

# Comparing Sustainability Practices of Large US Corporations: Domestic vs. International Operations

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*Large US corporations are leading the way in reshaping business practices despite the absence of a national consensus regarding sustainability policies. This study highlights the commitment of some large US corporations to environmental, social, and corporate governance criteria and their widely employed sustainability practices compared with other global corporations. A survey of Fortune 500 corporations was conducted to identify their commitment to the nine major sustainability practices across domestic and international operations. Our findings indicate that several of the surveyed corporations exhibited significant adoption of these practices both domestically and internationally. Both hypotheses were rejected in favor of alternate hypotheses.*

*Keywords: sustainability practice, US corporations, domestic operation, international operation, ESG criteria*

## **INTRODUCTION**

In highly polarized nations such as the US, sustainability-related policies have not been uniformly embraced by all political parties, elected officials, and business leaders. Regardless, an increasing number of large US corporations have integrated environmental, social, and corporate governance (ESG) principles into their business strategies. ESG represents a modern form of corporate citizenship grounded in the long-term assessment of environmental risks and related business opportunities. In the early days of the sustainability movement, financial institutions may have considered ESG factors as voluntary guidelines. However, over the past two decades, sustainability criteria have become essential for ensuring long-term viability, fulfilling legal obligations, and maintaining competitiveness in a highly volatile global market (Vogel, 2005).

Sklansky (2023) highlighted the role of institutional investors in advocating for ESG criteria in future investment decisions. In their fiduciary capacity, institutional investors show substantial interest in safeguarding their clients' financial interests by advocating ESG standards for US and global corporations. Unlike traditional "corporate social responsibility," ESG is embraced by mainstream institutional investors for its alignment with their desire for higher returns for their clients in the long run because following ESG standards reduces the risk of unexpected losses.

Miller (2023) reported that nearly half of US Fortune 500 corporations have established evident sustainability policies and are actively participating in at least one major climate initiative. However, fewer than half of these companies have a designated sustainability officer. Approximately two-thirds of Fortune Global 500 companies have made explicit sustainability commitments, but many large US corporations are still lagging behind their global counterparts in terms of sustainability efforts.

This study is novel because there is a lack of data on the level of sustainability practices adopted by large US corporations. Additionally, the sustainability-related differences between domestic and international operations of large US corporations were analyzed in this study. Our findings can help corporate leaders allocate sustainability-related resources more effectively in the future.

## LITERATURE REVIEW

In July 2000, the UN launched the UN Global Compact, a voluntary corporate citizenship initiative that committed corporations to uphold principles related to human rights, labor rights, and environmental justice. The UN invited representatives from 18 financial institutions developed guidelines for efficiently integrating ESG concerns into their asset management, brokerage services, and related research functions. This collaboration led to the creation of the “Who Cares Wins” report, which was endorsed by financial groups and overseen by the UN Global Compact (The World Bank Group, 2017). As a pioneering effort, investors adopted ESG standards to encapsulate modern corporate social responsibility, establishing globally recognized criteria for sustainability-related efforts.

In June of 2005, the UN implemented a process for the world’s largest institutional investors to establish the principles for responsible investment (PRI). PRIs provide a framework for a global investor to participate in the ESG initiative. The UN Environment Program Finance Initiative (UNEP FI) collaborated closely with the UN Global Compact to develop the PRI (PRI, 2005), inviting participation from 20 pension funds, various foundations, and 12 sovereign funds. The UN also engaged a diverse group of experts from the investment industry, intergovernmental and governmental organizations, civil society, and academic institutions to draft the PRI. The resulting six principles called for the integration of ESG criteria into the investment process and further mandated ESG corporate disclosure to ensure market transparency (The World Bank, 2022). This marked the beginning of a new era of sustainability in 2005.

Simultaneously, as early as 2005, a group of conservative policymakers expressed skepticism regarding these developments. For example, Vogel (2005) questioned the correlation between corporate social responsibility (CSR) efforts and financial performance. Their research was based on one-sided literature review that highlighted the ambiguous statistical and causal relationship between a corporation’s CSR policies and financial performance.

