How Sustainable Practices Affect the Financial Performance of Glove Manufacturers

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Abstract

This qualitative study used sustainable development (ESG) theory to investigate the relationship between sustainable business practices and the financial performance of the major players in the glove industry. This investigation focused primarily on the ESG practices and financial outcomes of glove manufacturers. The relationship between glove manufacturers' financial performance and their practices in terms of sustainability strategy was studied and investigated using a qualitative case study and multiple sources, such as in-depth interviews and content analysis of the selected twenty glove manufacturers' business executives and their financial documents. The content of their ESG practices and ratings was studied to better understand the impact of sustainable practices on the financial results of glove manufacturers.

Keywords: ESG, sustainability, financial performance, glove manufacturing

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Chapter 1: Introduction

Multinational corporations now place a high value on sustainability as a business strategy (Derqui, 2020). Many business executives believe that planning for sustainability can help them increase their net income (Shabbir & Wisdom, 2020). Studies have found a link between strong Environmental, Social, and Governance (ESG) performance, higher equity returns, and lower downside risk (Whelan et al., 2021). According to Alareeni and Hamdan (2020), firms with higher financial leverage and more assets had better scores on ESG, corporate social responsibility (CSR), environmental, and corporate governance disclosure practices. These authors concluded that ESG can enhance investment potential (Whelan et al., 2021; Alareeni & Hamdan, 2020). However, one contemporary business problem related to Environmental, Social, and Governance (ESG) is the requirement for a company to align its operations with ESG principles while meeting stakeholder expectations. Implementing a sustainability strategy can be difficult for businesses, such as glove manufacturers, that still need to prioritize sustainability or have outdated practices that may harm the environment or social well-being (Wu et al., 2020).

The world's glove industry has an annual market cap of $8.7 billion (Allied Market Research, 2023). Malaysia, Thailand, and China are major manufacturing hubs for the glove industry. However, the glove industry faced numerous challenges, for example, competition pressures, price fluctuations, regulatory requirements, raw material dependence, and a need for sustainability efforts (Wu et al., 2020). Most importantly, glove manufacturers are out of date and must adhere to sustainable business practices in order to continue operations. Sustainability is as much a corporate culture as an additive. Sustainable glove manufacturers focus on reducing their environmental footprint by adopting eco-friendly practices, using renewable or recycled materials, optimizing energy efficiency, minimizing waste generation, and implementing proper waste management and recycling processes (Wu et al., 2020).

This qualitative case study investigated the relationship between sustainable business practices and the financial performance of the glove industry's major players (see Appendix A). The relationship between glove manufacturers' financial performance and their impacts on the sustainability strategy was examined through in-depth interviews and a review of archival documents of content analysis on the selected twenty glove manufacturers' ESG practices and ratings to understand the degree of impact of sustainable practices on glove manufacturers' financial results.

Background of the Problem

One contemporary business problem related to Environmental, Social, and Governance (ESG) is the requirement for glove manufacturers to align their operations with ESG principles while meeting stakeholder expectations on sustainability performance (Silva et al., 2019). Aligning their operations with ESG principles can be difficult for glove manufacturers that have not previously prioritized sustainability or have outdated practices that may harm the environment or social well-being (Boersma, 2017; Loganathan & Krishnan, 2022). Glove manufacturing, like any other industrial sector, significantly impacts sustainability (Loganathan & Krishnan, 2022). Glove manufacturing can have environmental implications due to raw material extraction and processing, energy consumption, waste generation, and emissions (Patrawoot et al., 2021). Moreover, glove manufacturing is energy-intensive, and greenhouse gas emissions during production add to the adversities. End-of-life waste of this product is undeniably high due to single-use patterns (ESG Thematic Report, 2022). Sustainable glove manufacturers focus on reducing their environmental footprint by adopting eco-friendly practices, using renewable or recycled materials, optimizing energy efficiency, minimizing waste generation, and implementing proper waste management and recycling processes (Wu et al., 2020). Sustainable glove manufacturing considers social aspects such as fair labor practices, worker safety, and employee well-being. It includes ensuring safe working conditions, providing fair wages and benefits, promoting diversity and inclusion, and supporting the overall welfare of employees. Ethical and responsible labor practices are essential for sustainable manufacturing—the legislative proposal to ban marketing goods made with forced labor (MARGMA, 2023). Forced labor import bans are legislatively mandated and government-enforced measures that prevent foreign-made goods from entering a country if forced labor is suspected of being used in production (Pietropaoli et al., 2021). For instance, the U.S. blocks medical gloves imported from the world's largest manufacturer over 'forced labor' (Washingtonpost.com, 2020). Therefore, the sustainability of glove manufacturing goes beyond the production process and extends to the entire supply chain. Sustainable glove manufacturers must collaborate closely with their suppliers to ensure responsible raw material sourcing, traceability, and adherence to ethical and environmental standards throughout the supply chain, which includes monitoring supplier practices and promoting sustainable practices within the industry.

Statement of the Research Problem

The problem is that ESG compliance can be problematic for glove manufacturers who have not prioritized sustainability or use outdated practices that may harm the environment or social well-being. Pollman (2022) presented three challenges faced by such businesses:

1. Businesses experienced challenges related to the difficulty of empirically showing a causal relationship between ESG and financial performance.

2. A proliferation of ratings can seem at odds with the understood purposes of ESG or enable sustainability arbitrage.
3. Businesses are challenged by tradeoff issues such as carbon emissions and labor interests that cannot be reconciled on their terms.

Research is needed to examine and validate the relationship between glove manufacturers' financial performance and their impacts on the sustainability strategy through in-depth interviews and case studies. Such research would allow manufacturers and researchers to understand the degree of impact of sustainable practices on glove manufacturers' financial results. The practices of sustainability of glove manufacturers will affect the consumer population of close to eight billion people with harmful products to the environment and social well-being if their business is not following the ESG principles.

Purpose Statement

This qualitative study aimed to investigate the relationship between sustainable business practices and the financial performance of the glove industry's major players. To better understand the relationships, qualitative research allows researchers to pose questions that participants' experiences will answer (Kemparaj & Chavan, 2013). Extending knowledge and understanding necessitates investigating the practical applications of specific social phenomena and researching significant issues as they emerge. A more in-depth examination of these professionals' experiences would be possible with qualitative research (Silverman, 2020). By thoroughly examining a business executive's actions and cognitive processes, qualitative research would help place the data collected from glove manufacturers in the context of the situation. The relationship between glove manufacturers' financial performance and their impacts on the sustainability strategy was examined and validated through case studies on the selected 20 glove manufacturers' ESG practices and ratings to determine the degree of impact of sustainable practices on glove manufacturers' financial results. This case study and content analysis research included in-depth interviews and a review of archival documents to support rigorous, transparent, and flexible analysis of in-depth interview data (Deterding & Waters, 2021).

Research Questions

I aimed to interview the business executives of glove manufacturers about their sustainability practices and financial outcomes. The main research question was how sustainable practices affect glove manufacturers' financial performance. This investigation primarily focused on the ESG practices of glove manufacturers:

RQ1. How do glove manufacturers integrate ESG into their sustainable strategies?

RQ2. What is the implementation ratio of ESG against the 35 sustainable key issues listed in Table 1 (MSCI, 2023)?

RQ3. What are the ESG ratings and rankings of glove manufacturers?

RQ4. What are glove manufacturers' perceptions of the impact of sustainability on their financial outcomes following the practices?

RQ5. What are glove manufacturers' experiences of the impact of sustainability on their financial outcomes following the practices?

RQ6. What is the relationship between glove manufacturers' net income and ESG rating?

Table 1

ESG Key Issue Framework

3 pillars	10 themes	35 ESG key issues
Environmental	Climate	Carbon emissions
		Product carbon footprint
		Financing environmental impact
		Climate change vulnerability
	Natural Capital	Water stress
		Biodiversity & land use
		Raw material sourcing
	Pollution & Waste	Toxic emissions & waste
		Packaging material & waste
		Electronic waste
	Environmental Opportunities	Clean tech
		Green building
		Renewable energy
Social	Human Capital	Labor management
		Health & safety
		Human capital development
		Supply chain labor standards
	Product Liability	Product safety & quality
		Chemical safety
		Consumer financial protection
		Privacy & data security
		Responsible investment
		Insuring health & demographic risk
	Stakeholder Opposition	Controversial sourcing
		Community relations
	Social Opportunities	Access to finance
		Access to health care
		Access to communication
		Opportunities in nutrition & health
Governance	Corporate Governance	Board
		Pay
		Ownership
		Accounting
	Corporate Behavior	Business Ethics
		Tax Transparency

(Source: https://www.msci.com/our-solutions/esg-investing/esg-ratings/esg-ratings-key-issue-framework)

Researchers such as Sargani et al. (2020) have studied sustainability use theories like ecosystem, bottom line, and environmental justice theories in their research, policy development, and practical application. They frequently assume that inclusive and participatory methods are necessary to address sustainability challenges. They promote the involvement of various stakeholders, including communities, civil society organizations, businesses, and governments, to encourage cooperation, shared decision-making, and collective action. According to the Malaysian Rubber Glove Manufacturers Association (MARGMA, 2023), the goals of glove manufacturers for 2023 give ESG a higher priority. While ESG data collection and reporting is the first step of a company's sustainability journey, more is needed to lead to financial improvement. According to McKinsey (2023), studies show that strong ESG performance is positively correlated with higher equity returns and a reduction in downside risk (MSCI, 2023; Whelan et al., 2021). Furthermore, Morgan Stanley developed ESG rating criteria measuring a company's resilience to long-term, financially relevant ESG risks (MSCI, 2023).

To better understand how sustainable practices affect the financial performance of those particular glove manufacturers, this qualitative study employed in-depth interviews and a review of archival documents. The in-depth interview of the case study method entails speaking with participants whose positions are at the executive level in charge of sustainability activities, such as sustainability committees. The case study method examines the selected glove manufacturers' financial reports and their ESG ratings and rankings, for example, financial reports such as income statements and ESG ratings and rankings from Bloomberg's CSRHub application. These methods were used to collect extensive qualitative data, participant feedback, and knowledge of challenging sustainability issues.

Theoretical Framework

According to Brundtland (1987), sustainability refers to meeting the current generation's needs without jeopardizing future generations' ability to meet their own needs. It involves the responsible use and management of conservation of natural resources, environmental protection, and the promotion of social and economic well-being for current and future generations (Brundtland, 1987). Many researchers and scholars of environmental science, economics, ethics, and sustainability have drawn on the ideas of sustainability presented in the Brundtland Report on their research, policy recommendations, and practical initiatives related to sustainability and sustainable development (Brundtland, 1987). In particular, Herman Daly, an ecological economist known for his work on ecological and steady-state economics, referenced the Brundtland Report in his writings on sustainable development (Goodland & Daly, 1996). Donella Meadows, a systems analyst, and author of *The Limits to Growth*, often intersects with the concepts of sustainable development presented in the Brundtland Report (Meadows et al., 1972). Amartya Sen, the Nobel laureate economist, has discussed sustainability's ethical and philosophical aspects, often referring to the Brundtland Report's ideas (Hamilton, 2019). Ernst Ulrich von Weizsäcker, a co-chair of the UNEP International Resource Panel, has contributed to developing sustainable resource management concepts (Von Weizsäcker et al., 2009). Joan Martinez-Alier, an ecological economist known for his work on ecological conflicts, has referenced the Brundtland Report in his studies on environmental justice and sustainability (Haberl et al., 2011). Johan Rockström, a prominent Earth system scientist who has worked on the concept of planetary boundaries, aligns with the idea of safeguarding the environment for future generations. Lastly, Jeffrey D. Sachs, the economist and author, has discussed sustainable development extensively, often referring to the Brundtland Report in his work (Sachs, 2015).

The Brundtland Report introduced the concept of sustainable development and emphasized the importance of addressing environmental, social, and economic issues in a balanced and integrated manner (Brundtland, 1987). ESG criteria are a set of standards investors and organizations use to evaluate a company's or investment's sustainability and ethical impact. The Brundtland Report is often seen as a foundational document that laid the groundwork for developing the ESG framework. The Brundtland Report highlighted the importance of protecting the environment and sustainably managing natural resources. It called for addressing environmental challenges and ensuring that development does not harm the planet. ESG criteria often include environmental factors, such as a company's carbon footprint, resource use, and efforts to reduce environmental impact. The report also emphasized the need to address social issues and improve the well-being of all people, especially those living in poverty. ESG criteria incorporate social aspects, including labor practices, diversity and inclusion, community engagement, and human rights. The Brundtland Report acknowledged the significance of good governance in managing resources and making decisions that benefit society. ESG criteria assess the governance practices of companies, including board composition, executive compensation, transparency, and ethical leadership.

Therefore, this study focused on the perceptions of glove manufacturers concerning matters connected to these 35 key issues of ESG. Examining glove manufacturers' financial performance in relation to their sustainable practices was aided by examination through the framework of sustainability. This theoretical framework is an essential component of research because it provides the theoretical foundation for the study, guides the research process, and aids in the interpretation of research findings. It serves several essential functions in research and academic work. It is an essential tool for ensuring that research is rigorous and relevant within the larger academic or scientific context.

Definition of Terms

The definition of terms provided below aided comprehension because they were relevant to this study.

1. Financial performance: It refers to the outcomes or performance indicators that reflect a company or organization's financial position and performance within a specific period (Anderson, 2020).
2. Glove manufacturing**:** Glove manufacturing typically includes material selection, glove design, material preparation, glove forming, vulcanization or curing, quality control, and packaging (Johns Hopkins Medicine, 2008). It refers to the process of producing gloves, which are hand coverings designed to protect the hands from various environmental factors, substances, or potential injuries.
3. Sustainability: Sustainability refers to the ability to meet the current generation's needs without jeopardizing future generations' ability to meet their own needs. It involves the responsible use and management of conservation of natural resources, environmental protection, and the promotion of social and economic well-being for current and future generations (Brundtland, 1987).

Definition of Abbreviations

Below, the definitions of abbreviations are provided to aid in the comprehension of the commonly used acronyms throughout this paper.

1. CSR: CSR stands for Corporate Social Responsibility, which refers to society's

ethical and discretionary expectations of organizations at a given time (Carroll, 1979).

2. ESG: ESG stands for Environmental, Social, and Governance. It is a framework to assess companies' and investment portfolios' sustainability and ethical practices (GSIA, 2020).
3. EES: EES stands for environmental, economic, and social, which each is part of the factor to measure sustainability performance (Alsayegh et al., 2020).
4. GHG: GHG stands for greenhouse gas (MARGMA, 2023).
5. GOTS: GOTS stands for Global Organic Textile Standard. It is the worldwide leading textile processing standard for organic fibers, including ecological and social criteria, backed up by independent certification of the entire textile supply chain (Syuib, 2022).
6. ISO: ISO stands for International Organization for Standardization. It is a worldwide federation of national standards bodies. ISO is a nongovernmental organization comprising standards bodies from more than 160 countries, with one body representing each member country (Syuib, 2022).
7. MARGMA: MARGMA stands for Malaysian Rubber Glove Manufacturers Association. It was established on 28 June 1989 as a non-profit industry association that extends a range of services to members comprising Malaysian rubber glove manufacturers and associated suppliers and supporting organizations globally (MARGMA, 2023).
8. MSCI: MSCI stands for Morgan Stanley Capital International. It is an investment research firm that provides stock indexes, portfolio risk and performance analytics, and governance tools to institutional investors and hedge funds (MSCI, 2023).

9. ROA: Return on Assets, is a financial metric used to measure a company's profitability relative to its total assets. It indicates how efficiently a company is using its assets to generate profit (Penman, 2013).
10. ROE: Return on Assets, is a financial metric used to measure a company's profitability relative to its total assets. It indicates how efficiently a company is using its assets to generate profit (Penman, 2013).
11. ROI: Return on Investment, is a financial metric used to evaluate the profitability of an investment. It measures the gain or loss generated relative to the amount of money invested (Penman, 2013).
12. SDG: SDG stands for Sustainable Development Goals. It provides a comprehensive framework for addressing global challenges and promoting sustainable development worldwide (Brundtland, 1987).
13. WCED: WCED is also known as the World Commission on Environment and Development (Brundtland, 1987). The Brundtland Commission aided in directing the world's nations toward sustainable development.
14. WRAP: WRAP stands for Worldwide Responsible Accredited Production. It is an internationally recognized social compliance certification body (Medline, 2023).

Significance of the Problem

The problem is significant in terms of sustainability in glove manufacturing. The portfolios managed by professionals integrating various ESG assessments have reached a significant $17.5 trillion globally, demonstrating an inclination towards sustainability among primary stakeholders such as investors (Kimbrough et al., 2023). The increased global adoption of ESG principles and elements has occurred because of the potential benefits for individuals and organizations.

According to Wu et al. (2020), sustainable practices in glove manufacturing help reduce environmental impact, conserve natural resources, mitigate climate change, and protect ecosystems. By adopting sustainable measures, manufacturers contribute to the overall goal of environmental preservation and combatting global challenges. Sustainability in glove manufacturing ensures fair and safe working conditions for employees, promoting social welfare and ethical labor practices. There has been an increasing demand for sustainable products from consumers, businesses, and regulatory bodies in recent years (Mhatre et al., 2021). Sustainable glove manufacturing allows companies to meet this demand, gain a competitive edge, enhance their reputation, and build customer loyalty. According to Sandamini and Dissanayake (2022), the critical part is based on the significant environmental-related areas and their applicable environmental management practices. Their study revealed a strict link between environmental performance and the financial results of the case-studied organization. Sustainability also helps manufacturers comply with sustainability regulations and industry standards. Embracing sustainability in glove manufacturing is crucial for companies' long-term viability and resilience in a rapidly changing world (Abdi, 2022). By integrating sustainable practices, manufacturers can reduce operational costs, improve efficiency, mitigate risks, and position themselves as responsible and future-ready organizations (Paul et al., 2014). ESG has acute severity and immediate urgency for glove manufacturers to meet the requirements, according to the Malaysian Rubber Glove Manufacturers Association (MARGMA, 2023).

Limitations

One limitation of this study is my experience in the glove industry. As an executive and practitioner in the glove industry for over thirty years, I am aware that gloves are essential products that may not have a direct impact during economic downturn. This could have imposed my own bias when analyzing the data and associating specific pandemics with negative economic conditions related to data interpretation. Another research bias limitation could have occurred if I inadvertently introduced my own moral perspective into the presentation of findings, introducing distortions (Chase, 2013). Participants in the study were encouraged to talk through open-ended questions, but they may talk extensively about themselves, their experiences, and the critical nature of their leadership competencies, sensationalizing their actual contributions to organizational success. The third limitation is the design limitation. Not all glove manufacturers are publicly traded and the market and competition are constantly changing; therefore, their financial statements and ESG ratings may be unavailable. The fourth limitation is that involving samples and selection of the instruments used to collect the data and time constraints using ATLAS.ti software. When data collected by researchers is interpreted subjectively, it can affect the success of the research results. Participants may be aware of the researcher and their biases, and the researcher may be aware of participant characteristics. In addition, the researcher's personal bias must be taken into account in order to successfully interpret data for a project that requires data in addition to the interpretation. As a result, it is critical to maintain objectivity while conducting a study, developing a thorough research plan, and reviewing the research procedure with the professor and cohort. To validate the findings and the reliability of the study, triangulation was used to ensure a comprehensive and well-rounded analysis.

