority, only 20% have made substantial progress towards their sustainability goals (Manly et al., 2022). Many companies deliberately manipulate stakeholder perceptions (Isaksson & Steimle, 2009). A significant problem with SRTs is the lack of standardization, which makes comparing and benchmarking SBPs challenging (Delmas & Blass, 2010; León-Bravo & Caniato, 2023).

- **The role of ethical dilemmas and trade-offs in SBPs decision-making.**

Sometimes, when companies attempt to introduce SBPs, they are confronted with ethical dilemmas and trade-offs. There are inherent trade-offs in striving for sustainability goals (Haffar & Searcy, 2017; Morioka & Carvalho, 2016). Companies often face situations where they must choose one option and forgo another, typically losing a benefit or opportunity. For example, a company may need to decide between offering a higher quality product with a positive environmental impact and offering it at a lower price.

- **Lack of an agency that seriously audits and verifies ESG reports**

One of the significant challenges of SBPs is the absence of an agency that rigorously audits and verifies ESG reports. Inadequate ESG data collection and processing can lead to skewed results, potentially misleading stakeholders and resulting in poor decision-making (Accenture, 2021). Most ESG reports are not authentic, exhibiting a gap between actual practices and the reports (Accenture, 2021; Milne & Patten, 2002). The self-reported nature of ESG data impacts their reliability, credibility, and validity.

3. Creative and Innovative Strategies for Effective SBPs

This study acknowledges that while companies are generally eager to identify and implement Sustainable Business (SB) strategies, not all are successful in achieving the objectives of SB, as there are no shortcuts. Despite the challenges in implementing effective SBPs, the following strategies can aid companies in improving their efforts.

- **Commitment and support of leadership team to SBPs**

Senior managers' belief in SBPs is crucial. When they commit and support SB initiatives by allocating adequate resources and time, sustainability becomes a top agenda item. Olson (2022) highlights that committed leaders are more inclined to transform their companies, take risks, and make significant investments to meet sustainability targets. Effective sustainability requires integration with other company priorities. When leadership offers robust support, it not only inspires managers and employees across all levels to actively participate in SBPs, but also encourages HR and line managers to fill roles with individuals who possess creative and innovative ideas conducive to advancing SB initiatives. Additionally, committed leadership is likely to deploy appropriate technologies and strategies, speeding up the implementation of SBPs.

- **Integrate sustainability with core business strategy**

Integrating sustainability into the core business strategy is essential for genuine SBPs. Often, sustainability is siloed in isolated, underfunded dEnergy Protection Agencyrtments (Olson, 2022). Making sustainability-oriented investments linked to business risk, opportunity, and growth is necessary (Boons & Lüdeke-Freund, 2013). Companies should review their current situation before developing a sustainability strategy, identifying areas for improvement (Flores - Hernández, et al., 2020). Balancing gradual progress with long-term transformation, focusing, being patient, and adapting and learning as SB initiatives progress are critical.

- **Setting SMART sustainability goals**

It is more likely for a company to make progress in its sustainability efforts if its goals align with the SMART criteria (Specific, Measurable, Achievable, Relevant, and Time-bound). This study emphasizes that merely setting ambitious SB goals is not sufficient; these goals must be actionable and effectively executed. Therefore, companies should formulate their SB goals to meet SMART ensuring they are supported by the necessary resources and regularly tracking progress and performance.

- **Building a diverse and qualified workforce**

Developing a diverse and qualified workforce significantly enhances a company's capacity for creativity and innovation, which positively influences its SB initiatives. Diversity in the workforce is a key driver of creativity and innovation (Tessema et al., 2023). The more creative and innovative a company, the more adept it becomes at implementing SBPs. Commitment to SBPs begins with establishing a clear strategy for hiring and retaining a diverse workforce, who are more likely to challenge conventional methods and foster innovation.