In summary, UN initiatives have established the financial, legal, and social foundations for ESG investments. By adopting the PRI, institutional investors acknowledged that considering ESG factors in decision making was financially prudent and aligned with their fiduciary duties (PRI, 2005). The UNEP FI published a report in 2005, reaffirming the legal compatibility of ESG considerations with the financial sector’s fiduciary duties. This report, which was authored by legal experts and asset managers, concluded that research increasingly demonstrated the links between ESG factors and long-term financial performance. Therefore, integrating ESG considerations into investing was “clearly permissible” and “arguably required in all jurisdictions” (Deringer, 2005).

In continuing efforts to guide the global economy and large global corporations toward a more sustainable future, the UN launched the Sustainable Development Goals (SDGs) in 2015. This initiative aimed to provide frameworks for large corporations to pursue sustainable practices. Commencing in 2016, the global SDGs provide an evidence-based framework for sustainable development planning and programming through 2030 (Allen, Metternicht, & Wiedmann, 2018). Designed to be more adaptable than previous mandates, the SDGs present specific sustainability targets instead of binding directives. The flexibility of these non-binding targets is considered vital for fostering sustainable behavioral change among large US corporations, allowing them to select the pathways most suitable to their unique contexts. Additionally, Whittingham, Earle, Leyva-de la Hiz, and Argiolas (2023) evaluated the normative influence

of SDGs by analyzing the language used in the sustainability reports of 164 large corporations before and after 2015. This sample was drawn from the 2019 S&P Global Sustainability Yearbook, and the reports were analyzed using computer-aided text analysis. Their study revealed that while corporations aligned their sustainability goals with only a subset of the SDGs, there was still a noticeable shift in their focus toward sustainability practices. Furthermore, the selection of SDGs by these corporations was influenced by their institutional characteristics, industry, and levels of natural resource intensity.

### **Sustainability Initiative Roles in the US and Other Developed Countries**

The US federal government has historically been a reluctant participant in the sustainability movement but has gradually advanced toward a more sustainable future. The federal government has set a target of achieving 100% carbon-free electricity generation by 2050. Favorably, legislatures in many states and the District of Columbia have adopted more aggressive timelines for achieving carbon-free power generation (Clean Energy States Alliance, 2024).

Kleimann et al. (2023) compared two significant sustainability policy initiatives: the US Inflation Reduction Act of 2022 (IRA) and European Union's Net Zero Industry Act of 2023. The IRA represents the most ambitious green policy initiative undertaken by the US government, featuring trade-distortive subsidies, including local content requirements, tax breaks, and direct subsidies for new renewable energy (RE) projects. In addition to subsidies for solar, wind, and other RE projects, funding is provided for innovation and energy-efficiency initiatives. In response, the European Union proposed the more aggressive Net Zero Industry Act in 2023, aiming to position its corporations as leaders in achieving carbon neutrality. Although green energy subsidies are comparable between these two initiatives, the EU's subsidies remain higher for RE production. The Net Zero Industry Act has broad consensus and majority support across Europe, whereas the IRA was approved by a one-vote majority in a highly polarized US political environment.

Kleimann et al. (2023) conducted a quantitative and qualitative comparison of the IRA and the Net Zero Industry Act, concluding that both initiatives may have a transformative effect on green technology industries in the US and Europe. These initiatives may assist trans-Atlantic partners, who are often competitors, in achieving their carbon reduction targets. They further recommended that both regions cooperate and share their insights on future green policy initiatives.

Bersalli, Menanteau, and El-Methni (2020) conducted a comprehensive study analyzing 20 years of data from 20 Latin American and 30 European countries by employing an econometric model. They found that policies promoting green technology have a positive and statistically significant effect on RE investment. However, tax incentives alone are insufficient to achieve the desired outcomes. The authors also discussed the effectiveness of various approaches in each region. In Europe, the share of renewables in power generation (including hydropower) increased from 1.0% in 1995 to 19.5% in 2018, whereas in Latin America, renewable electricity grew from 2.5% in 1995 to only 11.0% in 2018. Both regions require sustained support from policymakers to achieve their long-term carbon mitigation targets.

Lu et al. (2020) identified energy efficiency standards as a common strategy for energy saving and carbon mitigation. They reviewed sustainable energy policies in the US, UK, Germany, Denmark, and China, noting that despite disagreements between policymakers regarding the diverse ideological spectra of energy-saving legislation and investments, feed-in tariffs have been widely applied in all five countries to encourage RE growth.