Organization of the Study

In Chapter 1, the problem statement and the purpose and significance of the research were introduced. Chapter 2 includes a review of the literature on glove manufacturing, sustainability, and the financial outcomes of sustainable businesses. The literature review focuses on research on approaches to sustainability and financial, environmental, social, and manufacturing outcomes, which also discusses current glove research. Chapter 3 discusses the research design, data collection, data analysis, and limitations. The study takes into account validity, reliability, and ethical concerns. Chapter 4 summarizes the findings of the research. Lastly, Chapter 5 contains findings related to glove manufacturers' ESG practices and financial performance, as well as areas for future research.

Chapter 2: Review of the Literature

Multinational corporations now place a high value on sustainability as a business strategy (Derqui, 2020). The problem is that ESG compliance can be problematic for glove manufacturers who have not prioritized sustainability or use outdated practices that may harm the environment or social well-being. Therefore, research is needed to examine and validate the relationship between glove manufacturers' financial performance and their impacts on the sustainability strategy through in-depth interviews of case studies. Such research would allow manufacturers and researchers to understand the degree of impact of sustainable practices on glove manufacturers' financial results. This qualitative study aims to investigate the relationship between sustainable business practices and the financial performance of the glove industry's major players.

It was essential for me as researcher to understand the relationship between sustainable business practices and the financial performance of glove manufacturers, as well as how sustainability has become a necessary practice in the glove manufacturing industry. First, it was critical to understand what sustainability is, what sustainability approaches have been used, and what current sustainability research has been conducted. Second, it was critical to understand the financial and business outcomes of practicing sustainability and current research on sustainable business outcomes. Third, it was critical to comprehend what glove manufacturing is, its history, and current research. Last but not least, it was critical to understand the research on sustainability being conducted in glove manufacturing. I, therefore, conducted a thorough and systematic examination of the four critical areas mentioned above, which are sustainability, sustainable business financial outcomes, glove manufacturing, and history of the sustainability in glove manufacturing being studied. This literature review begins with an examination of sustainability.

Sustainability

Sustainability is a broad and multifaceted concept that refers to the ability to maintain or continue a particular state or condition over time without significantly impacting the environment, society, or economy (Hansmann, 2010). It entails the responsible use and management of resources to meet current needs without jeopardizing future generations' ability to meet their needs (Quoquab & Mohammad, 2017). To increase growth and global competitiveness, many businesses include sustainability as a key goal in their strategy and operations (Porter & Derry, 2012). This trend has spread far beyond the small group of people traditionally positioned themselves as green and now includes many prominent businesses across many different industry sectors. In many cases, these efforts have significant results (EPA, 2023). Global issues like climate change, resource depletion, social inequality, and environmental degradation have given the idea of sustainability a lot more attention. Societies can work toward a more equitable and prosperous future for the present and coming generations by embracing sustainable practices and taking the long view (f et al., 2013).

Approaches to Sustainability

There are many different ways to achieve sustainability, each of which is aimed at encouraging socially and environmentally responsible behaviors and safeguarding the health of our planet over the long term. Sustainability refers to policies, projects, and practices to protect a specific resource (Brundtland, 1987). The Brundtland Commission aided in directing the world's nations toward sustainable development (Brundtland, 1987). The commission is also known as the World Commission on Environment and Development (WCED). It ran from 1984 to 1987. The Brundtland Commission's mandate was to explore the complex interactions between development and the environment and to propose strategies for achieving sustainable development to meet the needs of present and future generations (Brundtland, 1987). The commission's findings were published in the Brundtland report in 1987. Several approaches to sustainability aim to promote environmentally responsible practices and ensure the long-term well-being of our planet. Businesses must strategically incorporate the chosen approaches into their policies and procedures (Brundtland, 1987). Brundtland (1987) stated that the Brundtland Commission's report on sustainability provided a framework and guiding principles for sustainable development, influencing subsequent global initiatives, policies, and discussions on sustainability. It raised awareness about balancing environmental, social, and economic considerations in decision-making processes to ensure a sustainable future. One of the report's most widely quoted definitions of sustainable development is: "It is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, p. 15). The report's recommendations and insights have significantly influenced international policy discussions, environmental agreements, and development strategies. It paved the way for various initiatives, including adopting the United Nations' Sustainable Development Goals (SDGs) in 2015, which provide a comprehensive framework for addressing global challenges and promoting sustainable development worldwide (Brundtland, 1987). Organizations implement some essential sustainability approaches in their work, namely, corporate social responsibility, stakeholder theory, corporate sustainability, and the green economy.

Corporate Social Responsibility

Corporate Social Responsibility (CSR) has gained popularity as a business strategy (Smith & Johnson, 2019). It entails taking responsibility for and giving thought to how business operations may affect society and the environment (Smith & Johnson, 2019). With a focus on topics like ethical sourcing, community engagement, employee well-being, and philanthropy, many businesses now have dedicated CSR departments or initiatives. Barnett et al. (2020) suggested that CSR researchers should move toward “small data” research designs, which will enable studies to determine better causation rather than identify correlation.

Stakeholder Theory

According to the stakeholder theory, organizations must weigh the interests of all relevant parties in their decision-making processes, including those of their employees, clients, suppliers, communities, and the environment (Santos, 2011). Sustainable stakeholder theory expands on this concept by emphasizing integrating sustainability principles into the relationship between organizations and their stakeholders. It gives businesses a framework for incorporating sustainability principles into their everyday operations, decision-making, and stakeholder interactions. Organizations can accomplish their business goals and contribute to sustainable development by doing this (Garvare & Johansson, 2010). Hart and Milstein (2003) created a framework for sustainable values that connects the firm’s creation of shareholder value to the issues facing global sustainability (Hart & Milstein, 2003). By applying stakeholder theory to sustainability, a glove company can ensure that its sustainability roadmap is comprehensive, inclusive, and effective in creating long-term value for all stakeholders while minimizing environmental impact.

Corporate Sustainability

Businesses are essential to sustainability initiatives (Smith & Johnson, 2019). Many businesses implement sustainable practices like lowering carbon emissions, implementing environmentally friendly production techniques, incorporating social responsibility, and embracing sustainable supply chain management (Smith & Johnson, 2019). Pivotal environmental and social issues necessitate more radical changes than many current corporate practices, such as pollution prevention, environmental management systems, etc. Proponents of sustainable development have long recognized the potential benefits of a variety of new, innovative business models, such as those offered by the sharing economy, industrial symbiosis, product-service systems, social enterprises, and so on, but a systematic analysis of their environmental and social performances still needs to be improved (Bocken et al., 2014). Schaltegger et al. (2015) contend that the concept of business models can provide a valuable framework for analyzing disruptive change in business operations from the standpoint of sustainable development because it illuminates an organization's value creation logic and its impacts and allows for new forms of governance.

Green Economics

Green economics, also referred to as ecological economics or environmental economics, is a branch of economics that aims to incorporate social welfare and environmental sustainability into economic decision-making (Van den Bergh, 2001). Loviscek (2020) is known for coining the term triple bottom line, which emphasizes the importance of considering social, environmental, and economic factors in business decision-making. Green economics aims to develop a framework that combines ecological principles with economic decision-making (Van den Bergh, 2001). It aims to change our attention from only pursuing economic growth to taking into account the planet's and society's overall well-being (Van den Bergh, 2001).

Therefore, approaches to sustainability include corporate social responsibility, stakeholder theory, corporate sustainability, and the green economy. Researchers have agreed that corporate social responsibility entails taking responsibility for and giving thought to how business operations may affect society and the environment (Smith & Johnson, 2019);

stakeholder theory weighs the interests of all relevant parties in their decision-making processes, including those of their employees, clients, suppliers, communities, and the environment (Santos, 2011); businesses are essential to corporate sustainability (Smith & Johnson, 2019); and green economics takes into account the planet's and society's overall well-being (Van den Bergh, 2001). The following will now examine the current research on sustainability.

Current Research of Sustainability

Business sustainability is a field that is constantly changing, with new studies being published on a regular basis (Miceli et al., 2021). It refers to the practice of managing an organization in a way that meets its current needs and goals while also ensuring its long-term viability and minimizing negative impacts on the environment, society, and the economy. It is often described as a holistic approach to business that takes into account the triple bottom line (Loviscek, 2020). Business motivation, consumer motivation, financial outcomes, philanthropic outcomes, and other outcomes are some of the key and current research areas of sustainability included in this study (Loviscek, 2020).

Business Motivation

It is significant to note that different businesses and industries have different motivations for sustainability (Høgevold et al., 2014). Business motivation for sustainability is influenced by a range of elements, including ethical considerations, legal requirements, customer demand, competitive advantage, risk management, and long-term profitability (Yılmaz & Flouris, 2010). Based on their particular circumstances, values, and stakeholder expectations, some businesses may give some motivations a higher priority than others (Babiak & Trendafilova, 2011). Businesses may pursue sustainability for a variety of reasons, and frequently, a combination of factors influences this choice (Babiak & Trendafilova, 2011). Esty and Winston (2009) offered insights into how companies can navigate environmental challenges and create business value through sustainability. For example, implementing an EMS, such as ISO 14001, can help companies systematically identify, monitor, and manage their environmental impacts. This enables businesses to set goals, track progress, and continuously improve their environmental performance.

Consumer Motivation

Environmental concern, ethical and social responsibility, health and well-being, long-term cost savings, personal values, identity, influence, and advocacy are some of the factors that consumers use as motivations for sustainability (Haddock-Fraser & Tourelle, 2010). Many consumers are becoming more environmentally conscious and looking for eco-friendly goods and services as a way to support a cleaner, more sustainable environment (Shil, 2012). They look for products that are safe from potentially dangerous chemicals, toxins, and other factors that could harm their health (McDonough & Braungart, 2017). Consumers are aware that while sustainable products might cost more upfront, they can save money over time (Johnson, 2018). Durable goods, energy-saving technologies, and energy-efficient appliances are a few examples of products that can eventually lower utility bills and overall costs (Lilley et al., 2005). Their commitment to sustainability reflects their individual identities and values. They see themselves as responsible citizens of the world and think that their decisions can help bring about improvement. Sustainable consumer behavior is behavior that attempts to satisfy present needs while simultaneously benefiting or limiting environmental impact (Trudel, 2018).

Financial Outcomes and Metrics

The financial outcomes of sustainability create the economic benefits and cost savings that businesses and organizations can achieve. Researchers are examining and studying a number of financial outcomes that are connected to sustainability (Ballou et al., 2012). They outlined how environmental, social, and governance (ESG) issues become financially material, affecting corporate profitability and valuation (Freiberg et al., 2019). A few of the main areas of focus are ESG performance, cost-cutting and efficiency, risk management, innovation and competitive advantage, access to capital, consumer behavior and preferences, regulatory changes, and policy changes. To help businesses and investors make decisions, ongoing research and analysis aim to offer insights into the risks and potential financial rewards of sustainable practices (Atz et al., 2021). The ESG performance of businesses is assessed as a measure of their sustainability practices. Strong ESG performance is being compared to financial performance, which includes stock market returns, profitability, and risk management. To find out how sustainable practices can lower costs and boost operational effectiveness, research has been done (Atz et al., 2021). For instance, long-term energy cost reductions for businesses can be achieved with the aid of energy-efficient technologies and renewable energy sources (Lilley et al., 2005). Businesses that create and use sustainable practices and technologies may gain a competitive advantage, draw in clients, and improve their financial performance. Studies have been done on the cost and availability of capital for sustainable businesses and projects. Researchers are looking into whether sustainable businesses have a financial advantage (Montenegro, 2023). Nonetheless, while ESG data collection and reporting is the first step of a company's ESG journey, it does not by itself lead to financial improvement (Cappucci, 2018). According to McKinsey (2023), studies show that strong ESG performance is positively correlated with higher equity returns and a reduction in downside risk (Montenegro, 2023). For example, the MSCI ESG ratings are designed to assess a company's management of financially relevant ESG risks and opportunities.

MSCI uses a rules-based methodology to identify industry leaders and laggards based on ESG risk exposure and risk management relative to peers.

Businesses often measure success using income statements and balance sheets, which provide crucial financial information (Kimmel et al., 2020). The income statement, also known as the profit and loss statement, shows a company's financial performance over a specific period. The income statement's key components include revenue, expenses, and net income, which is the primary indicator of profitability and overall financial health. The balance sheet provides a snapshot of a company's financial position at a specific time. The balance sheet includes assets, liabilities, and equity. ESG compliance should be tracked like other supporting financial data within a company (Barauskaite & Streimikiene, 2021). Since there is no guarantee that companies monitor ESG compliance metrics as part of their daily operations, nor is it guaranteed that companies correlate ESG compliance and financial metrics, in theory, successful companies would generate more income, have better review standing, and show more waste reduction and less fines in their income statements and sustainability reports (Apergis et al., 2022). Tracking these financial metrics relating to ESG compliance can be measured by the firms' ROI, ROA, and ROE, or other financial metrics such as profitability, liquidity, solvency, efficiency, and growth (Kimmel et al., 2020). Using income statements and balance sheets as metrics to measure the success of ESG implementation provides a comprehensive view of a company's financial health and operational efficiency, guiding strategic decisions and indicating areas for improvement.

Philanthropic Outcomes

Philanthropic strategies for sustainability are constantly being learned about and improved, assisting organizations in making the most of their efforts and having a positive impact (Liu et al., 2017). Philanthropic outcomes in sustainability are a significant area of research, with organizations and researchers looking at the influence and efficacy of philanthropic efforts in promoting sustainability (Liu et al., 2017). Impact measurement, scalability and replicability, collaboration and partnerships, innovation and knowledge transfer, empowerment and capacity building, and policy and advocacy are significant philanthropic results being researched. Philanthropic money drives more of the climate and energy research and action agenda, and corporate interests are also increasing their influence (Sovacool et al., 2020).

Other Outcomes

There are a number of other sustainability outcomes that are being researched, in addition to financial and philanthropic outcomes. These outcomes are interconnected and often require collaborative efforts from governments, businesses, civil society, and individuals to achieve holistic sustainability goals (Vrchota et al., 2020). Some of the main research areas are resilience and adaptation, circular economy and resource efficiency, governance and policy, behavioral change and decision-making, and health and well-being (Kennedy & Linnenluecke, 2022). These varied fields of study aid in the comprehension of sustainability issues and guide the creation of tactics, laws, and procedures that support a more sustainable future (Aureli et al., 2020).

Therefore, current research regarding sustainability has focused on business motivation, consumer motivation, financial outcomes, philanthropic outcomes, and other outcomes. Most importantly, research has highlighted that business motivation for sustainability is influenced by various elements, including ethical considerations, legal requirements, customer demand, competitive advantage, risk management, and long-term profitability (Yılmaz & Flouris, 2010). Consumers' motivations for sustainability include environmental concern, ethical and social responsibility, health and well-being, and long-term cost savings (Haddock-Fraser & Tourelle, 2010). These outcomes from sustainable practices are interconnected and achieving holistic sustainability goals frequently necessitates collaborative efforts from governments, businesses, civil society, and individuals (Vrchota et al., 2020). The following will now examine sustainable business financial outcomes.

Sustainable Business Financial Outcomes

According to Alareeni and Hamdan (2020), ESG investing has surfaced as a reaction to the changing requirements of large-scale retail investors and public sector authorities. The stakeholders attempt to combine long-term fiscal risks and prospects into their investment plans to create enduring value (Boffo & Patalano, 2020). The financial outcomes of sustainable businesses are influenced by various critical factors, such as the performance of ESG practices, the optimization of costs and efficiency, the management of risks, the promotion of innovation, the attainment of competitive advantage, the availability of financing, the examination of customer behavior and preferences, and the impact of regulatory and policy modifications (Alareeni & Hamdan, 2020).

According to Buallay (2019), the financial outcomes of sustainable businesses deviate from the traditional focus on immediate financial rewards. In contrast, there is a strong emphasis on attaining financial prosperity while concurrently making constructive contributions to the environment and society by integrating sustainability principles into company operations (Dentchey et al., 2018). The paradigm shift has pushed investors to include ESG aspects in their venture choices, recognizing the broader consequences of business processes on the surroundings, society, and the development of long-term wealth (Doherty, 2013).

One important benefit of strong ESG success is that businesses may be able to lower their cost of capital (Doherty, 2013). ESG factors are becoming more and more important to investors as they look at possible opportunities. This is due to the perception that companies with strong ESG policies are associated with lower levels of risk, resulting in reduced borrowing expenses. According to Jackson (2009), the focal point of ESG research revolves around the enduring viability of a firm, which encompasses the examination of environmental and social aspects that have the potential to impact its financial performance significantly (Doherty, 2013). By considering these many elements, investors can effectively discern organizations more favorably positioned for long-term success, surpassing the limitations of conventional financial measurements.

ESG research plays a significant role in identifying potential dangers that may go unnoticed under conventional financial inspection (Jackson, 2009). Porter and Kramer (2007) explained that investors who include ESG elements in their assessments gain significant knowledge regarding crucial matters such as climate change, susceptibility of supply chains, labor standards, and governance difficulties. Buallay’s (2019) research expanded their investigation to include companies included on the US S&P 500 index throughout the timeframe spanning from 2009 to 2018. The outcomes of their research are in sync with the more comprehensive academic discussion, demonstrating a favorable association between the disclosure of ESG information and a company’s performance metrics (Alareeni & Hamdan, 2020). The statement highlights the increasing acknowledgment of the concrete advantages of incorporating ESG factors into company strategies and investment choices (Alareeni & Hamdan, 2020). These factors have the potential to impact on a company’s financial performance significantly.

If a company has good environmental, social, and governance (ESG) practices, they might not be explicitly detailed in the income statement, but certain elements related to ESG practices can indirectly affect the financial performance reflected there (Lee & Suh, 2022). ESG practices might show up in an income statement (Faccia & Capitanio, 2021). According to Knachel and Porter (2021), companies with strong ESG practices may attract customers who prefer to support environmentally and socially responsible businesses, potentially increasing sales. They might be able to charge premium prices for their products or services if they are perceived as sustainable or ethically produced. ESG initiatives, such as energy efficiency improvements or waste reduction programs, can lead to lower operating costs. Initial costs might increase due to investments in sustainable technology or practices, such as renewable energy sources or eco-friendly materials (Knachel & Porter, 2021). Improved processes and efficiencies from sustainable practices can enhance operating income. Better social practices, such as fair wages and good working conditions, can lead to higher employee satisfaction and productivity, positively impacting operating income (Knachel & Porter, 2021). Good governance practices reduce the risk of legal issues, fines, and penalties, which can protect net income. Sustainable practices contribute to long-term financial health, which might be reflected in consistent or growing net income. Although not directly shown in the income statement, an enhanced reputation due to strong ESG practices can lead to increased customer loyalty and long-term revenue growth. Adhering to stringent ESG standards may reduce the likelihood of regulatory fines and associated costs (Knachel & Porter, 2021).