- **Investing in sustainable technology**

A company's investment in sustainable technology can substantially benefit its SB efforts. Utilizing the latest technologies allows companies to discover innovative approaches that integrate sustainability into their value chain (Olson, 2022). For example, the use of renewable resources and eco-friendly materials, which can be recycled and reused without sacrificing product quality, necessitates investment in cutting-edge technologies. Research and development (R&D) play a crucial role in this process.

- **Presence of effective legislative and regulatory actions**

The likelihood of companies prioritizing SBPs increases with the presence of effective legislative and regulatory actions. These actions can either incentivize or disincentivize companies in their operational approaches (León-Bravo & Caniato, 2023). León-Bravo, Caniato, and Caridi (2021) highlight that regulatory pressures compel companies, especially in the food industry, to implement health and safety practices within their supply chains, thereby enhancing their performance quality. Legislative and regulatory agencies can spur innovations that reduce waste and pollution. Therefore, providing tax deductions, rebates, or other incentives is essential to encourage companies to adopt the latest technologies.

- **Collaborative efforts among numerous stakeholders and companies in each industry**

SBPs are more likely to succeed when there is a concerted and combined effort among various stakeholders and companies within an industry. Each industry represents a complex ecosystem requiring collaborative efforts from a range of stakeholders (Krishnan et al., 2020; Tachizawa & Wong, 2014). In industries like food, stakeholders include producers, manufacturers, retailers, restaurants, food services, and policymakers, each playing a distinct role. Forming strategic partnerships across industries allows companies to pool knowledge, networks, and resources to create solutions that would be challenging to achieve independently. Additionally, incentivizing stakeholders across the value chain to engage in joint actions towards sustainability is crucial.

4. Conclusions, Implications, and Direction for Future Research

Sustainability has emerged as a timely and critical issue in business. Consequently, there has been growing interest in adopting Sustainable Business Practices (SBPs). The sustainability challenges facing our planet are considerable. While significant progress in SBPs has been observed in the food and construction industries, some companies lag behind, although their sustainability reports might suggest otherwise. This study finds that the number of companies in these industries transitioning towards business practices that consider Environmental, Social, and Governance (ESG) factors is on the rise. However, much more needs to be done.

This study highlights that SB does not occur overnight but requires a synchronized, integrated, and effective use of financial, human, and social resources. Despite the challenges in adopting SBPs, converting these challenges into business opportunities can be beneficial. Companies should view the challenges of SBPs not as obstacles but as incentives for sustained competitive advantage.

The study contends that the sustainability challenges faced by companies are interconnected and complex, necessitating a deep understanding of these challenges to avoid solving one problem while creating another. SBPs should be seen as a vital component of a company's overall performance, requiring a strategic approach to sustainability that goes beyond influencing reputation/brand, merely meeting regulations, or achieving short-term operational improvements.

The study emphasizes that genuine SBPs require deliberate investment and intent. Strategies that can elevate sustainability initiatives include integrating sustainability with core business strategy, leadership commitment to SBPs, setting SMART sustainability goals, building a diverse and qualified workforce, investing in sustainable technology, effective legislative and regulatory actions, and collaborative efforts among stakeholders and companies in each industry. While these strategies do not guarantee SB, their absence can adversely affect SB initiatives. The study also highlights that the benefits of SBPs can outweigh the costs and challenges.

This study has implications for both theory and practice. For theory, this study adds to the existing literature on sustainability. For practice, it offers insights for companies planning to introduce or enhance their SBPs. This study's significance lies in exploring the various dimensions of SBPs in the U.S. food and construction industries, including practices, trends, benefits, and challenges, as well as strategies to address challenges in adopting genuine SBPs. A limitation of this study is its focus on only two U.S. industries, which may limit the generalizability of the findings. Therefore, similar studies are needed in other industries and global regions. Future research should also include case studies of company's SBPs to deepen understanding of the practices, benefits, and challenges faced by U.S. companies.

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