### **Sustainability Ranking of US Corporations**

Corporate Knights is a sustainable economy media and research group founded in 2002. The organization began its global sustainability ranking in 2005 and announced its latest 2024 ranking in April 2024 (Corporate Knights, 2024). This marks the 20th annual ranking of the most sustainable global corporations. Corporate Knights describes itself as maintaining "an editorial focus on climate change, responsible investing, and the ideas, actions, and innovations that shape a sustainable economy" (Corporate Knights, 2024). As one of the pioneers in sustainability rankings, Corporate Knights is a recognized leader

in the field, although several other organizations also assess the sustainability performance of global corporations, each employing different research methodologies.

Corporate Knights uses weighted average percentile rank scores across up to 25 metrics to evaluate large global corporations with revenues exceeding one billion dollars. In the 2024 Global 100 ranking, only 15 US corporations were included, down from 20 corporations in 2023 (Corporate Knights, 2023, 2024). Table 1 reveals concerning trends for US corporations. The highest-ranking US corporation in 2024 (Autodesk Ink) was ranked 11th globally, and the 15th US corporation was ranked 87th among the top 100 global sustainable corporations. Few US companies have achieved a sustainability grade of A or higher. The sustainability rankings are volatile, with many corporations from the 2023 list failing to maintain their positions in 2024.

**TABLE 1**  
**MOST SUSTAINABLE LARGE US CORPORATIONS IN 2023 AND 2024 WITH**  
**GLOBAL RANKINGS**

<b>US Corporation Rank-2023</b>	<b>US Rank</b>	<b>Global Rank</b>	<b>Final Grade</b>
Schnitzer Steel Industries Inc	1	1	A+
Autodesk Inc	2	5	A
Evoqua Water Technologies Corp	3	6	A
McCormick and Company Inc	4	22	B+
Alphabet Inc	5	26	B+
Ecolab Inc	6	30	B+
SunPower Corp	7	35	B
Xerox Holding Corporation	8	36	B
HP Inc	9	39	B
VMware Inc	10	40	B
First Solar Inc	11	46	B-
Cisco Systems Inc	12	48	B-
Sprouts Farmers Market Inc	13	55	B-
Hewlett Packard Enterprise Co	14	67	C+
Apple Inc	15	73	C+
Gilead Sciences Inc	16	83	C+
Tesla Inc	17	86	C
Pfizer Inc	18	93	C
Danaher Corp	19	99	D+
Novavax Inc	20	100	D+
<b>US Corporation Rank-2024</b>			
Autodesk Ink	1	11	A-
Clean Harbors Inc	2	13	B+
Enphase Energy Inc	3	14	B+
SunPower Corp	4	16	B+
First Solar Inc	5	34	B
Radius Recycling	6	36	B
Tesla Inc	7	46	B-
McCormick & Company Inc	8	49	B-
Rivian Automotive Inc	9	56	B-
Cisco Systems Inc	10	64	C+
HP Inc	11	67	C+
Equinix Inc	12	69	C+

US Corporation Rank-2023	US Rank	Global Rank	Final Grade
Apple Inc	13	71	C+
Hewlett Packard Enterprise Co.	14	81	C
Prologis Inc	15	87	C

*Note. US: United States*

Hashmi et al. (2015) included 12-year-old historical data on US corporations from Corporate Knights' Global 100 rankings in their research paper, revealing that only 13 US corporations appeared in the 2011 and eight in the 2012 list. Although the number of US corporations in the Global 100 has slightly increased, there has been no significant improvement in US corporation global sustainability rankings over the past 12 years, despite greater emphasis and investment in sustainability practices (Hashmi et al., 2015).

When Corporate Knights launched its rankings in 2005, many corporations did not produce in-house sustainability reports and there were no standardized performance indicators or reported percentages for green revenue or investments. In the year preceding the 2024 Global 100 ranking (i.e., 2023), the top-ranked firms allocated 55% of their investments to sustainable projects, an increase from 47% in the previous year. This contrasts sharply with the wider range of publicly traded global corporations, where sustainable investments account for only 17% of all investments, despite revenues exceeding \$1 billion annually.