While ESG practices themselves are not itemized on the income statement, their impacts are reflected in the financial performance of the company (Sheehan et al., 2023). Improved revenues, cost savings, and risk management associated with good ESG practices can contribute positively to the financial outcomes shown on the income statement (Knachel & Porter, 2021). If a company has good environmental, social, and governance (ESG) practices, the impacts may be reflected in several areas of the balance sheet (Faccia & Capitanio, 2021). While ESG practices themselves are not explicitly itemized, their effects can influence various balance sheet components. According to Knachel & Porter (2021), investment in sustainable infrastructure, such as energy-efficient buildings or renewable energy installations, will increase the value of PP&E. Goodwill and brand value may increase due to a strong reputation from ESG practices. Patents or intellectual property related to green technologies can also be classified here. Sustainable sourcing can lead to higher-quality or ethically sourced inventory, possibly valued differently from conventional inventory. If the company finances its ESG initiatives through debt, this will be reflected in an increase in long-term liabilities (Kim & Li, 2021). However, favorable terms might be obtained through green bonds or other ESG-linked financing. Lower provisions for future environmental remediation costs due to proactive environmental management practices. Improved profitability from cost savings and revenue growth related to ESG practices can increase retained earnings over time. Strong ESG practices can attract ESG-focused investors, potentially increasing the market value of the company's shares and overall shareholder equity. Investments in sustainable and longer-lasting assets might lead to slower depreciation rates. Enhanced operational efficiencies from ESG practices can improve the cash position, which is reflected in higher current assets (Kim & Li, 2021).

Good ESG practices can lead to tangible and intangible benefits that enhance the overall financial health of a company, reflected in various components of the balance sheet. Investments in sustainable assets, improved profitability, and a stronger market position are some ways these benefits manifest in the balance sheet, contributing to the company's long-term viability and attractiveness to investors (Kim & Li, 2021).

Approaches to Sustainable Business Outcomes

Approaches to sustainable business outcomes are essential for achieving long-term success, minimizing environmental impacts, fulfilling social responsibilities, and positively impacting society and the planet (Doherty, 2013). According to Alareeni and Hamdan (2020), by embracing approaches to sustainable business outcomes, companies cannot only contribute to a more sustainable world but also secure numerous business advantages, not limited to better fiscal performance, heightened brand reputation, reduced risks, and improved resilience in the face of environmental and social challenges. According to Yin (2014), generalist, technology-centered, entrepreneurial, innovative, and behavioral approaches are used to study sustainable business outcomes.

Alareeni and Hamdan (2020) posited that a generalist approach to sustainability research entails adopting an expansive and multidisciplinary viewpoint in order to comprehend and tackle the intricate problems associated with sustainable development. It recognizes that sustainability issues are interconnected and require integrated solutions that consider social, economic, and environmental dimensions (Boffo & Patalano, 2020). Researchers and practitioners can better understand the complexity of sustainability challenges and work towards finding integrated and practical solutions that encourage a more ecologically friendly future. The critical aspects of the generalist approach to studying sustainability are systems thinking, interdisciplinary perspective, holistic view, stakeholder engagement, policy and governance, and sustainable solutions (Dentchey et al., 2018). This approach encourages collaboration, innovation, and a broader perspective on sustainability challenges and solutions.

Boffo and Patalano (2020) explained that the technology-centered approach complements other perspectives in sustainability studies, such as the generalist approach mentioned earlier. By focusing on technological advancements and innovations, this approach aims to leverage the potential of technology to drive sustainable development and address pressing environmental and social challenges. This approach to sustainability study focuses on the role of technology in addressing sustainability challenges (Alareeni & Hamdan, 2020). It recognizes that technological advancements and innovations can promote long-term development by improving resource efficiency, reducing environmental impacts, and enhancing social well-being. This approach emphasizes developing, adopting, and applying technologies as critical drivers for achieving sustainability goals (Dentchey et al., 2018).

According to Alareeni and Hamdan (2020)**,** the entrepreneurship and innovative approach in sustainability study emphasizes the role of entrepreneurial thinking, creativity, and innovation in addressing sustainability challenges. According to Alareeni and Hamdan (2020), the approach recognizes that new ideas, business models, and solutions are crucial for transitioning to more sustainable practices and achieving long-term environmental and social goals (Doherty, 2013). It encourages individuals, businesses, and organizations to identify opportunities, take risks, and develop innovative solutions that promote sustainability. By fostering entrepreneurship and innovation in sustainability, this approach aims to unlock creativity, identify new opportunities, and drive the adoption of sustainable practices and solutions (Yılmaz & Flouris, 2010). It recognizes that entrepreneurial individuals and organizations can play an essential role in creating a more sustainable future by developing and implementing innovative approaches to address sustainability challenges (Dentchey et al., 2018).

According to Yin (2014), the behavioral approach to sustainability study focuses on understanding and influencing human behavior to promote sustainable practices and address sustainability challenges. The psychological factors that influence pro-environmental behavior and the design of effective interventions (Doherty, 2013). It recognizes that individual and collective behaviors significantly shape environmental impacts, resource consumption, and social well-being. This approach seeks to identify, and address barriers and drivers of behavior change to foster sustainable lifestyles, decision-making, and societal transitions (Zeifman et al., 2022). By understanding human behavior and applying behavioral insights, the behavioral approach aims to facilitate the adoption of sustainable practices, encourage responsible decision-making, and promote societal shifts toward sustainability (Zhao et al., 2018). It recognizes that individual and collective behavior change is essential for attaining long-standing sustainability goals (Dentchey et al., 2018).

Therefore, approaches to sustainable business outcomes include the generalist approach, the technology-centered approach, the entrepreneurial and innovative approach, and the behavioral approach. Researchers agree that the generalist approach recognizes that sustainability issues are interconnected and require integrated solutions considering social, economic, and environmental dimensions (Dentchey et al., 2018); the technology-center approach recognizes that technological advancements and innovations can play an essential role in promoting long-term development by improving resource efficiency, reducing environmental impacts, and enhancing social well-being (Dentchey et al., 2018); the entrepreneurial and innovative approach recognizes that entrepreneurial individuals and organizations can play an essential role in creating a more sustainable future by developing and implementing innovative approaches to address sustainability challenges (Dentchey et al., 2018). The behavioral approach recognizes that individual and collective behaviors significantly shape environmental impacts, resource consumption, and social well-being (Doherty, 2013). The following will now examine the current research on sustainable business outcomes.

Current Research of Sustainable Business Outcomes

There are many types of research on sustainable business outcomes. Jackson (2009) explored the association between monetary growth, ecological sustainability, and human well-being, advocating for alternative models of prosperity that decouple growth from resource consumption. Porter and Kramer (2007) also extensively researched the intersection of business and the environment, focusing on strategies for achieving environmental and economic sustainability. The critical areas of research in sustainable business outcomes are essential for achieving long-term success, minimizing environmental impacts, fulfilling social responsibilities, and creating a positive impact on the general public and the planet (Wu et al., 2020). This study introduced and discussed the following three outcomes: environmental outcomes, social outcomes, and manufacturing outcomes. Other studies have demonstrated that ESG practices have a moderating influence on financial performance that can help companies deal effectively with corporate controversies without a significant decline in their financial performance. Nirino et al. (2021) studied corporate controversies' impact on firm performance. Corporate controversies are primarily linked to CSR, making them essential in understanding how consumers and other stakeholders perceive and react to malpractices regarding ESG principles.

According to Zhao et al. (2018), environmental outcomes are assessed regarding their impact on ecosystems, biodiversity, natural resources, and overall ecological balance. Some expected environmental outcomes in sustainability studies include changes in climate, biodiversity loss, pollution, resource exhaustion, land use change, water scarcity, and waste management (Wu et al., 2020). These environmental outcomes are interconnected and impact ecosystems' overall health and resilience. Sustainable practices aim to minimize adverse environmental outcomes by promoting conservation, efficiency, and responsible resource management (Hermundsdottir & Aspelund, 2022).

Shabbir and Wisdom (2020) explain that social outcomes focus on understanding and addressing social challenges and promoting social justice within sustainability. Some expected social outcomes in sustainability studies include social equity, human rights, poverty alleviation, community engagement, health and well-being, education and awareness, cultural preservation, and social resilience. These social outcomes in sustainability studies strongly emphasize advancing inclusivity, social justice, and well-being (Top Glove, 2023). The outcomes are to ensure that everyone has the chance to succeed and that the advantages and disadvantages of sustainable development are shared fairly (Hermundsdottir & Aspelund, 2022).

According to Tayan (2022), manufacturing outcomes assess the sustainability performance of manufacturing activities and aim to minimize negative impacts while promoting more responsible and efficient practices. Some expected manufacturing outcomes in sustainability studies include resource efficiency, greenhouse gas emissions, waste generation and management, life cycle assessment, supply chain management, environmental compliance, circular economy practices, and social impact (Thep-On et al., 2022). Sustainability studies aim to advance environmentally friendly, socially responsible, and economically viable manufacturing practices (Smith & Johnson, 2019). The goals include reduced environmental harm, increased resource efficiency, and support for the manufacturing sector's overall sustainability (Hermundsdottir & Aspelund, 2022).

The ESG factors in the assessment of corporations have arisen as a significant shift in perspective, indicating a comprehensive method for evaluating a company's sustainability and ethical influence. ESG criteria comprise a diverse range of characteristics, providing a holistic perspective for investors, stakeholders, and analysts to assess the ethical behavior of firms (Hermundsdottir & Aspelund, 2022). The increasing importance of incorporating ESG factors into venture decision-making has been acknowledged by scholars (Montenegro, 2023). Ten themes, according to the three pillars of ESG, are considered when measuring a company's performance in the areas of sustainability (Boffo & Patalano, 2020).

According to Smith and Johnson (2019), one of the themes of climate change has emerged as a pressing global issue, necessitating urgent action to mitigate its adverse effects. One of the key contributors to this phenomenon is the excessive emission of carbon dioxide (CO2) and other greenhouse gases. The issue of climate change encompasses significant ESG concerns (Hermundsdottir & Aspelund, 2022). This analysis explores the corporate obligation to quantify and alleviate carbon emissions, thereby contributing to the worldwide endeavor to address climate change. Furthermore, corporations evaluate their carbon footprint throughout different phases of a product's life cycle, aiming to identify and mitigate areas of high emissions (Buallay, 2019). In addition, the provision of financial resources for environmental efforts assumes a significant role in effectively tackling the difficulties posed by climate change, hence emphasizing the pressing need to combat the vulnerability associated with climate change (Alareeni & Hamdan, 2020).

There is also the idea of natural capital, which includes how an organization handles priceless resources like water, biodiversity preservation, and sustainable raw material sourcing (Montenegro, 2023). In areas experiencing challenges related to limited water availability, implementing efficient water resource management emerges as a critical focus (MSCI, 2023). Organizations should also consider their influence on ecosystems and habitats, striving to safeguard and rehabilitate biodiversity. According to Buallay (2019), mitigation of environmental and social hazards, particularly in raw material procurement, holds significant importance within supply chains (Alareeni & Hamdan, 2020).

Waste and pollution are two more themes. Montenegro (2023) states that it entails assessing a company's actions to lessen pollution, lessen the production of hazardous waste, and get rid of harmful emissions in line with the general goal of environmental responsibility.

Furthermore, the analysis of packaging materials is crucial because it helps to reduce pollution (Boffo & Patalano, 2020). In addition, it considers the issue of electronic waste, which is frequently disregarded, in order to promote appropriate disposal methods (Montenegro, 2023). According to MSCI (2023), evaluating environmental opportunities is another way. Organizations that prioritize environmental sustainability demonstrate proactive involvement in adopting clean technologies and implementing green construction techniques (Buallay, 2019). The company allocates resources towards the development of renewable energy sources, thereby mitigating their environmental impact and promoting the advancement of novel ideas and adaptability (Montenegro, 2023)

According to Alareeni and Hamdan (2020), human capital is another fundamental aspect of measuring a firm's operations' sustainability and ethical effects. It involves the effective administration of personnel, safeguarding employee well-being, and cultivating a favorable organizational climate (MSCI, 2023). According to Boffo and Patalano (2020), organizations are assessed based on their dedication to promoting employee well-being and ensuring occupational safety and their endeavors to foster and contribute to societal welfare. The importance of ethical labor standards within supply chains has been emphasized by various sources (Montenegro, 2023)

Product liability is another theme that involves product safety and quality (MSCI, 2023). This theme involves the convergence of product safety, quality, chemical safety, and consumer financial protection. According to Alareeni and Hamdan (2020), companies must comply with rigorous safety regulations, effectively handling and reducing risks associated with chemical safety, all while safeguarding the interests of consumers in financial transactions. Privacy and data security hold equal importance in the contemporary digital era, as highlighted by various scholarly sources (Montenegro, 2023). According to Montenegro (2023), another evaluation criterion is using stakeholder opposition, which investigates the firm’s decisions on sourcing and their interactions with the community. According to Buallay (2019), evaluating the ethical ramifications of procurement processes holds significant importance for investors and stakeholders to gain a comprehensive understanding of the risks involved. The establishment of constructive interactions with local populations holds similar significance (Boffo & Patalano, 2020)

According to Alareeni and Hamdan (2020), social opportunity themes involve various aspects such as access to financial resources, healthcare services, communication infrastructure, and nutritional provisions. According to Alareeni & Hamdan (2020), the evaluation of companies is conducted by assessing their endeavors to facilitate the accessibility of financial services, enhance the availability of healthcare, improve communication infrastructure, and promote the availability of nutritious food options (MSCI, 2023). Another theme is corporate governance, which involves several critical factors: board membership, executive compensation procedures, ownership structure, and the implementation of standardized accounting methods

(MSCI, 2023). According to Boffo and Patalano (2020), boards must exhibit independence and diversity while maintaining a distinct segregation between the positions of chairman and CEO. The alignment of executive remuneration systems with principles of fairness and performance is crucial for developing responsible governance (Montenegro, 2023)

The last theme is corporate behavior, which involves business ethics and tax transparency (Buallay, 2019). The principles of business ethics and implementing transparent tax strategies are essential to ethical company conduct (Alareeni & Hamdan, 2020). It is anticipated that corporations will exhibit resolute dedication to ethical conduct while upholding tax policies that are characterized by transparency (Montenegro, 2023). Venture capitalists and organizations may pay attention to different ESG criteria based on their own standards and sustainability aims. Table 1 depicts the various 35 ESG key issue frameworks developed by Morgan Stanley Capital International (MSCI) that focus on the intersection of a firm's core processes and industry-specific matters that may pose substantial dangers and prospects.

According to Whelan (2021) and NYU researchers, ESG was positively related to 58% of "corporate" studies that looked at operational metrics like ROE, ROA, or stock price. The other 13% showed a neutral impact, 21% had mixed results (the same study found positive, neutral, or negative results), and only 8% showed a negative relationship. ESG disclosure studies could help understand the impact of reporting on sustainability initiatives on primary and secondary stakeholders (Buallay, 2019). Alsayegh et al. (2020) studied how ESG disclosure could influence performance. The researchers used data from 2005 and 2017 to understand how ESG information disclosure could drive Asian firms' EES (environmental, economic, and social) sustainability performance. The study encompassed a substantial number of organizations, totaling 1244, throughout a diverse range of 20 nations. This extensive sample size renders it highly representative, thereby facilitating a comprehensive comprehension of the relationship between sustainability and performance. Alsayegh et al. (2020) discovered a significant correlation between the sustainability performance of companies in the energy, environment, and social (EES) sector and their disclosure of environmental, social, and governance (ESG) practices. This finding underscores the importance for companies to openly communicate their corporate governance efforts and plans pertaining to social and environmental aspects. According to Zhao et al. (2018), similar to previous research, the investigators discovered that environmental, social, and governance (ESG) factors have the potential to enhance financial performance. This finding holds considerable implications for various stakeholders, including investors, corporate executives, policymakers, and regulatory bodies (Zhao et al., 2018). The implementation of ESG reporting has the potential to exert a favorable influence on consumer views towards the firm.