Several other organizations also provide sustainability rankings. For instance, ESG Book analyzes data from large corporations with total revenues exceeding \$10 billion (Top 100 ESG Companies, 2024). Updated monthly, ESG Book's list includes 29 US corporations among the top 100 global corporations, reflecting a higher number of American firms compared with the Corporate Knights ranking. This discrepancy may stem from differences in methodologies and the size of the corporations ranked, because Corporate Knights assesses corporations with revenues over \$1 billion, whereas ESG Book focuses on those with revenues exceeding \$10 billion. Consumers and investors must carefully examine the methodologies and criteria used by sustainability ranking organizations to make informed decisions. Evidently, the sustainability ranking industry must be streamlined to support investment and purchasing decisions effectively.

### **Large US Corporations at a Critical Juncture**

Although the UN-facilitated PRI received global attention in 2005, progress in ESG investment and corporate action to address climate change has been slower than anticipated. Many corporations and politicians, most notably in the US, remain resistant to ESG investment. As of 2023, approximately half of US state governments are attempting to prohibit their corporations from following ESG investment criteria, and their attorney generals are advising fund managers to disregard ESG considerations (Mulholland, 2023). Despite this resistance, pressures from investors, federal and several state governments, mandates from global organizations, and shifting consumer behavior have compelled many large US corporations to allocate resources to ESG initiatives. More than half of Fortune 500 corporations have a "sustainability statement" on their websites and engage in significant sustainability initiatives (Miller, 2023).

Corporations are increasingly targeting sustainably conscious consumers through aggressive or misleading green advertising, known as greenwashing. Szabo and Webster (2021) analyzed greenwashing in two studies: one involving interviews with consumer products and consulting firms, and the other analyzing consumer interactions with company websites. Through interviews, questionnaires, and neurophysiological techniques, their research revealed that many corporations employ green marketing strategies to gain a competitive advantage, even though their claims are often unsubstantiated. Therefore, greenwashing negatively affects reputation and profitability in the long term.

Dogan, Mohammed, Khan, and Binsaeed (2024) recommended that large US corporations invest in technological innovation, clean energy, and research and development to achieve environment-related goals. Their findings, which are based on a time series econometric analysis of data from US corporations from 1990 to 2022, suggest that such investments will enhance competitiveness and help the US achieve key objectives outlined in the UN SDGs and COP28 carbon targets in the long term.

Prasad (2023) conducted a case study of 3M, a Minnesota-based corporation with a history exceeding 100 years. 3M has been a leader in sustainability since the introduction of its pollution prevention pay program in 1975. The corporation's sustainability policies have evolved through continuous stakeholder engagement, emphasizing the importance of open dialogue in shaping effective sustainable practices. Notable commitments include reducing the use of virgin plastic by 57 million kilograms by 2026 and innovating production and packaging methods with recycled content and bio-based plastics. Other large US corporations are also setting ambitious sustainability targets and transforming their business practices, focusing on innovation, waste reduction, and electricity consumption from renewable sources.

### **Sustainability Practices of Fortune 500 Corporations**

The Fortune 500, which ranks the largest US corporations by revenue, published its 70th annual ranking in 2024. Fortune 500 corporations collectively represent two-thirds of US gross domestic product, with revenues amounting to \$18.8 trillion, profits of \$1.7 trillion, and a market value of \$43 trillion as of March 28, 2024. They employ 31 million people worldwide, underscoring the significance of their sustainability efforts for both the US and global business environments. Despite multiple crises and globalization over the decades, 49 corporations from the original Fortune 500 list have remained on the list for all 70 years, including corporations such as Hormel, Pfizer, and Exxon Mobil. Walmart remained the highest revenue-generating company for the 12th consecutive year (Fortune 500, 2024).

Positively, the EPA (2024) reports that by July 25, 2024, the combined annual green power usage of the top Fortune 500 Partners exceed 65.5 billion kilowatt-hours, equivalent to the annual electricity consumption of more than 6 million average American homes. At least 38 Fortune 500 corporations are producing more than 100% of their electricity needs from renewable sources, including biomass, geothermal, hydro, and solar and wind farms. Leading Fortune 500 corporations such as Walmart, General Mills, Microsoft, and Starbucks are among this group. Notably, given the diverse industries represented within the Fortune 500, sustainability policies vary significantly among corporations. Each organization must customize its sustainability policies based on its business model, values, and industrial practices. Many large US corporations prominently display sustainability statements, aiming to improve their brand reputation and explore new market opportunities by pursuing greener futures.

For a better understanding of the status of sustainability policies and motivations, the major sustainability goals and practices of selected large Fortune 500 corporations representing different industries are summarized below (Fortune 500, 2024).

#### *Walmart*

Walmart is the largest corporation on the 2024 Fortune 500 list. Walmart's sustainability aspiration is "...focus on environmental and social issues, including climate, nature, waste, working conditions, responsible recruitment, and economic opportunity for people working in product supply chains, as well as the availability of affordable, safer, and healthier products" (Walmart, 2024). The company has addressed social and environmental issues by announcing specific policy goals such as restoring at least 50 million acres of land and 1.0 million square miles of ocean by 2030 (Walmart, 2024). Their aspirations to strive for zero waste within all global operations are influenced by their innovative policy to focus on "three Rs" (recycle, reuse, and regenerate). This bold initiative allows Walmart to strive for economically sustainable products while protecting the environment. Since protein and animal products are popular in the consumer goods industry, Walmart also hopes to meet the demand for more affordable protein while practicing animal welfare, which includes humane treatment of farm animals and responsible use of antibiotics (Walmart, 2024). Finally, they aim to achieve zero emissions within their operations by 2040 and eliminate 1.0 billion metric tons of supply chain emissions by 2030 (Walmart, 2024).

#### *UnitedHealth Group*

UnitedHealth Group is ranked fourth on the 2024 Fortune 500 list. They are a service company that sells insurance under the "UnitedHealthcare" umbrella and technology-aided delivery services under "Optum." UnitedHealth Group is the largest healthcare company in the US. The company is committed to

four priorities that reflect contemporary challenges and actions, including minimizing paper use, diverting waste from landfills, and focusing on water efficiency. More specifically, regarding sustainability, they are committed to net zero emissions as they recognize the impact of climate change on people's ability to live a healthy life. They are also aware of the impact of climate change on their bottom line (UnitedHealth Group, 2024). UnitedHealth Group's sustainability goals are rooted in their long-term growth plans and supported by their business structure.

#### *Ford Motor Company*

Ford Motor Company is ranked 17<sup>th</sup> on the 2024 Fortune 500 list and they have implemented many sustainability goals. They hope to reach carbon neutrality in Europe by 2035 and globally by 2050 (Ford, 2024). Ford Motor Company is the largest automobile company in the US and is committed to carbon neutrality. The organization has partnered with Manufacture 2030 to reduce its supply chain carbon emissions. They are the first company to partner with Manufacture 2030 while aligned with the Paris Climate Agreement. This feature sets them apart from any other automobile company in the US.

#### *Valero Energy*

Valero Energy is ranked 29<sup>th</sup> on the 2024 Fortune 500 list. They are a downstream petroleum company known for the marketing and transportation of fuels and petrochemical products. This corporation has many goals for carbon emissions reduction, including "...reduce and displace companywide greenhouse gas (GHG) emissions for scopes 1, 2, 3, and 4 by more than 45 million metric tons of CO<sub>2</sub>e by 2050." Another goal is 100% GHG emissions reduction/displacement for scopes 1 and 2 by 2035 (Valero, 2024).

#### *Target Corporation*

Target Corporation is ranked 37<sup>th</sup> on the 2024 Fortune 500 list. This retail corporation operates a chain of discount department stores and hypermarkets. It is notable for its focus on upscale and trend-forward merchandise at lower costs. Target is the seventh largest retailer and American-owned private employer in the US. Target's sustainability strategy is called "Target Forward." Their vision is to create an equitable and sustainable future in collaboration with consumers and other stakeholders. Target aims to design and elevate sustainable brands, innovate to eliminate waste, and accelerate opportunities and equity to achieve this strategy. By adopting a holistic approach to sustainability, Target Forward's efforts are part of an ambitious project to appeal to sustainability-focused consumers, invest in sustainable processes, and maintain competitiveness in an ever-changing industry (Target Corporation, 2024).