Here are the 35 key issues organized into ten themes from the three ESG pillars (MSCI, 2023):

1. Climate Change
    a) Carbon Emissions: Measuring and managing a company’s carbon emissions and its contribution to climate change
    b) Product Carbon Footprint: Identifying hotspots in a product’s lifecycle where emissions are most significant and developing strategies for emission reduction or offsetting
    c) Financing Environment Impact: Recognizing the urgent need to address environmental challenges, such as climate change, biodiversity loss, and resource depletion
    d) Climate Change Vulnerability: Managing and mitigating the impacts of climate

change, such as reducing greenhouse gas emissions, setting emissions targets, and disclosing climate-related risks

2. Natural Capital

   a) Water Stress: Assessing how a company manages water resources and its exposure to water-related risks in regions with water scarcity

   b) Biodiversity and Land Use: Examining a company's impact on biodiversity, ecosystems, and efforts to protect and restore habitats

   c) Raw Material Sourcing: Understanding how companies manage environmental and social risks within their supply chains, including raw material sourcing

3. Pollution and Waste

   a) Toxic Emissions & Waste: Evaluating a company's efforts to reduce pollution, chemical use, and hazardous waste generation

   b) Packaging Material and Waste: Evaluating packaging materials to reduce pollution, chemical use, and hazardous waste generation

   c) Electronic Waste: Evaluating electronic waste to reduce pollution, chemical use, and hazardous waste generation

4. Environmental Opportunities

   a) Clean Technology: Evaluating a company's involvement in clean and renewable energy technologies

   b) Green Building: Evaluating office buildings to be green in clean, renewable energy, energy saving

   c) Renewable Energy: Evaluating sustainable renewable energy sources with minimal environmental impacts

5. Human Capital
    a) Labor Management: Assessing and providing investors and stakeholders with insights into how well a company manages its human resources and treats its workforce
    b) Health and Safety: Considering the measures a company takes to ensure the health and safety of its employees in the workplace, including compliance with regulations and best practices
    c) Human Capital Development: Providing investors, stakeholders, and companies themselves with valuable insights into the company's commitment to fostering a positive workplace culture, developing its employees, and contributing to social responsibility
    d) Supply Chain Labor Standards: Giving stakeholders insights into how a company manages and mitigates labor-related risks and ethical concerns within its supply chain.
6. Product Liability
    a) Product Safety and Quality: Assessing a company's adherence to safety standards and regulations relevant to its products and services
    b) Chemical Safety: Providing stakeholders with insights into how a company manages and mitigates chemical safety risks
    c) Consumer Financial Protection: Evaluating a company's commitment to protecting the interests of consumers in financial transactions
    d) Privacy and Data Security: Evaluating a company's practices and policies for protecting the privacy and data security of its customers, employees, and other stakeholders

e) Responsible Investment: Considering not only the potential financial returns of an investment but also its impact on society and the environment

f) Insuring Health and Demographic Risk: Involving evaluating how insurance companies manage and underwrite health-related and demographic risks, particularly in providing health, life, and related insurance policies

7. Stakeholder Opposition

a) Controversial Sourcing: Assessing the ethical and sustainability implications of a company's supply chain and sourcing decisions, helping investors and stakeholders understand potential risks and impacts related to the company's procurement practices

b) Community Relations: Focusing on a company's efforts to engage with and build positive relationships with the communities in which it operates

8. Social Opportunity

a) Access to Finance: Focuses on assessing how a company facilitates access to finance and capital for individuals and businesses, especially those in underserved or disadvantaged communities

b) Access to Health Care: Focusing specifically on a company's efforts to improve access to healthcare and healthcare-related services

c) Access to Communication: Focusing on assessing a company's efforts to improve communication and information technology access

d) Opportunities in Nutrition and Health: Assessing of a company's efforts to promote access to nutritious food, develop healthier food products, or support initiatives related to nutrition education and awareness

9. Corporate Governance
    a) Board: Assessing the composition and structure of a company’s board of directors, which includes evaluating the independence of board members, diversity, the presence of non-executive directors, and whether the chairman and CEO roles are separate
    b) Pay: Assessing pay-related ESG factors helps investors and stakeholders gauge whether a company’s executive compensation practices are aligned with principles of fairness, performance, and responsible governance
    c) Ownership: Engaging with companies in their investment portfolios on ESG issues, which may use their ownership influence to encourage companies to improve their ESG practices, disclose more ESG-related information, and address ESG-related risks and opportunities
    d) Accounting: Helping companies account for and report on their ESG performance in a structured and standardized manner.
10. Corporate Behavior
    a) Business Ethics: Helping investors and stakeholders gauge a company’s commitment to ethical behavior and practices
    b) Tax Transparency: Having clear and transparent tax strategies and policies.

The specific ESG key issues that are relevant for assessing a company’s sustainability and responsibility depend on the industry, geographic location, and stakeholder expectations. Investors and organizations may prioritize different ESG criteria based on their own values and sustainability goals. Table 1 depicts the various 35 ESG key issue frameworks developed by Morgan Stanley Capital International (MSCI) that focus on the intersection of a company’s core business and industry-specific issues that may pose significant risks and opportunities. Therefore, current research on sustainable business outcomes focuses on environmental outcomes, which assess the impact on ecosystems, biodiversity, natural resources, and overall ecological balance; social outcomes, which focus on understanding and addressing social challenges and promoting social justice within the context of sustainability (Hermundsdottir & Aspelund, 2022); and manufacturing outcomes, which assess the sustainability performance of manufacturing activities to minimize adverse outcomes (Hermundsdottir & Aspelund, 2022). Most importantly, research has identified 35 key issues from the three ESG pillars depicted in Table 1 for investigating businesses' sustainable practices (MSCI, 2023). The following will now examine glove manufacturing.

Glove Manufacturing

Producing gloves that provide hand protection is called glove manufacturing. Gloves are frequently employed in various sectors, including healthcare, food handling, manufacturing, automotive, and many more. In addition to protecting against chemicals, they also act as a barrier against contaminants and germs, preventing accidents and upholding hygienic standards (MARGMA, 2023). Different nations and regions may have different manufacturing standards and regulations to ensure safe, high-quality gloves. Gloves would protect the hands of roughly eight billion people (MARGMA, 2023). Generally, the main processes involved in glove manufacturing typically include material selection, glove design, material preparation, glove forming, vulcanization or curing, quality control, and packaging (Venkatachalam et al., 2013). It is important to remember that manufacturers vary their production methods and focus on particular glove types. Different nations and regions may have different manufacturing standards and regulations to ensure the production of gloves that are safe and of high quality. The

Malaysian Rubber Glove Manufacturers Association (MARGMA) predicted that by 2023, there would be 300 billion gloves in global demand. Additionally, it was noted that discussions about corporate sustainability, a bill to outlaw forced labor, and EU deforestation-free regulations place a high priority on ESG goals with social compliance (MARGMA, 2023). Some of the biggest glove manufacturers are Brightway Holdings Sdn Bhd, Top Glove Corporation Bhd, Hartalega Holdings Bhd, Kossan Rubber Industries Bhd, and Supermax Corp Bhd (Top 10 of Malaysia, 2020).

History of Glove Manufacturing

Dr. William Stewart Halstead, the first chief of surgery at Johns Hopkins Hospital in Baltimore, Maryland, invented disposable gloves in response to a request from his nursing assistant in May 1889 (Johns Hopkins Medicine, 2008). Caroline Hampton, the assistant, complained that she was developing a rash on her hands as a result of handling chemicals during surgical procedures. Disposable latex gloves were commonplace in operating rooms across the country by 1966, and the AIDS epidemic-driven need for “universal precautions” in the 1980s increased their use outside of operating rooms and among all healthcare professionals. As the use of gloves increased, allergic reactions also increased. By the middle of the 1990s, latex allergies were regarded as a severe health concern. Dr. Brown says he prefers the term “latex safe” to “latex free” because removing all sources of natural rubber remains a bit of a challenge (Johns Hopkins Medicine, 2008).

Glove production has changed over time in response to shifting demands, vogue trends, and improvements in materials and technology (Allied Market Research, 2023). Natural rubber latex gloves were first produced in the early 1900s and quickly gained popularity as a result of their elasticity and barrier qualities (Medical World, 2020). Synthetic gloves, such as those made of vinyl and nitrile, were first produced in the middle of the 20th century as alternatives to latex (Venkatachalam et al., 2013). In recent decades, advancements in technology and manufacturing processes have further improved glove production. Automation and robotics have streamlined manufacturing operations, increasing productivity and quality control. Newer materials and coatings have been developed to enhance glove performance, providing improved protection against chemicals, pathogens, and other hazards. The essential requirements for gloves are that they meet the customer’s unique requirements for durability, flexibility, tactile sensitivity, resiliency, and that they fit like a “second skin” for surgeons performing delicate procedures, that they are strong enough to protect the wearer while also being comfortable enough not to choke the user’s hand, and that the material meets demanding production criteria as well as tactile requirements (Dayananda et al., 2022). Today’s glove producers keep up with technological advancements to produce gloves that prioritize comfort, durability, and safety while also meeting the needs of various industries (Nelson & Phalen, 2022). For example, in glove manufacturing, a self-powered technology based on the triboelectric effect and electrostatics monitors hand movements and gestures to improve comfort, durability, and safety (Shen et al., 2022).

Therefore, the history of glove manufacturing includes how disposable latex gloves became commonplace in operating rooms across the country by 1966 and how the AIDS epidemic-driven need for “universal precautions” in the 1980s increased their use outside of operating rooms and among all healthcare professionals (Johns Hopkins Medicine, 2008), as well as how manufacturing technology and process have changed over time in response to shifting demands, fashion trends, and advancements in materials and technology (Allied Market Research, 2023). Researchers agree that technological advancements and manufacturing processes have improved glove production in recent decades to improve durability, comfort, and safety (Nelson & Phalen, 2022). The following will now examine the current research on glove manufacturing.

Current Research of Glove Manufacturing

The demand for rubber gloves has significantly increased in both medical and non-medical fields due to the spread of the coronavirus in 2019 (Maciaszek et al., 2020). It is challenging for rubber glove manufacturing industries to balance the production and demand for the product during the pandemic (MARGMA, 2023). Glove manufacturers must determine techniques to decrease production costs so as to make rubber gloves more economical for consumers (Thep-On et al., 2022). Generally, natural gas, fossil fuels, and renewable energy sources are used worldwide in the manufacturing of rubber gloves (Thep-On et al., 2022). Researchers are looking into the creation of sustainable and eco-friendly materials for glove production (Thep-On et al., 2022). This entails looking into biodegradable materials as substitutes for synthetic ones, lowering the impact of glove production on the environment, and improving the methods for recycling or discarding used gloves. These materials are designed to break down naturally over time, reducing their environmental persistence and impact. Through tests and experiments, a circular system for single-use protection gloves was designed (Skoog & Backman, 2020). To lessen hand fatigue and increase dexterity, scientists are concentrating on ergonomic glove design and comfort (Skoog & Backman, 2020). This entails researching the flexibility and fit of gloves as well as creating new materials and manufacturing processes to improve wearer comfort. Glove manufacturers participate in ESG initiatives and strive for higher ratings in governance, social, and environmental sustainability (Wong, 2023). Environment sustainability measures include product carbon footprint, GHG emissions, sustainable raw materials, water conservation, energy conservation, recycling water conservation, recycled water consumption, packaging material, toxic emissions, zero waste in landfills, renewable energy, and green building. Human capital development, workplace safety, inclusion and diversity, health and wellness, product safety and quality, supply chain sustainability, and CSR initiatives are some of the metrics used to measure social sustainability, which includes human capital and social sustainability (Šlaus & Jacobs, 2011). Ownership and control, leadership ethics, audits and financial practices, certifications, awards, and recognitions are some of the metrics for measuring the sustainability of governance (MARGMA, 2023). By focusing on the development of sustainable and eco-friendly materials for glove production, researchers contribute to reducing the environmental footprint of healthcare, laboratories, and other industries that rely on glove use (MARGMA, 2023). To ensure compliance with international sustainability standards, the company has sought certifications such as ISO 14001 (Environmental Management System) and ISO 45001 (Occupational Health and Safety).

As a result, the development of environmentally friendly and sustainable materials for glove production has been the main focus of recent research on glove manufacturing (Thep-On et al., 2022), which entails looking into biodegradable materials as substitutes for synthetic ones, lowering the impact of glove production on the environment, and improving the methods for recycling or discarding used. Most importantly, research has identified glove manufacturers who participate in ESG initiatives have strived for higher governance, social, and environmental sustainability ratings (Wong, 2023). Furthermore, research focuses on developing sustainable and eco-friendly materials for glove production; researchers contribute to reducing the environmental footprint of healthcare, laboratories, and other industries that rely on glove use (MARGMA, 2023). The following will now examine the history of the sustainability in glove manufacturing being studied.

History of the Sustainability in Glove Manufacturing Being Studied

In the early years of glove manufacturing, sustainability considerations were not at the forefront of industry practices (Patrawoot et al., 2021). Environmental impacts were often overlooked, and the focus was primarily on product functionality and cost-effectiveness (Patrawoot et al., 2021). In the late 20th century, as environmental concerns gained prominence worldwide, industries, including glove manufacturing, started to pay attention to their ecological footprint. This shift in consciousness led to increased efforts to minimize waste, reduce energy consumption, and develop eco-friendly materials and production processes (Shaker et al., 2023).

Glove manufacturers began exploring alternative materials that were more sustainable than traditional options. For instance, some companies started using sustainable synthetic rubber products, which could be realized through the incorporation of materials from biological sources (Boon et al., 2022). Another aspect of sustainability in glove manufacturing involves recycling and waste reduction. Manufacturers introduced initiatives to recycle and reuse materials, such as latex gloves, to minimize landfill waste. Some companies established take-back programs, where used gloves could be returned for recycling or repurposing. Certifications and standards have played a crucial role in promoting sustainability in the glove manufacturing industry (Boon et al., 2022). Various organizations and regulatory bodies have developed guidelines to ensure environmentally friendly practices, worker safety, and ethical sourcing. Examples include the Global Organic Textile Standard (GOTS), Fair Trade certification, and ISO 14001 for environmental management systems (Syuib, 2022).

To reduce their carbon footprint, glove manufacturers have implemented energy-efficient technologies and adopted renewable energy sources (Syuib, 2022). Upgrading manufacturing equipment, optimizing processes, and implementing energy management systems have helped minimize energy consumption and greenhouse gas emissions (Syuib, 2022). Sustainability efforts in glove manufacturing have also focused on improving supply chain management and transparency. Companies have started to engage with suppliers to ensure responsible sourcing of raw materials and to address social and environmental concerns throughout the supply chain. Increasingly, consumers are demanding sustainable products, including gloves. This demand has driven many glove manufacturers to integrate sustainable practices into their operations. Additionally, companies recognize the importance of corporate responsibility and sustainability as part of their brand image, which has further incentivized the adoption of eco-friendly practices (Freiberg et al., 2019).

According to Top Glove (2023), the largest glove supplier on its ESG initiatives webpage, it has taken various sustainability initiatives to address its operations' environmental, social, and economic aspects. Some of their key sustainability activities are environmentally friendly practices, renewable energy usage, sustainable materials, water management, waste reduction and recycling, certifications and standards, labor practices and employee welfare, community engagement, and responsible supply chain management.

Top Glove has made a commitment to reducing its environmental impact. They have implemented energy-efficient technologies, water recycling systems, and waste management strategies to reduce their carbon footprint and conserve resources. To meet its energy needs in a sustainable manner, the company has been investigating the use of renewable energy sources such as solar power. To reduce the use of non-renewable resources and waste generation, Top Glove has been researching and implementing sustainable materials in its glove production. In their manufacturing processes, they have prioritized water conservation and responsible water usage. Top Glove has initiatives in place to reduce waste generation during the manufacturing process and promotes recycling wherever possible. To ensure compliance with international sustainability standards, the company has sought certifications such as ISO 14001 (Environmental Management System) and ISO 45001 (Occupational Health and Safety). Top Glove has worked to improve labor practices and employee welfare, such as health and safety initiatives and worker fairness. To positively contribute to the communities in which they operate, the company has engaged in community development projects such as support for education and healthcare. Lastly, Top Glove has collaborated with suppliers to promote sustainable practices and ethical standards across the supply chain.

Another glove manufacturing distributor, Medline Industries, only purchased from manufacturing partners who are certified by Worldwide Responsible Accredited Production (WRAP), an internationally recognized social compliance certification body. It independently and objectively verifies a factory's compliance with ethical labor standards. WRAP conducts its own rigorous social audits that assess compliance against the organization's 12 principles. In 2022, our gloves divisions initiated the first ever WRAP certification project in the medical device sector, and 30+ of our suppliers achieved certification that same year (Medline, 2023).

Conclusion

Therefore, the literature emphasized the significance of several constructs. First, sustainability is defined as the practice of meeting the needs of the present without compromising the ability of future generations to meet their own needs. Sustainability is important for businesses because it can drive profitability, growth, and long-term success. Second, renewable energy is energy that is generated from natural sources that are constantly replenished and are not depleted when used. Renewable energy is viewed as a multifaceted approach that addresses environmental, economic, social, and security challenges, promoting a sustainable and resilient energy future. Third, waste reduction and recycling are seemed as important aspects of sustainability practices for resource conservation, energy savings, pollution reduction, climate change mitigation, corporate social responsibility, and regulatory compliance. Fourth, environmental regulation consists of the rules, policies, and laws enacted by governments and regulatory bodies to protect the environment and public health. These regulations are designed to control the amount and types of pollutants that can be released into the environment, manage the use of natural resources, and promote sustainable practices. Fifth, ESG compliance is defined as standards and regulations related to Environmental, Social, and Governance criteria. These criteria are used by investors, regulators, and stakeholders to evaluate a company’s sustainability practices and ethical impact. Sixth, sustainable certification is a formal recognition given to products, services, companies, or organizations that meet specific sustainability standards and criteria set by a certifying body. These certifications are designed to verify that certain environmental, social, and economic practices have been followed, promoting sustainable development and responsible resource management. Seventh, market forces are essential for businesses, policymakers, and investors to make informed decisions and adapt to changing economic conditions. They are the economic factors that influence the price, availability, and demand for goods and services in a market economy. These forces are primarily driven by the interactions between consumers and producers and play a crucial role in determining how resources are allocated and how markets function. Finally, glove companies’ financial reports, such as balance sheets, income statements, cash flow, and sustainability reports, are helpful in validating the answers from the participants as to whether strong ESG performance is positively correlated with higher equity returns and a reduction in downside risk.

Summary

As a result, the history of sustainability in glove manufacturing can be summarized as sustainability in glove manufacturing involves recycling and waste reduction; glove manufacturers introduced initiatives to recycle and reuse materials, such as latex gloves, to minimize landfill waste; some glove manufacturers established take-back programs, where used gloves could be returned for recycling or repurposing; certifications and standards have played a crucial role in promoting sustainability in the glove manufacturing industry (Boon et al., 2022); and various organizations and regulatory bodies have developed guidelines to ensure environmentally friendly practices, worker safety, and ethical sourcing. Furthermore, glove manufacturers focused on environmentally friendly practices, renewable energy usage, sustainable materials, water management, waste reduction and recycling, certifications and standards, labor practices and employee welfare, community engagement, and responsible supply chain management.

Glove manufacturers that address ESG issues proactively can set the standard for the entire industry while also helping to protect themselves from activist intervention. The reviewed literature inspired me to dive deeper into the association between sustainable practices and the financial performance of glove manufacturers. The present comprehensive review has established a robust basis for my investigation into the complex correlation between sustainable practices and the financial success of glove makers. Through analyzing many scholarly viewpoints, this review has provided insight into the dynamic realm of glove production, tracing its historical progression towards sustainability and incorporating ESG concepts into industrial operations. The review identified gaps in the availability of empirical data on the subject, hence the need for more investigation. Chapter 3 will go over the methodology that will be used to thoroughly examine the complex relationship between sustainable practices and the financial performance of significant participants in the glove manufacturing sector.

Chapter 3: Methodology

This qualitative study aimed to investigate the relationship between sustainable business practices and the financial performance of the glove industry's major players. According to Patton (2002), a case study includes interviews, document reviews, and other artifacts obtained from publicly available sources. The documents and other artifacts are not used on their own, necessarily, to be analyzed – but, instead, they are being used to provide more context for when analyzing and discussing the interviews. Further, in Creswell et al. (2007), they defined a case study as including interviews, documents, and artifacts. To better understand relationships, qualitative research allows researchers to pose questions that participants' experiences will answer. Extending knowledge and understanding necessitates investigating the practical applications of specific social phenomena and researching significant issues as they emerge. A more in-depth examination of these professionals' experiences would be possible with qualitative research (Silverman, 2020). Conducting a thorough examination of a business executive's actions and cognitive processes, qualitative research helps place the data collected from glove manufacturers in the context of the situation. The relationship between glove manufacturers' financial performance and their impacts on the sustainability practices was examined and validated using in-depth interview of the case study method, which entailed speaking with participants whose positions are at the executive level in charge of sustainability activities, such as sustainability committees. The case study method examined the 20 selected glove manufacturers' net income reports and their ESG ratings and rankings, for example, income statements and ESG ratings and rankings from Bloomberg's CSRHub application to understand the degree of impact of sustainable practices on glove manufacturers' financial results.

Research Questions

This study aimed to interview the business executives of glove manufacturers about their sustainability practices and financial outcomes. The main research question was how sustainable practices affect glove manufacturers' financial performance. This investigation primarily focused on the ESG practices of glove manufacturers:

RQ1. How do glove manufacturers integrate ESG into their sustainable strategies?

RQ2. What is the implementation ratio of ESG against the 35 sustainable key issues listed in Table 1?

RQ3. What are the ESG ratings and rankings of glove manufacturers?

RQ4. What are glove manufacturers' perceptions of the impact of sustainability on their financial outcomes following the practices?

RQ5. What are glove manufacturers' experiences of the impact of sustainability on their financial outcomes following the practices?

RQ6. What is the relationship between glove manufacturers' net income and ESG rating?

Researchers such as Sargani et al. (2020) studying sustainability frequently use ecosystem, bottom line, and environmental justice theories in their research, policy development, and practical application. They frequently assume that inclusive and participatory methods are necessary to address sustainability challenges. They promote the involvement of a variety of stakeholders, including communities, civil society organizations, businesses, and governments, to encourage cooperation, shared decision-making, and collective action. According to the Malaysian Rubber Glove Manufacturers Association, the goals of glove manufacturers for 2023 give ESG a higher priority. While ESG data collection and reporting is the first step of a company's sustainability journey, it does not by itself lead to financial improvement. According to McKinsey, studies show that strong ESG performance is positively correlated with higher equity returns and a reduction in downside risk (MSCI, 2023; Whelan, 2021). Furthermore, Morgan Stanley came out with ESG rating criteria measuring a company's resilience to long-term, financially relevant ESG risks (MSCI, 2023).

In order to better understand how sustainable practices affect the financial performance of those particular glove manufacturers, this qualitative study employed case study and content analysis methods. A case study is a manner by which the researcher can answer questions arising from events that actually happened to a specific person or a group of people at a specific point in time (Stake, 2005; Yin, 2014). Content analysis is a method of objectively analyzing recorded communication, such as books, transcripts, websites, and other forms of the written word, in order to make objective inferences (Holsti, 1969). The in-depth interview of the case study method entails speaking with participants whose positions are at the executive level in charge of sustainability activities such as sustainability committees. According to Yin (2014), the case study method studies and documents as many of the steps of the procedures as possible. The content analysis method examined the selected glove manufacturers' ESG ratings and rankings and their net income statements, for example, ESG rating and rankings from Bloomberg's CSRHub and financial reports such as income statements. Case study and content analysis methods were used to collect extensive qualitative data as well as participant feedback and knowledge of challenging sustainability issues. Data were collected through multiple sources, including interviews, observations, and document analysis. Triangulation of data collection and analysis was used, which strengthens reliability as well as internal validity (Merriam, 1998). The use of qualitative research aided in the exploration and comprehension of the complex and nuanced aspects of Environmental, Social, and Governance (ESG) issues. Qualitative research provides an in-depth understanding of ESG issues, captures diverse perspectives, and allows for the exploration of complex dynamics. By employing robust qualitative research, researchers can contribute valuable insights to the field of ESG and inform decision-making processes. In addition, qualitative research allows researchers to pose questions that participants' experiences will answer in order to better understand the relationships. The iterative process of data collection, analysis, and theory development with case study would continue until theoretical saturation is reached. Extending knowledge and understanding necessitates investigating the practical applications of specific social phenomena as they emerge, as well as researching significant issues as they emerge. A more in-depth examination of these professionals' experiences would be possible with qualitative research (Silverman, 2020). By conducting a thorough examination of a sustainability business executive's actions and cognitive processes, qualitative research will help place the data collected from glove manufacturers in the context of the situation.

Protection of Human Subjects

This research adhered to ethical principles. It obtained informed consent forms from participants, protected their confidentiality, and ensured the anonymity of organizations or individuals discussed in the research. It obtained necessary ethical approvals by California Baptist University's research guidelines. First, regarding informed consent, each interviewee was provided with an informed consent form (See Appendix B). The interviewee had to sign the informed consent form prior to the interview. Second, regarding confidentiality, I redacted the participant's name and organization from the transcript. Finally, regarding data security, I will keep the transcript in a password-protected file. The scope of this research was to conduct in-depth interviews with business executives from glove manufacturers to get feedback on the above interview questions. The responses were then collected, coded, and analyzed to produce a narrative result. Because of the fact that the research's interview subjects are business executives, and the activities involved interviews that do not involve minors, it would be classified as exempt, which means that the research poses no or minimal risk to subjects and it is exempt from the major requirements of the federal policy for the protection of human subjects. This research, however, still required an IRB review for an exemption determination. The research findings will be kept confidential within CBU.

Research Design

This qualitative research included in-depth interviews and a review of archival documents to support rigorous, transparent, and flexible analysis of in-depth interview data (Deterding & Waters, 2021). For the study international interviews were conducted with business executives from the selected glove manufacturers. I interviewed 20 people, with one business executive involved in sustainability activities from each of the 20 glove manufacturers.

A case study approach was adopted for this research. As Stake (2005) and Yin (2014) described, a case study is a manner by which the researcher can answer questions arising from events that actually happened to a specific person or a group of people at a specific point in time. Using a case study design ensures triangulation, which increases validity by bringing together findings, sources, and methods (Farquhar et al., 2020). Case studies are commonly used in various fields, including business, medicine, psychology, sociology, education, and more. The purpose of a case study is to provide an in-depth and detailed analysis of the ESG activities that glove manufacturers conduct. Generally, case studies have several steps. Therefore, I conducted interviews with selected interviewees, collected data, and iteratively analyzed the data with questions to discover glove manufacturers' perceptions and experiences with the impact of sustainability practices on their financial performance, then generated findings, discussed and interpreted the results, drew conclusions, and recommended future research. In addition, content analysis was used to study glove manufacturers' ESG ranking, rating, and financials.

Population

The global glove manufacturing industry includes many companies operating at various scales, from large multinational corporations to small and medium-sized enterprises (See Appendix A). The glove industry is concentrated in countries such as Malaysia, Thailand, China, the United States, and other countries with a strong presence in the healthcare, industrial, and personal protective equipment (PPE) sectors. There are more than 165 factories and 2,386 installed production lines, according to Malaysian Rubber Glove Manufacturers Association (MARGMA, 2023). Executives are generally male and have a college education.

Sample

Businesses are increasingly incorporating non-financial environmental, social, and governance factors into their analysis process to identify material risks and opportunities for growth in order to build a sustainable company. First, I assembled a list of 165 glove manufacturers and companies worldwide. Second, I selected 20 publicly traded glove manufacturers from the pool. These glove manufacturers were the intended sample of the study. If one of the sample participants had not participated, a new one would have been selected. According to Marshall et al. (2013), 20 to 30 participants are the right estimates for qualitative research studies using case studies. More specifically, the selection included business executives from the sustainability committees that oversee the company's sustainability and ESG programs.

Instrumentation

During the participating interview, a 14-question interview protocol was used (See Appendix C). These questions include what initiatives the glove manufacturer took to promote sustainability, what key issues they identified in their ESG practices, and what financial impacts were realized as a result of sustainable practices. The detailed interview questions posed to each interviewee were as follows:

IQ1. What initiatives has your organization made to encourage sustainability?

IQ2. What are the renewable energy sources during the manufacturing process?

IQ3. How does implementing waste reduction and recycling initiatives in your organization affect financial performance?

IQ4. How do environmental regulations in your organization affect financial performance?

IQ5. How does ESG compliance in your organization affect financial performance?

IQ6. How do sustainable certifications in your organization affect financial performance?

IQ7. What is your organization's overall ESG ranking and rating?

IQ8. How does the perception of gloves made in a sustainable manner affect your organization's financial performance?

IQ9. How does the willingness to pay for gloves made in a sustainable manner affect your organization's financial performance?

IQ10. How does the financial performance of your organization change when sustainable supply chain practices, like ethical labor practices and responsible sourcing, are implemented?

IQ11. What are the potential dangers and difficulties of using sustainable manufacturing techniques for gloves, and how do they affect the financial result?

IQ12. How do environmentally friendly manufacturing techniques for gloves support the development of a positive brand image and customer loyalty, and how does this affect your financial performance?

IQ13. Overall, what are the ESG criteria (key issues) used in your organization? That is the overall ESG against the 35 sustainable key issues referred to in Table 1.

IQ14. Overall, how does the financial performance of your organization change when sustainable manufacturing practices are implemented? Very high, high, average, low, or not applicable?

Data Collection

In-depth interview information was gathered through virtual in-depth interviews that lasted approximately 60 minutes each and document analysis for data collection. I also conducted open-ended conversations with participants during interviews. Participants' experiences, beliefs, attitudes, and opinions were explored through structured interviews. In addition, content analysis assists in contextualizing the research and gaining insights into social, cultural, or historical aspects. I collected financial reports and ESG reports through the participant's organization website, Yahoo! Finance, and CSRHub. Table 2 summarizes each data collection method.

Table 2

Data Collection Forms, Methods, and Data

Collection form	Collection method	Data
In-depth interviews	Conduct in-depth interview with open-ended questions	Sustainable activities included financial performance
Financial and sustainability documents	Review documents	Documents such as balance sheet, income statements, cash flow, and sustainability report
CSRHub report	Review reports	ESG ratings and rankings

Data Analysis

I used ATLAS.ti and Excel to code and analyze collected data from the interviews and a review of archived financial and ESG documents. ATLAS.ti is a software program for coding and analyzing transcripts & field notes, building literature reviews, creating network diagrams, and data visualization. It is designed for qualitative data analysis, specifically in the fields of social sciences, anthropology, psychology, and other disciplines requiring in-depth analysis of textual, audio, video, or image data. It includes tools and features to assist researchers in organizing, coding, and analyzing large amounts of qualitative data in a systematic and efficient manner. According to Gibbs (2007), the researcher checks for the accuracy of the findings using qualitative validity, whereas qualitative reliability indicates that the researcher's approach is consistent across different researchers and among different projects. Each interviewee's response was manually transcribed from the recording. The manual transcription method also allows for the creation of a nearly clean transcript. This method is time-consuming but ensures accuracy. I looked for recurring themes or patterns in the interview responses and used coding or tagging to categorize different topics, opinions, or emotions expressed during the interview. I would read through the transcribed text to familiarize the content and highlight key points, meaningful quotes, or any relevant information for the analysis. Thematic analysis, content analysis, and case study were used. The steps were to look for patterns, themes, and relationships within the data to derive meaningful insights.

Design, Instrument Limitations, and Bias

This research framework includes the purpose statement, research questions, protection of human subjects, research design, population, sample, instruments, data collection, data analysis, and design and instrument limitations. The limitations of the study are not limited to the factor that this study is my personal experience in the glove industry. As an executive and practitioner in the glove industry for over thirty years, I am aware that gloves are essential products that may not have a direct impact during economic downturn. This may impose my own bias when analyzing the data and associating specific pandemics with negative economic conditions related to data interpretation. Another research bias limitation could have occurred if I inadvertently introduced my own moral perspective into the presentation of findings, introducing distortions (Chase, 2013). To mitigate these biases, I used my knowledge to ask keen questions of the participants while remaining objective. To maintain objectivity, I based my questions and analysis on the literature and financial statements for each glove company. Participants in the study were encouraged to talk through open-ended questions, but they also talked extensively about themselves, their experiences, and the critical nature of their leadership competencies, sensationalizing their actual contributions to organizational success. Therefore, I have knowledge and bias about the glove industry. The third limitation is the design limitation. Not all glove manufacturers are publicly traded; therefore, their financial statements and ESG ratings may be unavailable. Therefore, I selected publicly traded companies and ensured that the participants would have access to their income statements and ESG ratings. The fourth limitation is that of samples and selection of the instruments used to collect the data and time constraints using ATLAS.ti software. When data collected by researchers is interpreted subjectively, it can affect the success of the research results. Participants may be aware of the researcher and their biases, and the researcher may be aware of participant characteristics. As a result, it is critical to maintain objectivity while conducting a study, developing a thorough research plan, and reviewing the research procedure with the professor and cohort. To validate the findings and the reliability of the study, triangulation was used to ensure a comprehensive and well-rounded analysis.

ESG ratings are designed to assess ESG quality. However, there is no single agreed-upon definition of ESG quality. There are two major perspectives on ESG, and they work in opposite directions to some extent (Tayan, 2022). According to one perspective, ESG reflects a company’s impact on its stakeholders’ welfare, including employees, suppliers, customers, the local community, and the environment. Based on this definition, a company can improve its ESG profile by discontinuing activities detrimental to stakeholders or improving business practices in affected areas to benefit these constituents. The cost of such investment is borne by shareholders, at least in the short run, while the long-term financial impact on the company is unknown. When most individual investors think of ESG quality, they probably think of this view of ESG doing good. Therefore, I studied the relationship between ESG and the impact on the glove manufacturer’s financial performance. According to one opposing viewpoint, ESG measures the impact of societal and environmental factors on the company, and these factors are financially material (Tayan, 2022). An ESG framework, according to this definition, provides a set of risk factors that a company can plan for or mitigate through strategic planning, targeted investment, or a change in operational activity.

Summary

Chapter 3 provided an overview of the research methodology. It included the purpose statement, research questions, protection of human subjects, research design, population, sample, instruments, data collection, data analysis, and design and instrument limitations. The data collection methods included interviews, examination of glove manufacturers' income statements and their ESG ratings in CSRHub reports. The study's next steps were to conduct in-depth interviews, collect all the required data, analyze it, and then summarize the findings on the impact of sustainable activities on the financial performance of glove manufacturers. The data collection and findings of the study will be presented in Chapter 4 and the discussion of the major findings, conclusion, and reflections will be presented in Chapter 5.

Chapter 4: Data Collection and Findings

This qualitative study investigated the relationship between sustainable business practices and the financial performance of glove manufacturers. The relationship between glove companies' financial performance and their impacts on the sustainability strategy was investigated and validated using thematic analysis, content analysis, and case studies on the 20 selected glove companies' ESG practices and ratings to determine the impact of sustainable practices on their financial results. The data collection methods included the following methods.

- In-depth interviews,
- Examination of glove companies' financial documents on Yahoo! Finance and
- Their ESG ratings and rankings in CSRHub reports.

Populations and Sample

Following approval from the Institutional Review Board (IRB) to start data collection, a screening process was conducted on the 165 global glove manufacturers and companies that were identified from the Malaysian Rubber Glove Manufacturers Association's database. A series of screening questions, such as participants' job title, role in their company, age, gender, education level, office location, year at work, and sustainability engagement, were used to select the most knowledgeable candidates for the interview. Before beginning the in-depth interview, I contacted over 20 qualified participants on the list via email and phone, requesting that they sign and return consent forms. Securing the interviews took almost three months of using the mentioned systematic solicitation. To ensure a quiet environment and avoid potential interruptions, I conducted each interview in my office. The interviews included asking the primary 14 interview questions, followed by probing questions to gain deeper insights and understanding, and in addition reviewing business artifacts such as their ESG report, financial statements, and business plans. I thoroughly reviewed each transcribed interview for accuracy before confirming the transcribed interview and audio file to each study participant for approval. The demographic profile of the 20 participants included eight glove distributors and 12 glove manufacturers, with experience ranging from 5 to 40 years in the glove industry, four females and 16 males with various educational levels, including bachelor's, master's, and doctorate. The positions ranged from mid- to upper-management levels. Seven came from the United States, seven from Malaysia, two from China, two from Thailand, one from Japan, and one from the United Kingdom.

Table 3 displays the summary of the demographic profile of these 20 participants.

Table 3

Participants' Demographic Profile

ID	Organization type	Years of experience	Gender	Education level	Job designation	Country
Participant 1	Distribution	5	Male	Master	Operations	USA
Participant 2	Manufacturing	14	Male	Bachelor	Global product	USA
Participant 3	Distribution	15	Female	Bachelor	Operations	USA
Participant 4	Manufacturing	6	Male	PhD	Technology	Malaysia
Participant 5	Manufacturing	5	Male	Bachelor	Executive	Malaysia
Participant 6	Manufacturing	7	Male	Bachelor	CEO	Thailand
Participant 7	Distribution	25	Female	Bachelor	Sales	USA
Participant 8	Manufacturing	12	Male	PhD	R&D	Malaysia
Participant 9	Distribution	14	Female	Master	Operations	USA
Participant 10	Manufacturing	5	Male	Master	Compliance	China

ID	Organization type	Years of experience	Gender	Education level	Job designation	Country
Participant 11	Distribution	40	Male	Bachelor	Quality control	USA
Participant 12	Manufacturing	7	Male	Bachelor	COO	Malaysia
Participant 13	Distribution	5	Male	Bachelor	Sustainability	USA
Participant 14	Distribution	15	Male	Bachelor	Operations	UK
Participant 15	Manufacturing	20	Male	Master	Manufacturing	Malaysia
Participant 16	Manufacturing	15	Male	Master	Sales	China
Participant 17	Distribution	17	Male	Master	Supply chain	Japan
Participant 18	Manufacturing	10	Male	Master	GM	Thailand
Participant 19	Manufacturing	10	Male	Bachelor	Managing director	Malaysia
Participant 20	Manufacturing	6	Female	Bachelor	CMO	Malaysia

Instrument Validation

The purpose of the interview questions in this study was to elicit information from participants about their experiences and perceptions of how sustainability has affected their financial results since their companies implemented ESG. This was done to ensure that the answers to the questions were consistent with the research questions of the study. What is more important is that the questions focus on how the companies incorporated environmental, social, and governance (ESG) into their sustainable strategies; their ESG rating and ranking; the relationship between their ESG rating and net income; and their implemented ratio on the ESG key issues listed in Table 1. Appendix C includes 14 interview questions that elicited detailed and contextual responses from study participants.

Reliability Analysis

I interviewed 20 glove manufacturing participants to assess their sustainable initiatives, as well as their perceptions of the impact of sustainability on financial outcomes, current ESG ratings and rankings, and income statements from 2017 to 2023, including the trailing 12 months.

Triangulation analysis was used to validate the study's findings and reliability, resulting in a comprehensive and well-rounded analysis. Farquhar et al. (2020) stated that triangulation would increase validity by bringing together findings, sources, and methods. The goal of triangulation was to validate themes discovered by comparing one source of data to another, thus increasing the study's reliability and validity. The relationship between sustainability practices and financial outcomes was studied using interview data, ESG ratings and rankings from CSRHub, and net income reports from Yahoo! Finance. This triangulation analysis helps to strengthen the validity and reliability of the findings by reducing the impact of biases, increasing the breadth and depth of data collection, and producing converging evidence to support the study (Merriam, 1998).