#### *The Home Depot*

The Home Depot is ranked 23<sup>rd</sup> on the 2024 Fortune 500 list. Home Depot is the largest home improvement store in the US. Examining their carbon reduction goals reveals that they have allocated significant resources by initiating GHG emission reduction efforts. They have focused on all three aspects of GHG reduction (direct, indirect, and supply chain emissions). The corporation has projected that by 2030, scope 1, 2, and 3 GHG emissions will be reduced by 42%. They are also projecting that by fiscal year 2030, they will have produced/procured 100% renewable electricity in 90% of their forklift distribution centers, and many of these stores will be hydrogen-powered by the end of fiscal year 2029 (The Home Depot, 2024).

We aimed to identify the current state of sustainability commitment among Fortune 500 corporations, focusing on their use of various sustainability practices in domestic and international operations. Following a comprehensive literature review and interviews with a select group of corporate executives, the following research questions and hypotheses were formulated.

***RQ1:*** *What are the most widely used sustainability practices adopted by large US corporations in their domestic and international operations?*

*H1a: Large US corporations exhibit unequal levels of involvement in adopting sustainability measures in their domestic and international operations.*

*H1b: Large US corporations are more actively involved in adopting sustainability measures in their domestic operations compared with their international operations.*

## **METHODOLOGY**

We employed an online questionnaire administered to Fortune 500 corporations selected from the 2024 rankings announced on June 3, 2024. Based on a comprehensive literature review and approximately 45 min meetings with senior executives from five large corporations, a list of nine widely employed sustainability practices was compiled. Hashmi et al. (2015) also included most of these practices in their survey of Fortune 500 firms.

We conducted our review process at the university level, as sanctioned by the Institutional Review Board. Respondents were educated about any potential privacy-related risk and informed consent was obtained before they could access the questionnaire. A questionnaire containing a list of the nine sustainability practices and demographic information was formulated and later distributed via emails to senior leaders responsible for sustainability-related decisions, including the chief operating officer, vice president international, or vice president of marketing. In some cases, the survey was administered to sustainability officers. Two reminder emails were sent at 10-day intervals. Corporations in the financial sector and business services were excluded from the sample owing to their limited involvement in the sustainability practices and initiatives surveyed in this study. This exclusion reduced the sample from 500 to 349 corporations. Additionally, 18 corporations were excluded because they did not engage in international operations. Despite obtaining authenticated e-mail addresses, 24 e-mails were undelivered owing to security filters or personnel changes in the target corporations, resulting in an effective sample size of 307.

Following three email distributions and some telephone follow-ups, 64 usable responses were received, representing a response rate of 20.85%. Non-response bias was assessed by tabulating the population and sample based on their sizes (annual revenue), as shown in Table 2. The sample slightly over-represents smaller corporations (those with revenues less than \$10 billion and between \$10 and \$15 billion) and under-represents substantially large corporations (those with revenues exceeding \$15 billion to \$25 billion and over \$25 billion). This discrepancy may be because the senior executives of large corporations did not perceive value in the time required to respond to the survey request, with no incentive to respond or share their information. Several executives declined participation. Despite the relatively low response rate, the sample is adequately representative of all corporate sizes, and no significant non-response bias was observed.

**TABLE 2**  
**NUMBER OF CORPORATIONS IN THE POPULATION AND SAMPLE (BASED ON ANNUAL REVENUE)**

<b>Corporation Revenue</b>	<b>Corporations in Population</b>	<b>Corporations in Sample</b>
Less than \$ 10 billion	66 (21.50 %)	16 (25.00%)
\$ 10–15 billion	72 (23.45 %)	17 (26.56 %)
Over \$ 15 billion to \$ 25 billion	68 (22.15 %)	13 (20.32%)
More than \$ 25 billion	101 (32.90 %)	18 (28.12%)
Total	307	64

The data were analyzed using the SPSS software. Descriptive analysis and McNemar's test were employed for hypothesis testing. McNemar's test examines possible differences in a dichotomous



dependent variable between two related groups. This test functions similar to the paired-samples t-test but is designed for dichotomous variables, rather than continuous dependent variables.

## RESULTS

Table 3 summarizes the responses from surveyed corporations regarding their sustainability practices in both domestic and international operations, along with the results of McNemar’s test. Sustainability practices are listed based on their prevalence in domestic operations. The most widely adopted practice is “investing in energy-efficient methods,” as reported by 95.3% of corporations for domestic operations and 62.5% for international operations. The second and third most frequently used domestic practices are “using solar power” and “waste reduction and recycling methods.”

Hashmi et al. (2015) conducted a similar survey of Fortune 500 corporations approximately 12 years ago and found “investing in energy-efficient methods” to be the most prevalent practice, although it was reported by only 76% of corporations at that time. Fewer corporations examined by Hashmi et al. (2015) employed all other sustainability practices compared with the 2024 results presented in this study.

**TABLE 3**  
**NUMBER OF LARGE US CORPORATIONS ADOPTING SUSTAINABILITY PRACTICES**  
**AND MCNEMAR’S TEST RESULTS\***

Sustainability Practices	Domestic Operations	International Operations	P-Value (two-sided significance)
Investing in energy-efficient methods	61 (95.3%)	40 (62.5%)	<0.001
Using solar power	59 (92.2%)	45 (70.3%)	0.003
Waste reduction and recycling methods	58 (90.6%)	43 (67.2%)	0.001
Using wind power	57 (89.1%)	37 (57.8%)	<0.001
Carbon reduction and mitigation methods	49 (76.6%)	37 (57.8%)	0.036
Using biofuel or biomass	43 (67.2%)	29 (45.3%)	0.038
Supporting environmental organizations	37 (57.8%)	30 (46.9%)	0.337
Using hydro power	30 (46.9%)	42(65.6%)	0.050
Trading carbon credits	24 (37.5%)	38 (59.4%)	0.016

\*Usable sample size was 64.

Politicians across a broad ideological spectrum of American politics advocate for investments in energy-efficient methods, including those skeptical of the sustainability movement. Over the past 12 years, various state mandates and substantial state subsidies have prompted many US Fortune 500 corporations to adopt RE sources, including solar, wind, and biofuels. Alongside RE practices, recycling and waste management are widely implemented among the surveyed corporations. Conversely, “trading carbon credits” is the least adopted sustainability practice owing to the lack of stringent carbon reduction mandates from the federal or state governments. However, “trading carbon credits” and “using hydropower” are more prevalent in corporations’ international operations compared with the same practices in their domestic operations. This discrepancy is partially due to stringent carbon reduction mandates imposed by European Union countries and the greater use of hydropower in many international locations compared with its adoption in the US.

In summary, the surveyed Fortune 500 corporations employ seven out of nine sustainability practices more extensively in the US than in their international operations. However, the remaining two practices

(using hydropower and trading carbon credits) are more frequently employed in international operations than in domestic operations. Table 3 indicates that the differences in the use of sustainability practices between domestic and international operations are statistically significant for eight of the nine practices, leading to both null hypotheses being rejected in favor of the alternative hypothesis (H1a and H1b) at a significance level below 0.05.

## **DISCUSSION AND CONCLUSION**

The US government has not yet ratified the Kyoto Protocol; however, more stringent environmental policies are promoted by global organizations and adopted by global businesses. Regardless, a substantial segment of the US business community recognizes the need for sustainability policies to ensure long-term viability. The findings illustrated in our literature review and data surveyed from Fortune 500 corporations indicate that large US corporations have proactively adopted sustainability measures as a strategic decision.

There is a statistically significant difference in the involvement in sustainability practices between domestic and international operations. Larger US corporations have employed sustainability practices more extensively in their domestic operations, where a majority are actively engaged. Over half of the surveyed corporations reported that their international revenues account for less than 15% of their total income. Comparisons with a similar study conducted over 12 years ago (Hashmi et al., 2015) reveal significant progress. Specifically, sustainability practices have increased by approximately 40% to 80% in domestic operations and 50% to 100% in international operations. Policymakers in the US may consider implementing additional incentives for the increased use of sustainability practices in domestic operations, and academic researchers can further analyze the motivations behind efforts at adopting sustainability practices. Furthermore, large US corporations can use the presented data to compare their efforts with other US corporations. In summary, this study's findings can benefit policymakers, citizens, academics, leaders in large US corporations, investors, and interested consumers.

### **Limitations**

One limitation of this study was the relatively low response rate; however, the sample effectively represents the target population. Furthermore, our findings are only applicable to large US corporations with annual revenues over \$7 billion (Fortune 500). Future studies should survey and compare other categories of corporations using a similar questionnaire, such as all Fortune 1000 corporations (annual revenue over \$2.5 billion), Fortune Global 500, and Fortune 500 Europe. However, obtaining verifiable contact information and maintaining an acceptable response rate is challenging.

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