Mapping of Interview Questions to the Research Questions

Mapping interview questions to research questions is crucial in qualitative research as it ensures that the data collected directly addresses the research objectives (Poucher et al., 2020). In the literature review, I discovered that many businesses engage in sustainable practices such as lowering carbon emissions, employing environmentally friendly production techniques, incorporating social responsibility, and implementing sustainable supply chain management. Wong's (2023) research identified glove manufacturers who participate in ESG initiatives aimed at improving governance, social, and environmental sustainability ratings (Wong, 2023). Tables

4 and 5 display the mapping of research questions and interview questions, which helps to better understand the interview questions were designed to elicit responses to the research questions.

Table 4

Mapping Chart of Research Questions and Interview Questions

Research questions	Interview questions
RQ1	IQ1
RQ2	IQ2, IQ13
RQ3	IQ7
RQ4	IQ3, IQ4, IQ5, IQ6, IQ8, IQ9, IQ10, IQ11, IQ12
RQ5	IQ3, IQ4, IQ5, IQ6, IQ8, IQ9, IQ10, IQ11, IQ12
RQ6	IQ14

Table 5

Mapping Details of Research Questions and Interview Questions

Research questions	Interview questions
RQ1. How do glove manufacturers integrate ESG into their sustainable strategies?	IQ1. What initiatives has your organization made to encourage sustainability?
RQ2. What is the implementation ratio of ESG against the 35 sustainable key issues (referred to in Table 1)?	IQ2. What are the renewable energy sources during the manufacturing process? IQ3. Overall, what are the ESG criteria (key issues) used in your organization? That is the overall ESG against the 35 sustainable key issues referred to in Table 1.
RQ3. What are the ESG ratings and rankings of glove manufacturers?	IQ7. What are the overall ESG ranking and rating of your organization?
RQ4. What are glove manufacturers' perceptions of the impact of sustainability on their financial outcomes following the practices?	IQ3. How does implementing waste reduction and recycling initiatives in your organization affect financial performance? IQ4. How do environmental regulations in your organization affect financial performance? IQ5. How does compliance in your organization affect financial performance? IQ6. How do sustainable certifications in your organization affect financial performance? IQ8. How does the perception of gloves made in a sustainable manner affect your organization's financial performance? IQ9. How does the willingness to pay for gloves made in a sustainable manner affect your organization's financial performance? IQ10. How does the financial performance of your organization change when sustainable supply chain practices, like ethical labor practices and responsible sourcing, are implemented? IQ11. What are the potential dangers and difficulties of using sustainable manufacturing techniques for gloves, and how do they affect the financial result?

Research questions	Interview questions
	IQ12. How do environmentally friendly manufacturing techniques for gloves support the development of a positive brand image and customer loyalty, and how does this affect your financial performance?
RQ5. What are glove manufacturers' experiences of the impact of sustainability on their financial outcomes following the practices?	IQ3. How does implementing waste reduction and recycling initiatives in your organization affect financial performance?
	IQ4. How do environmental regulations in your organization affect financial performance?
	IQ5. How does compliance in your organization affect financial performance?
	IQ6. How do sustainable certifications in your organization affect financial performance?
	IQ8. How does the perception of gloves made in a sustainable manner affect your organization's financial performance?
	IQ9. How does the willingness to pay for gloves made in a sustainable manner affect your organization's financial performance?
	IQ10. How does the financial performance of your organization change when sustainable supply chain practices, like ethical labor practices and responsible sourcing, are implemented?
	IQ11. What are the potential dangers and difficulties of using sustainable manufacturing techniques for gloves, and how do they affect the financial result?
	IQ12. How do environmentally friendly manufacturing techniques for gloves support the development of a positive brand image and customer loyalty, and how does this affect your financial performance?
RQ6. What is the relationship between glove manufacturers' net income and ESG rating?	IQ14. Overall, how does the financial performance of your organization change when sustainable manufacturing practices are implemented? Very high, high, average, low, or not applicable?

Coding Procedures

I redacted the participant's name and organization from the transcript. Regarding data security, I kept the transcript in a password-protected file. Additionally, all audio recordings of the interviews were kept on an encrypted password protected laptop, only accessible by me. Audio recordings would be destroyed after the completion of the data analysis. Transcripts would be securely stored until three years after the completion of this research. I used ATLAS.ti and Excel to uncover meaning and patterns from the interviews he has conducted. The coding process consisted of six significant steps: importing data, creating codes, applying codes, organizing codes, analyzing codes, and interpreting results. First, I imported the interview transcripts into the ATLAS.ti. Second, I created codes based on recurring topics, ideas, or patterns in these interview transcripts. Third, I created codes based on selecting a text segment in the transcript and assigned it a label representing the concept it embodies. Fourth, I applied codes to relevant text segments in the transcripts. Fifth, I organized codes and grouped them into families. Sixth, I analyzed the data. Lastly, I interpreted the results of my analysis to conclude.

Presentation and Data Analysis

The in-depth interviews resulted in six themes and nineteen subthemes. The themes and subthemes are listed below, along with a description of each subtheme and its key quotes. Table 6 shows the themes and subthemes.

Table 6

Themes and Subthemes

Themes	Subthemes
Glove manufacturers engage in many ESG initiatives	Renewable energy Reduction of waste Corporate Social Responsibility activities Third-party certification
Glove manufacturers moderately engage in key issues identified by the MSCI	Engaged in approximately 18 key issues on average Perception of high accomplishment Sense of innovation (they feel they created something new)
Participants lack awareness of ESG ratings and rankings	Participants could not readily recall their rating or ranking Glove manufacturers did engage in certification Glove manufacturers were aware such ratings did exist
Challenges and benefits of sustainability practices on short- and long-term financial gain	Glove manufacturers described the up-front investment Glove manufacturers described the slow recuperation of cost Glove manufacturers described it as worth it in the end Glove manufacturers described challenges with environmental regulations
Perceptions of glove manufacturers do not match financial income statements	Short-term reality Long-term reality Value for glove technology
Relationship between ESG rating and net income can vary	Glove brand recognition Profit margin Macro-economy impact (COVID-19)

Findings

This investigation is primarily focused on the ESG practices of glove manufacturers and some operated as distribution companies. Data analysis identified codes and discovered themes and subthemes based on the transcripts from the interviews, financial income statements obtained from Yahoo!Finance, and ESG ratings and rankings obtained from CSRHub. Six themes were evident as follows: 1. Glove manufacturers engage in many ESG initiatives; 2. Glove manufacturers moderately engage in key issues identified by Morgan Stanley Capital International; 3. Participants lack awareness of ESG ratings and rankings; 4. Challenges and benefits of sustainability practices on short- and long-term financial gain; 5. Perceptions of glove manufactures do not match financial statements; and 6. Relationship between ESG rating and net income can vary.

Theme 1. Glove Manufacturers Engage in Many ESG Initiatives

Within this main theme derived from the interviews, glove manufacturers integrate Environmental, Social, and Governance (ESG) initiatives into their sustainable strategies by prioritizing the activities that align with their business goals and values. There are various degrees of material sustainability, such as bio-based and fully recycled materials for high sustainability and partial organic content for moderate sustainability. The activities include reducing carbon emissions by using renewable energy such as LED, motion sensor lighting systems, and solar power; encouraging carpooling and using electric vehicles; waste reduction by using greener materials and reducing papers; increasing corporate social responsibility and employed welfare; and third-party certification such as CSRHub, EcoVadis, B-Corp, SBTi. The following subthemes were identified within the main theme during the interview process.

Subtheme 1.1. Renewable Energy

The majority of participants agreed that implementing energy-efficient practices in manufacturing facilities, such as using renewable energy sources like biomass fuel, recycled water energy, and solar energy, can significantly reduce greenhouse gas emissions. Participants reported that renewable energy in glove production involved in initial stages, moderate integration, and full integration. Some were in the planning phase, assessing the feasibility and cost-benefit of shifting to renewable energy sources. Many organizations use renewable energy to power a portion of their operations, typically ranging from 25% to 50%. Some companies have achieved complete reliance on renewable energy for their glove production facilities, utilizing a combination of solar, wind, and other renewable sources to power all operations. These organizations often exceed 50% renewable energy usage, integrating large-scale solar farms or wind turbines directly linked to their manufacturing processes. Nevertheless, these organizations promote energy-saving process models, upgrade equipment, and improve resource utilization efficiency. Implementing water-saving technologies and practices can minimize water usage and pollution in production, thereby mitigating the impact on local ecosystems and communities.

The majority of participants stated that the gloves are manufactured using some renewable energy sources. Glove manufacturing uses biomass and biogas energy as thermal energy sources, or it converts energy into water or steam that does not pollute the atmosphere. Glove factories also use water energy. The company uses recycled water in its production line to reduce water energy waste. Glove manufacturing has invested in solar power generation equipment, which can provide clean solar power to the social grid while also consuming electricity.

Participant 4 shared, “Well, renewable energy because we reuse the water labor management. We do it over in, uh, we are over in Malaysia health and safety. We definitely work on health and safety, no doubt about it. Uh, that is very important, uh. Um, very important safety is, you know, we’re transparent, company and, integrity and consistency.”

Participant 16 shared, “Our sustainability initiatives are comprehensive. We’ve invested in renewable energy projects, including solar arrays and biogas facilities, to power our production lines. We’ve also implemented a zero-waste policy in our factories, pushing for 100% recycling of scrap materials. So we would recycle. We would clean all of our water before it went over back to the city.”

Participant 17 shared, “However, what I was about to talk about was our processes for making a glove. We used a lot of water. So we were in the process of designing and building our own water reclamation system for each production line so we could reuse our water.”

Similarly, the data provided in the participants’ company websites supported the notion that many ESG activities are conducted around the year.

Subtheme 1.2. Reduction of Waste

The majority of participants believed that implementing waste reduction and recycling programs within manufacturing facilities would reduce the amount of waste sent to landfills while also promoting ESG principles. Leading glove companies employ advanced process optimizations to minimize waste during manufacturing, such as precision cutting tools or reduced packaging. Some are making moderate adjustments, like improving material handling or slightly altering production techniques to reduce waste. To reduce the environmental waste from glove production, glove manufacturers use sustainable and greener materials such as biodegradable compounds and combine production with environmental protection, eliminating pollution and beautifying the environment. Participants also mentioned that their companies would reduce plastic usage and use 100% recycled materials.

Participant 3 shared, “Obviously they’re important when any business. If you’re looking at minimizing your waste and getting to, you know, zero waste trying to be sustainable with being eco-friendly.”

Participant 12 shared, “The waste reduction and recycling plan first makes full use of purchased raw materials, and secondly reduces the consumption of water, electricity, and fuel, and reduces the cost of environmental treatment while complying with environmental protection requirements.”

Participant 14 shared, “Packaging and material waste. Yeah, we totally do that. Uh, because of the size of the boxes that we use. Okay. Uh, instead of having 100 packs, we try to sell 300 packs, 250 packs, you per box.”

Similarly, the data provided in the participants’ company websites supported the notion that many ESG activities are conducted around the year.

Subtheme 1.3. Corporate Social Responsibility Activities

The majority of participants agreed that corporate social responsibility is an important component of ESG strategies because it addresses social and environmental concerns while also providing tangible benefits in terms of reputation, risk management, regulatory compliance, capital access, long-term sustainability, and meeting stakeholder expectations.

Participant 10 shared, “social responsibility awareness of all employees, and enhance the organization’s social responsibility and public participation through various social welfare activities. At the same time, through these activities, employees’ sense of social responsibility and teamwork ability can also be improved, and the overall image and social influence of the organization can be enhanced.”

Participant 12 shared, “with the continuous improvement of consumers’ own maturity, consumers’ sensitivity to corporate social responsibility and their requirements for companies to fulfill their social responsibilities have also continued to strengthen, and the impact of corporate social responsibility in the purchase decision-making process has become increasingly significant.”

Similarly, the data provided in the participants’ company websites supported the notion that many ESG activities are conducted around the year.

Subtheme 1.4. Third-Party Certification

The majority of participants thought that obtaining third-party certifications of sustainability is the avenue to verify organizational sustainability practices and build their reputation on their market.

Participant 2 shared, “Our company has obtained B Corp certification, also known as Benefit Corporation. It is an emerging enterprise certification system initiated by the American NGO organization B Lab, which includes five evaluation dimensions: environmental protection, employee rights, consumer rights, community building, and corporate governance.”

Participant 11 shared, “Obtaining a sustainability certification helped us attract a new client base that’s focused on environmental responsibility, which has been great for business.”

Participant 15 shared, “I think there’s benefit to a company just because it enables them to, um, build their reputation in the market. And it’s oftentimes used to help with your marketing, the product and selling it. You know, hey, I have my products and we have this sustainability. We’ve gotten all these certifications.”

By integrating the use of renewable energy, waste reduction, increased corporate social responsibility, and third-party certification as strategies into their operations, glove manufacturers can contribute to a more sustainable future while meeting the growing demand for environmentally and socially responsible products.

Similarly, the data provided on participants' company websites supported the idea that ESG-related certifications are posted.

Theme 2. Glove Manufacturers Moderately Engage in Key Issues Identified by the MSCI

Within this main theme derived from the interviews, glove manufacturers participate moderately in key issues identified by Morgan Stanley Capital International (Table 1). During the interview process, the following subthemes were identified: they engage in approximately 18 key issues on average, perceive high accomplishments, and experience a sense of innovation.

Subtheme 2.1. Engaged in Approximately 18 Key Issues on Average

The majority of participants states that their companies moderately engage approximately half of the 35 key ESG issues and lean towards more on climate change, natural capital, pollution and waste, environmental opportunities, human capital, corporate governance, and corporate behavior in referring to Table 1.

Participant 11 shared, "We align our operations with key ESG criteria, particularly focusing on our community impact and employee well-being, which have always been core to our ethos. We address 18 out of the 35 key ESG issues that are most relevant to our sector, focusing particularly on reducing carbon emissions, improving labor standards, and ensuring product safety."

Participant 15 shared, "As of now, our focus is on starting to understand the full scope of ESG criteria and determining which aspects are most applicable and urgent for our operations."

Participant 16 shared, “We’re actively engaged with 18 of the 35 ESG issues identified in our framework. We prioritize those that are most impactful for our stakeholders and align with our business objectives.”

Subtheme 2.2. Perception of High Accomplishments

Most participants believed their companies had made significant progress in addressing key ESG issues. They stated that investors, customers, employees, regulators, and the general public could all influence perceptions of glove companies’ ESG accomplishments. As a result, positive perceptions are frequently linked to tangible evidence of commitment and progress in the areas such as certifications, awards, third-party evaluations, and public disclosures of ESG performance metrics.

Furthermore, many believed the global awareness of ESG issues grows and ESG considerations are increasingly integrated into investment decisions, companies that demonstrate strong ESG performance may benefit their reputation, attract long-term investors, and mitigate certain risks associated with environmental and social challenges.

Participant 10 shared, “We do pretty well because we really try to keep improving how we do things for the environment and our people.”

Participant 12 shared, “Our market research shows that the perception of our gloves as sustainably made significantly boosts our financial performance. Customers are drawn to our brand because they trust in our commitment to sustainability.”

Participant 13 shared, “Integrating ESG considerations into day-to-day business processes allows us to embed sustainability principles throughout our operations. ESG criteria were integrated into procurement decisions, product development processes, performance evaluations, and strategic planning exercises.”

Subtheme 2.3. Sense of Innovation (they feel they created something new)

By seeking innovative solutions to environmental and social challenges, glove companies' R&D departments took the initiative to drive operational efficiencies, improve product quality, and identify new business opportunities contributing to long-term growth and competitiveness. Most participants believed ESG practices could make glove companies feel innovative for several reasons, such as differentiation in the market; by adopting strong ESG practices, glove companies differentiate themselves from competitors. This can be particularly important in industries where products are commoditized. ESG initiatives can set a company apart, attracting customers who prioritize sustainability and social responsibility; adaptation to changing demands that consumer and investor preferences are increasingly leaning towards sustainable and socially responsible businesses and integrating ESG practices into their operations, glove companies demonstrate their ability to adapt to evolving market demands and stay ahead of the curve, which can be perceived as innovative; efficiency and cost savings that many ESG initiatives, such as energy efficiency measures and waste reduction programs, not only benefit the environment but also lead to cost savings and operational efficiencies. Adopting innovative technologies and processes to improve ESG performance can enhance overall competitiveness and profitability.

Participant 10 shared,

> Integrating ESG practices into business strategies helped us drive innovation in all aspects of our operations, from product development and manufacturing to stakeholder engagement and risk management. This innovative mindset not only benefits the company but also helps to achieve larger societal and environmental goals.

Theme 3. Participants Lack Awareness of ESG Ratings and Rankings

According to the interviews, ESG ratings and rankings for glove manufacturers have been widely available or standardized across the industry. However, the majority of participants stated that they are unsure of their companies' ESG ratings and rankings, suggesting that glove companies are also unsure of their ESG (Environmental, Social, and Governance) rating and ranking. The subthemes such as glove manufacturers could not readily recall their rating or ranking, glove manufacturers did engage in certification, and glove manufacturers were aware such rating did exist were discovered during the interviews.

Subtheme 3.1. Participants Could Not Readily Recall Their Rating or Ranking

Most participants stated that they are not sure about their ESG (Environmental, Social, and Governance) rating and ranking due to the following reasons. Lack of Standardization: ESG rating and ranking methodologies vary among different providers, leading to inconsistencies in how companies are assessed. This lack of standardization can make it challenging for glove companies to determine which criteria are being used and how their performance compares to industry peers. Complexity of ESG Factors: ESG encompasses a wide range of factors, including environmental impact, labor practices, human rights, corporate governance, and community engagement. Assessing performance across these diverse areas requires comprehensive data collection and analysis, which can be complex and resource-intensive for glove companies, particularly smaller ones with limited resources. Data Availability and Quality: Access to reliable and standardized data on ESG performance can be a significant challenge for glove companies. Many ESG metrics rely on voluntary disclosure by companies, and data availability can vary widely across regions and industries. In some cases, companies may not have robust systems in place to track and report their ESG performance accurately.

Subjectivity of Ratings: ESG ratings and rankings often involve subjective judgment by analysts or rating agencies, which can introduce biases and inconsistencies in the assessment process. Factors such as company size, industry sector, geographic location, and stakeholder perceptions can influence how companies are rated, making it difficult for glove companies to predict their ESG scores accurately. Limited Understanding of ESG: Some glove companies may have limited understanding of ESG issues and how they impact their business. They may lack awareness of the importance of ESG factors to investors, customers, and other stakeholders, leading to a lack of prioritization and investment in ESG initiatives.

Participant 4, shared, “No, I don’t know, like what our ranking is on that. Um, and how that ranks. I haven’t seen that. Um, but I do know that it is like a, it’s a key, um, issue for us.”

Participant 6 shared, “I can try and look up that ISO number. You’re not given a rating. You either achieve the ISO accreditation or you don’t. So it’s pass or fail. Uh, and we pass.”

Similarly, the companies’ data presented in Yahoo!Finance supported the idea that sustainability ratings are available to the public.

Subtheme 3.2. Glove Manufacturers Did Engage in Certification

Most participants stated that their companies did engage in ESG certification. For example: Third-Party ESG Rating Agencies: Participants stated that companies like MSCI, CSRHub, EcoVadis, Sustainalytics, B-Corp provide ESG ratings and rankings for various companies, including those in the manufacturing sector. These ratings typically assess environmental impact, social responsibility, and governance practices.

Industry-Specific Indices**:** Some indices, such as the Dow Jones Sustainability Index (DJSI), the FTSE4Good Index Series, or SBTi include companies from the manufacturing sector and evaluate them based on ESG criteria.

Corporate Sustainability Reports**:** Many glove manufacturers publish annual sustainability reports that outline their ESG initiatives, goals, and performance metrics. Reviewing these reports can provide insights into a company's sustainability efforts.

Participant 17 shared,

> Our company has obtained B Corp certification, also known as Benefit Corporation. It is an emerging enterprise certification system initiated by the American NGO organization B Lab, which includes five evaluation dimensions: environmental protection, employee rights, consumer rights, community building, and corporate governance.

Subtheme 3.3. Glove Manufacturers Were Aware Such Rating Did Exist

Most participants were aware the rating of ESG did exist. As ESG considerations continue to gain prominence in the business world, glove companies are increasingly motivated to understand and improve their ESG performance to meet the expectations of investors, customers, and other stakeholders.

Participant 6 shared, "We are currently rated as 'BBB' in ESG. We acknowledge there's much to do, but each step forward is progress, and we're constantly looking for ways to improve."

Participant 11 shared, "Our organization is rated 'A' for ESG performance. This high rating is a testament to our ongoing commitment to environmental sustainability, social responsibility, and ethical governance."

Participant 15 shared, “We’re making progress but are not yet leading in our industry. Our efforts are moderate compared to some competitors who have been integrating ESG for longer.”

ESG standards and best practices are continuously evolving in response to changing societal expectations, regulatory requirements, and stakeholder demands. Keeping up with these changes and aligning with emerging ESG frameworks can be challenging for glove companies, especially those operating in dynamic and fast-paced industries. It is important to note that ESG ratings and rankings can differ depending on the methodology used by each rating agency and the specific criteria they prioritize. Furthermore, ESG performance can change as companies launch new initiatives and improve existing practices. As a result, conducting extensive research and considering multiple sources of information is critical when assessing the ESG performance of glove manufacturers or any other company.

Similarly, the companies’ data presented in Yahoo!Finance supported the idea that sustainability ratings are available to the public.

Theme 4. Challenges and Benefits of Sustainability Practices on Short- and Long-Term Financial Gain

Within this main theme derived from the interviews, the challenges and benefits of sustainability practices on short- and long-term financial gain are debatable. The subthemes discovered during the interviews are glove manufacturers described the up-front investment, glove manufacturers described the slow recuperation of cost, and glove manufacturers described it as worth it in the end.

Subtheme 4.1. Glove Manufacturers Described the Up-Front Investment

Most participants described the ESG investment are expensive. Investing in ESG (Environmental, Social, and Governance) initiatives for glove factories requires a significant upfront investment, and this expense can be attributed to several factors such as infrastructure and technology, training and education, compliance and certification, supply chain engagement.

Many believe upgrading infrastructure and implementing new technologies to improve environmental performance are costly. For example, implementing waste management systems and upgrading water treatment facilities require substantial capital investment. Many companies educate employees and stakeholders about sustainability and often involved training programs and workshops, which require both financial resources and time commitment. Glove companies achieved compliance by obtaining ESG certifications which incurred expenses such as permit fees, consulting fees, and certification costs. Compliance with standards such as ISO 14001 (environmental management) and obtaining certifications like B-Corp, SBTi (Science Based Targets Initiative), and EcoVadis require significant financial investment. Many stated enhancing social responsibility in the supply chain require additional investment in supplier audits, monitoring systems, and capacity-building programs to ensure compliance with labor standards and ethical sourcing practices. Engaging with upstream suppliers to improve working conditions and promote fair labor practices incur costs for glove factories.

Participant 1 shared,

> Implementing waste reduction and recycling initiatives in an organization can have both direct and indirect impacts on financial performance. While the initial costs of implementing these initiatives may be a concern, the long-term benefits often outweigh the expenses. For example, the equipment for water recycling plant will give a high

investment cost, however in long term it will reduce the cost of waste water treatment and disposal. Further the organization could benefit from less water consumption from municipal sources.

Participant 10 shared, “The big challenge is the upfront investment—both time and money. It’s tough when you’re trying to keep everything else running smoothly.”

Overall, while there are upfront costs associated with implementing sustainability practices, many participants perceive the long-term financial benefits of sustainability as outweighing the initial investments. By integrating sustainability into their business strategies, glove companies aim to balance environmental stewardship, social responsibility, and financial performance.

Similarly, the data provided in the financial statements presented by the companies supported the notion.

Subtheme 4.2. Glove Manufacturers Described the Slow Recuperation of Cost

Many participants stated the slow recuperation of costs associated with investments in ESG initiatives. The factors are long payback periods, market dynamics, and regulatory uncertainty. Some ESG investments, such as renewable energy systems and water-saving technologies, have long payback periods before the cost savings offset the initial investment. This delays the recuperation of costs and impacts the financial returns on these investments. Many believe economic conditions and market trends can affect the demand for sustainable products and services, for example, COVID-19 and wars. If there is limited demand for ESG-aligned products or if consumers are not willing to pay a premium for sustainability, glove companies would experience slower recuperation of costs associated with ESG investments. Changes in environmental regulations or shifting policy priorities can introduce uncertainty for glove companies investing in ESG initiatives. Regulatory uncertainty can impact the financial returns on ESG investments and prolong the time it takes to recuperate costs, particularly if compliance costs increase unexpectedly.

Participant 7 shared, “Um. Yes. Like, you know, right now, for example, the market is pretty tight and the money supply is low. So, um, it kind of. Put a crunch on the companies to invest and bring efficient instrument. And, the kind of changes we desire because the money supply is not that easy. You know, the return on investment is low… government need to somehow either, you know, support by tariffs or by subsidies to companies which are supporting ESG principles for the greater good. Um, that’s all I have to say.”

Participant 10 shared, “Overall, when we implement sustainable manufacturing practices, our financial performance changes dramatically. In the short term, it will affect financial performance, causing certain cost increases and profit losses.”

Subtheme 4.3. Glove Manufacturers Described It as Worth It in the End

The majority of participants described that investing in ESG initiatives would bring several significant benefits to their companies such as risk mitigation, cost savings, enhanced brand reputation, market differentiation, innovation and efficiency, and stakeholder engagement. Risk Mitigation: ESG investments help mitigate various risks, including regulatory compliance risks, supply chain disruptions, reputational damage, and legal liabilities. By addressing environmental and social issues proactively can reduce their exposure to these risks and safeguard their long-term financial performance. ESG initiatives such as energy efficiency measures, waste reduction programs, and water conservation efforts, can lead to significant cost savings for the long-term. By optimizing resource use and minimizing waste generation can reduce operating expenses and improve profitability. Many participants believed that adopting sustainable practices enhances the brand reputation of glove companies, leading to increased customer loyalty, positive brand perception, and competitive advantage.

Market Differentiation: Participants believed ESG investments differentiate them in the marketplace and help them stand out from competitors. Investing in ESG encourages innovation and fosters a culture of continuous improvement within glove companies. By seeking out innovative solutions to environmental and social challenges, companies can drive operational efficiencies, improve product quality, and identify new business opportunities that contribute to long-term growth and competitiveness. Engaging with stakeholders, including employees, customers, investors, and communities, is essential for the success of glove companies. ESG investments demonstrate a commitment to addressing stakeholders' concerns and creating shared value, leading to stronger relationships, greater trust, and enhanced brand loyalty over time.

Participant 1 shared, "Transparent communication about sustainable manufacturing builds trust with consumers. When customers see that a brand is honest and open about its environmental efforts, they are more likely to trust the company and it leads to repeated business opportunities which will lead to increase financial performances."

Participant 11 shared, "Our costs have initially increased as a result of investments in cleaner technologies to comply with strict environmental regulations. However, by improving operational efficiency and lowering potential penalties, these steps have proven worthwhile and have paid off in the long run."

Similarly, the data presented in the companies' sustainability reports supported the idea that investing in ESG pays off in the end.

Subtheme 4.4. Glove Manufacturers Described Challenges With Environmental Regulations

The majority of participants stated that investing in ESG initiatives posed challenges in meeting environmental regulations. Compliance with stringent environmental regulations has initially increased costs due to investments in cleaner technologies. However, these actions have paid off in the long run by increasing operational efficiency and lowering potential penalties.

Participant 5 shared, “Compliance with environmental regulations initially increased our operational costs due to investments in cleaner technologies and better waste management systems. However, these investments have paid off by mitigating the risk of regulatory fines and enhancing our brand reputation, which has attracted eco-conscious customers and investors.”

Participant 12 shared, “It keeps us from getting fined. That’s always good for the budget.”

Participant 19 shared, “Right now, it feels like we’re always playing catch-up, which can get expensive. Staying compliant is necessary, though, because fines would be worse.”

Glove companies believe that not only is it morally and ethically right to invest in sustainability, but it also makes sound financial sense. Sustainability would help glove companies generate long-term value for their customers, employees, shareholders, and society at large.

Theme 5. Perceptions of Glove Manufactures Do Not Match Financial Income Statements

Most participants believed that glove manufacturers’ sustainability practices did not align with their financial statements. Participants mentioned that complex financial reporting, earnings volatility, and external factors all played a role. Glove manufacturing companies often operate in complex supply chains and have diverse revenue streams across different markets and product lines. Understanding financial statements requires careful analysis, and discrepancies arise if stakeholders misinterpret or overlook certain aspects of the financial reporting. Glove manufacturers experience significant fluctuations in earnings due to factors such as changes in demand, raw material prices, foreign exchange rates, and regulatory environment, for example, during COVID-19, the short-term fluctuations in earnings created perceptions that do not fully reflect the company's long-term financial health.

External Factors: External factors such as macroeconomic conditions, industry trends, regulatory changes, and competitive dynamics can impact perceptions of glove manufacturers. Even if a Participants believed company's financial statements accurately reflect its performance and external factors influence how stakeholders perceive the company's prospects.

Subtheme 5.1. Short-Term Reality

Many participants mentioned that the short-term reality of glove companies' investment in ESG initiatives resulted in increased expenses associated with their implementation. These expenses included initial investments in infrastructure, technology upgrades, employee training, and stakeholder engagement initiatives. The immediate impact on financial performance may be higher operating costs and lower profitability as resources are allocated to ESG projects.

Participant 6 shared, "The sustainable production method of gloves also requires certain investment, such as research and development of new technologies and introduction of new equipment. These investments may put some pressure on corporate financial performance in the short term..."

Participant 10 shared, "I think definitely there would be a short-term cost in terms of staffing, spending time going around the business, um, understanding processes, improving changing processes, changing materials that we use."

Similarly, the data presented in the companies' financial statements supported the idea that glove companies' investments in sustainability resulted in increased short-term expenses.

Subtheme 5.2. Long-Term Reality

Many participants noted that the long-term reality following their companies' investment in ESG initiatives is characterized by sustainable growth, enhanced reputation, market differentiation, innovation, stakeholder engagement, risk management, and access to capital.

Participant 1 shared, "…however in long term it will reduce the cost of waste water treatment and disposal. Further the organization could benefit from less water consumption from municipal sources."

Participant 6 shared, "But I think that would be vastly outweighed by the long-term benefits. So the benefits in reducing material waste, buying less cardboard, um, buying less materials. Um. And I say any cost around the product itself is passed on to the customer. So that's not a cost to us as a business."

Similarly, the data presented in the companies' sustainability reports supported the notion that ESG benefits the company over time.

Subtheme 5.3. Value for Glove Technology

Many participants believed glove companies that have proprietary technology, the long-term value can be substantial and can manifest in several ways: Competitive Advantage: It allows them to differentiate their products from competitors, offering unique features, superior performance, or cost advantages. Proprietary technology enables glove companies to lead in innovation within the industry. They can continuously improve their products, develop new technologies, and introduce cutting-edge solutions to meet evolving customer needs and market demands. Proprietary technology can create significant barriers to entry for competitors, making it difficult for new entrants to replicate or compete effectively. This barrier protects the company's market position and helps preserve its market share and profitability over the long term. Glove companies can leverage their technology to offer value-added services, licensing agreements, or partnerships with other companies in related industries. This diversification of revenue streams reduces dependence on any single market segment and enhances the company's resilience and long-term growth prospects. Proprietary technology represents valuable intellectual property assets for glove companies. These assets can be protected through patents, trademarks, copyrights, or trade secrets, providing the company with exclusive rights to use, license, or monetize its technology.

Participant 5 shared, "The positive perception of our sustainably made gloves has significantly boosted our brand loyalty and customer base. Consumers are willing to pay a premium for products that are environmentally friendly, leading to higher sales volumes and improved profitability."

Participant 6 shared, "Environmentally friendly manufacturing technology can also improve the biodegradability of products and reduce environmental pollution, which not only enhances brand image, but also meets consumer demand for environmentally friendly products, thereby increasing customer loyalty."

Theme 6. Relationship Between ESG Rating and Net Income Can Vary

Most participants concluded that their ESG ratings are proportional to their ESG rankings, with higher ratings resulting in higher rankings and vice versa. However, direct correlation between their ESG ratings and net income are hard to assess. The relationship between glove manufacturers' ESG rating and net income varies and is influenced by a number of factors, including glove brand recognition, set profit margin, and macroeconomic impact (COVID-19).

Subtheme 6.1. Glove Brand Recognition

Most participants agreed that well-established brands could maintain premium pricing, resulting in higher profit margins and net income than lesser-known or generic brands. Strong glove brands can gain a larger market share while maintaining a competitive advantage over rivals. Glove brands with a good reputation for quality, dependability, and innovation typically have higher levels of customer loyalty. Repeat purchases and brand loyalty can lead to consistent revenue streams and lower customer acquisition costs, thereby increasing net income over time.

Participant 1 shared, “A positive brand image can lead to increased customer loyalty, repeat business, and all of which contribute to increased financial performances.”

Participant 12 shared, “Emphasizing the environmental protection value of the brand can gain consumers’ recognition and trust, improve their loyalty, and long-term stable purchasing power can bring sustainable benefits.”

Subtheme 6.2. Profit Margin

During the interviews, participants discussed how glove companies’ profit margins have a direct impact on their net income and overall profitability. Companies that strategically manage profit margins can boost profitability, improve competitive positioning, meet investor expectations, and drive long-term growth in the gloves industry.

Participant 8 shared, “To keep all of those documents and those compliances in order is going to affect your overhead, which is going to affect your profit margin. So yes, you’ll still be able to make and sell a glove, but you might only make 32% instead of 37%. It all depends on how efficient you are at maintaining all of your compliances. It’s all about digging into your profit margin, of course.”

Similarly, the data provided in the net income statements demonstrated the COVID impact on the gross margin in Table 6, which supported the notion. Table 7 depicts the profit margin of the studied glove companies.

Table 7

Yahoo!Finance Profit Margin of the Studied Glove Companies

Participant	2017	2018	2019	2020	2021	2022	2023	TTM
P1	0.49	0.49	0.47	0.48	0.47	0.44	0.43	0.44
P2	0.39	0.39	0.39	0.39	0.40	0.34	0.37	0.38
P3	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03
P4	NA	NA	NA	NA	NA	0.28	0.41	0.21
P5	NA	NA	NA	NA	NA	-0.05	-0.07	-0.01
P6	NA	NA	NA	NA	NA	NA	NA	NA
P7	0.45	0.45	0.44	0.50	0.50	0.42	0.40	0.40
P8	0.27	0.26	0.25	0.25	0.61	0.61	0.13	0.41
P9	0.31	0.31	0.31	0.28	0.30	0.30	0.31	0.31
P10	0.25	0.25	0.25	0.69	0.62	0.13	0.14	0.17
P11	0.36	0.30	0.33	0.36	0.31	0.31	0.34	0.35
P12	0.41	0.38	0.40	0.59	0.69	0.41	0.40	0.40
P13	NA	NA	NA	NA	NA	NA	NA	NA
P14	NA	NA	NA	NA	NA	NA	NA	NA
P15	NA	NA	NA	NA	NA	NA	NA	NA
P16	0.31	0.41	0.47	0.64	0.47	0.10	0.12	0.13
P17	NA	NA	NA	NA	NA	NA	NA	NA
P18	0.07	0.16	0.12	0.55	0.59	0.18	0.11	0.10
P19	0.32	0.34	0.33	0.52	0.78	0.58	0.18	0.18
P20	0.18	0.20	0.18	0.39	0.68	0.17	0.03	0.03

(Source: https://finance.yahoo.com/)

Subtheme 6.3. Macro-Economy Impact (COVID-19)

The majority of participants noted that the COVID-19 pandemic had a significant impact on the business of glove companies. Most experienced the increased demand for medical gloves which led to revenue spike. There were also drawbacks, including disruptions in the supply chain, operational limitations, and a product shortage. One of the most notable effects of the pandemic was the surge in demand for medical gloves due to heightened awareness of hygiene and infection control measures. Most participants experienced unprecedented demand from healthcare facilities, governments, and individuals seeking personal protective equipment (PPE) to prevent the spread of the virus. The surge in demand for gloves strained the global supply chain, leading to shortages of raw materials, production capacity constraints, and logistical challenges. Glove companies faced difficulties in sourcing raw materials, securing transportation, and meeting delivery deadlines, which impacted their ability to fulfill orders and maintain production levels. The increased demand for gloves coupled with supply chain disruptions resulted in price volatility within the glove industry. Glove prices soared to record highs as manufacturers struggled to keep up with demand, leading to increased revenues for glove companies in the short term. Some glove companies experienced labor shortages and faced challenges in recruiting and retaining workers, particularly in regions where lockdowns and movement restrictions were imposed.

Participant 3 shared, “Um, you know, obviously our economy has changed post Covid. Obviously, I think that gloves have a more, um. Prevalence now that we’re I mean, you still see lots of people wearing gloves for many things that they probably don't need to wear them for. So, you know, being on that side of the industry, is it favorable? Yes. Because obviously Covid propelled glove wearing to a whole different level."

Similarly, the data provided in the net income statements demonstrated the COVID impact on revenue and gross margin in Tables 6 and 8, which supported the notion.

Summary

Chapter 4 contained the study's findings from multiple data sources, including in-depth interviews, artifact studies on participants' companies' financial reports, and ESG ratings and rankings. Six themes and 19 subthemes emerged from the 14 interview questions, as part of an appreciative inquiry interview. The discussion in Chapter 5 centers on the significance of these findings and recommendations for scholars and business practitioners regarding the effectiveness of sustainability initiatives on glove manufacturers.

Chapter 5: Major Findings, Conclusions, and Recommendations

This study investigated and validated the relationship between glove manufacturers' sustainability practices and their impact on their financial performance through in-depth interviews and examination of business artifacts such as the company's ESG report, financial income statements, and business plans. I have structured the presentation into 12 significant sections in this chapter. They are 1) major findings – discussion of the six main themes, 2) ESG rating and ranking, 3) financial income statement – net income, 4) answers to the six research questions, 5) answers to the main research question of how sustainable practices affect the financial performance of glove manufacturers, 6) examining findings through theoretical lens, 7) unexpected findings, 8) conclusions, 9) discuss the implications for actions, 10) recommendations for future research, 11) practical recommendations, and 12) concluding remarks and reflections.

Major Findings

This section covers six main themes, ESG ratings and rankings, financial statements, answers to the six research questions, examining findings through theoretical lens, and unexpected findings.

Six Main Themes

The findings from the six main themes derived from the interviews with the 20 selected participants are that:

1. Glove manufacturers engage in many ESG initiatives: Glove manufacturers incorporate Environmental, Social, and Governance (ESG) initiatives into their sustainable strategies in a variety of ways, such as using renewable energy, reducing waste, increasing corporate social responsibility, and obtaining third-party

certification.

2. Glove manufacturers moderately engage in key ESG issues: Glove manufacturers participate moderately in key issues identified by Morgan Stanley Capital International.
3. Participants lack awareness of ESG ratings and rankings of their companies: According to the interviews, ESG ratings and rankings for glove manufacturers have been widely available or standardized across the industry. However, the majority of participants stated that they are unsure of their companies' ESG ratings and rankings, suggesting that glove companies are also unsure of their ESG (Environmental, Social, and Governance) rating and ranking.
4. Challenges and benefits of sustainability practices in the short and long term: Participants reported that glove manufacturers described the up-front investment, glove manufacturers described the slow recuperation of cost, and glove manufacturers described it is worth in the End.
5. Perceptions of glove manufacturers do not match financial income statements: Most participants believed that glove manufacturers' sustainability practices did not align with their financial income statements. Participants mentioned that complex financial reporting, earnings volatility, and external factors all played a role.
6. The relationship between ESG rating and net income can vary: Most participants concluded that their ESG ratings are proportional to their ESG rankings, with higher ratings resulting in higher rankings and vice versa. However, direct correlation between their ESG ratings and net income are hard to assess. The relationship between glove manufacturers' ESG rating and net income varies and is influenced by

a number of factors, including glove brand recognition, set profit margin, and macroeconomic impact (COVID-19).

ESG Rating and Ranking

The interviews revealed that most participants were unaware of their companies’ ESG ratings and rankings. Participants stated that their companies engaged in ESG certification and were aware of the rating’s existence. They also believed that high ESG ratings could differentiate their brand and make their products more appealing to a segment of consumers who value ethical practices. Nevertheless, I conducted a triangulation analysis using CSRHub’s report on ESG ratings and company rankings for the participants. The goal was to confirm themes discovered by comparing one set of data to another, thereby increasing the study’s reliability and validity. As a result, the relationship between sustainable practices and financial outcomes was examined using the CSRHub report and Yahoo!Finance.

Table 8 displays the status of the participants’ companies’ ESG ratings and rankings from CSRHub, with the conclusion that the higher the rating, the higher the ranking. High ESG rankings are often seen as industry leaders in sustainability and ethics, attracting investors and customers who prioritize these values.

Table 8

ESG Rating and Ranking on CSRHub

Participant	ESG started MM/YYYY	ESG rating	ESG ranking
P1	10/2021	61	86
P2	10/2021	60	85
P3	10/2021	62	89
P4	10/2021	55	67
P5	10/2021	55	45
P6	10/2021	NA	NA
P7	10/2021	NA	NA
P8	10/2021	62	89
P9	10/2021	58	78
P10	10/2021	54	63
P11	10/2021	61	88
P12	10/2021	55	66
P13	10/2021	53	74
P14	10/2021	58	79
P15	10/2021	51	88
P16	10/2021	47	31
P17	10/2021	45	24
P18	10/2021	54	61
P19	10/2021	50	43
P20	10/2021	63	92

(Source: https://www.csrhub.com/)

Financial Statement – Net Income

In addition to the in-depth interviews, which revealed that most participants' perceptions do not match their financial income statements and that the relationship between ESG rating and net income varies, I conducted content analysis on the participants' companies' financial income statements, specifically their net income statements.

Table 9 displays the net income of the participants' companies from 2020 to the last trailed twelve months. The table gave readers an overview of the participants' companies' net incomes from 2020 to 2023 and the last trailed twelve months. Surprisingly, 2021's numbers are greater than 2022 and the years after. Some glove companies incurred net loss in 2022, 2023, and the last trailer twelve months.

Table 9

2017 to 2023 and TTM Net Incomes on Yahoo!Finance (in $millions)

Participant	2017	2018	2019	2020	2021	2022	2023	TTM	Δ%
P1	4,858	5,349	4,517	5,449	5,921	5,777	(6,995)	(6,995)	-2.21
P2	148	484	112	159	247	159	148	148	-0.07
P3	1,288	256	1,363	(3,696)	611	(933)	261	639	-1.68
P4	NA	NA	NA	NA	NA	46	-25	-25	-1.54
P5	NA	NA	NA	NA	NA	-9	-12	-12	0.39
P6	NA	NA	NA	NA	NA	NA	NA	NA	NA
P7	2,225	2,938	3,696	6,375	7,725	6,950	5,941	5,941	-0.15
P8	59	92	95	91	604	677	-49	-49	-1.07

Participant	2017	2018	2019	2020	2021	2022	2023	TTM	Δ%
P9	406	536	695	404	631	538	445	445	-0.17
P10	20	25	25	975	1,033	87	45	45	-0.49
P11	2,278	1,410	2,157	2,352	1,814	1,934	1,764	1,764	-0.09
P12	38	42	47	227	597	33	2	2	-0.93
P13	NA	NA	NA	NA	NA	NA	NA	NA	NA
P14	NA	NA	NA	NA	NA	NA	NA	NA	NA
P15	NA	NA	NA	NA	NA	NA	NA	NA	NA
P16	28	38	68	245	161	-52	-81	-81	0.57
P17	NA	NA	NA	NA	NA	-6	-2	-2	-0.63
P18	8	29	18	401	660	46	4	4	-0.91
P19	14	22	26	110	798	150	(29)	(29)	-1.20
P20	69	90	76	372	1,624	58	-184	-184	-4.19

(Source: https://finance.yahoo.com/)

Answers to the Six Research Questions

After reviewing the six main themes and subthemes derived from the interviews, reviewing the ESG ratings and rankings reported on CSRHub, analyzing the income statements reported on Yahoo!Finance, and examining media reports associated with the participants' companies, answers to the research questions emerged.

RQ1. How do glove manufacturers integrate ESG into their sustainable strategies?

Participants stated that they integrated Environmental, Social, and Governance (ESG) initiatives into their sustainable strategies in a variety of ways, including the use of renewable energy, waste reduction, increased corporate social responsibility, and third-party certification.

Yahoo!Finance's sustainability (ESG) risk rating indicated the company's performance and management practices regarding environmental, social, and governance factors. The "Total ESG Risk Score" provides investors, analysts, and stakeholders with a holistic view of the company's ESG performance and potential risks. A higher Total ESG Risk Score indicates stronger ESG management practices and lower exposure to ESG-related risks, while a lower score may suggest areas of concern or potential vulnerabilities.

RQ2. What is the implementation ratio of ESG against the 35 sustainable key issues listed in Table 1?

Participants stated that their companies are moderately involved in key issues identified by Morgan Stanley Capital International. The majority of participants say their companies engage moderately in about half of the 35 key ESG issues, with a focus on climate change, natural capital, pollution and waste, environmental opportunities, human capital, corporate governance, and corporate behavior. Yahoo! Finance's sustainability reported the overall ESG risk score along with individual scores for environment, social, and governance.

RQ3. What are the ESG ratings and rankings of glove manufacturers?

Participants indicated that they were unsure of their ESG rating and ranking. According to the interviews, ESG ratings and rankings for glove manufacturers are widely available and consistent across the industry. CSRHub, EcoVadis, Sustainalytics, and other companies provide sustainability data.

RQ4. What are glove manufacturers' perceptions of the impact of sustainability on their financial outcomes following the practices?

Most participants believed that glove manufacturers' sustainability practices did not align with their financial income statements. Participants mentioned that complex financial reporting, earnings volatility, and external factors all played a role. Many participants mentioned that glove companies' short-term investment in ESG initiatives resulted in increased implementation costs. Many participants stated that the long-term reality of their companies' investments in ESG initiatives includes sustainable growth, improved reputation, market differentiation, innovation, stakeholder engagement, risk management, and access to capital.

Sustainability reports can provide information on a company's environmental, social, and governance (ESG) performance and impacts. It is typically published annually and is a critical tool for communicating the company's sustainability initiatives, goals, progress, and challenges to various stakeholders, including investors, employees, customers, suppliers, regulators, and the broader community. Sustainability reports are essential for promoting transparency, accountability, and stakeholder engagement in corporate sustainability practices. They allow companies to demonstrate their commitment to sustainable development, identify areas for improvement, and build trust with stakeholders by disclosing relevant information in a clear and transparent manner.

RQ5. What are glove manufacturers' experiences of the impact of sustainability on their financial outcomes following the practices?

Participants offered limited quantitative data points concerning sustainability practices in their companies. However, participants offered many descriptions of various sustainability practices in their interviews. First, sustainable practices often lead to long-term cost savings; energy-efficient machinery and waste reduction can lower operational costs. Second, there is growing consumer demand for sustainable products; manufacturers offering eco-friendly gloves may find new market opportunities and can often command premium prices. Third, manufacturers that emphasize sustainability can enhance their brand reputation, which can lead to increased customer loyalty and attract new customers who prioritize sustainability. Lastly, adhering to sustainable practices can help manufacturers comply with current and future environmental regulations and be more attractive to investors.

Overall feedback from participants is that ESG investments are costly. Infrastructure and technology, education and training, certification and compliance, and supply chain involvement are among the areas that can receive a large upfront investment when investing in ESG initiatives for glove factories. Participants revealed, for example, a water treatment plant would cost a standard 200 to 1000 GPM capacity raw water treatment system from $975,000 to $3 million, depending upon flow rate and water quality. The return on investment of improving companies' facilities for ESG practices can be long term.

RQ6. What is the relationship between glove manufacturers' net income and ESG rating?

Participants provided limited quantitative data on the relationship between their net income and their firms' ESG ratings. In their interviews, participants described financial improvements in terms of cost reduction and customer attraction for ethical products. However, participants stated that there were unaware of the ESG rating criteria being tracked as part of the typical business operations.

Most participants came to the conclusion that higher ratings correspond with higher rankings in ESG, and vice versa. It is difficult to determine a clear relationship between their ESG ratings and net income due to participants having no access to their companies' financials. The correlation between the ESG rating of glove manufacturers and their net income could not be obtained, and participants believed it was impacted by various factors such as macroeconomic impact, set profit margin, and glove brand recognition (COVID-19).

The gross margin varied in Table 9 by examining their net income statements. Internal factors within the company, such as pricing, costs, and operational efficiency, as well as external factors in the broader market and economic environment, were the factors that impacted the relationship of a company's income to its ESG rating.

Answers to the Research Question – How Sustainable Practices Affect the Financial Performance of Glove Manufacturers

The study found that glove companies' sustainable practices affect their financial performance in both the short and long term.

In the short term, it affects financial performance, causing certain cost increases and profit losses. Numerous participants brought up how the short-term realities of glove companies' investments in ESG initiatives led to higher implementation costs. These costs covered stakeholder engagement programs, staff training, technology updates, obtaining sustainability certifications, and initial infrastructure investments. As resources are devoted to ESG projects, there would be an immediate negative impact on financial performance, such as increased operating costs and decreased profitability.

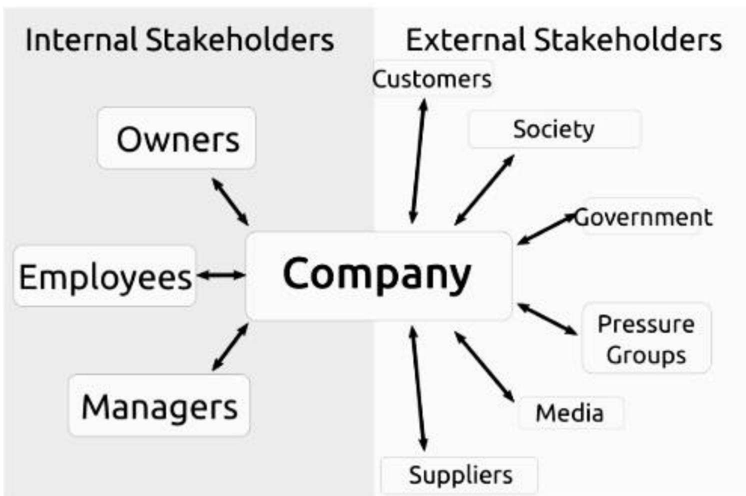
In the long term, it will have an impact on financial performance positively, allowing for continued growth, brand recognition, improved reputation, market differentiation, innovation, stakeholder engagement, risk management, and capital access.

Examining Findings through a Theoretical Lens

This study, in addition to pursuing the research questions, examined the findings through the lens of stakeholder theory. According to stakeholder theory studied in literature review, companies are responsible not only to their shareholders, but also to other parties, or stakeholders, who have an interest in or are affected by the firm's actions. These stakeholders can be internal or external to the company. Figure 1 depicts the relationship of a company to its internal and external stakeholders.

Figure 1

Stakeholder Theory



(Source: https://www.economicpoint.com/)

Internal stakeholders typically include owners, employees, and managers. These are individuals or groups who are directly involved in or affected by the company's operations and decisions. External stakeholders encompass a broader range of individuals or groups that are not directly part of the company but still have an interest in its activities. This category includes customers, society, government, pressure groups, media, and suppliers.

First, stakeholder theory is concerned with internal interactions within the company. With this in mind, the participants are internal stakeholders who offered their knowledge and experience on how their companies incorporated sustainability into their business strategy, the sustainable activities they engaged in, and the relationship between net income and ESG rating.

Second, stakeholder theory focuses on external interactions outside of the company. In this regard, the participants contributed their experience and knowledge of how customers perceive their products made from sustainable materials, if their suppliers comply with ESG, and how government regulation affected their sustainability practices, which were investigated under this theory.

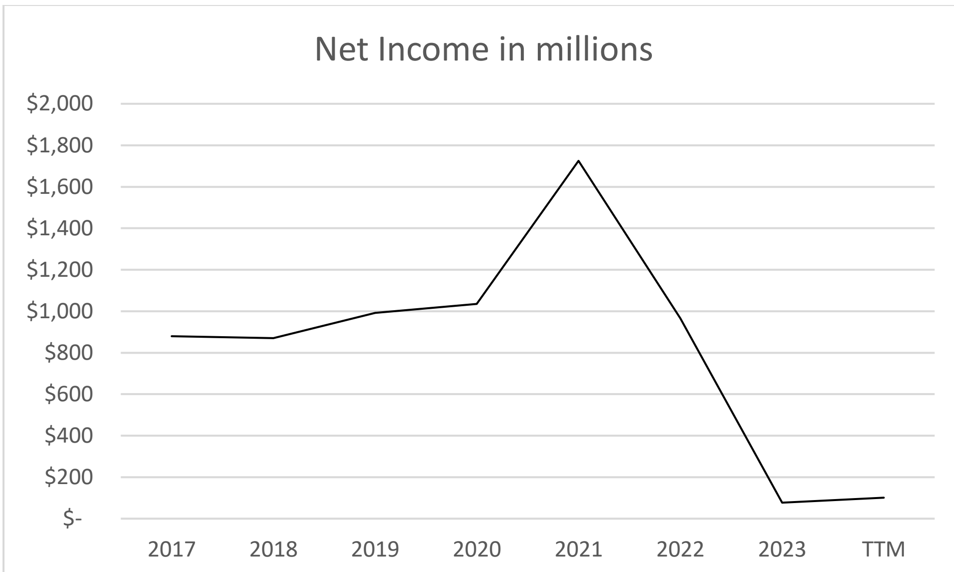
In summary, organizations must weigh the interests of all relevant parties in their decision-making processes, including those of their employees, clients, suppliers, communities, and the environment (Santos, 2011). Sustainable stakeholder theory expands on this concept by emphasizing integrating sustainability principles into the relationship between organizations and their stakeholders. It gives businesses a framework for incorporating sustainability principles into their everyday operations, decision-making, and stakeholder interactions. Organizations can accomplish their business goals and contribute to sustainable development by doing this (Garvare & Johansson, 2010). Hart and Milstein (2003) created a framework for sustainable values that connects the firm's creation of shareholder value to the issues facing global sustainability (Hart & Milstein, 2003). By applying stakeholder theory to sustainability, a glove company can ensure that its sustainability roadmap is comprehensive, inclusive, and effective in creating long-term value for all stakeholders while minimizing environmental impact.

Unexpected Findings

In the study, one unexpected finding is that the COVID-19 pandemic had a significant impact on glove companies' profitability during the period of 2021 to 2023 and the last trailing twelve months. Most glove companies in the study experienced an increased demand for their gloves, resulting in a revenue spike. Figure 2 illustrated the average net income of the 20 participants' companies from 2017 to 2023, as well as the trailer twelve months. The spike occurred in 2021, followed by a significant drop in 2022, and average net incomes in 2022 and subsequent years are lower than the prior years before 2020, the year COVID-19 emerged.

Figure 2

2017 to 2023 and TTM Average Net Income Trending (in millions)



(Source: https://finance.yahoo.com/)

Many participants reported that COVID-19 caused an extremely high increase in sales in 2021 due to increased healthcare needs, government mandates, stockpiling, supply chain disruptions, and the general fear of contamination. These factors combined to create an unprecedented demand for gloves across multiple sectors, leading to global shortages and supply chain challenges. After 2021, the glove industry was impacted by overstock inventory, which many participants reported this phenomenon will last until the end of 2024, with hopes for a market rebound in 2025. This infers that unanticipated macroeconomic effects such as COVID-19 can be a factor that contributed to the impact on glove manufacturers' profitability.

Another unexpected finding of the study is that the participants' companies did not have good metrics for tracking the financial impact of their ESG practices. Over half of the participants were unaware of the ESG rating. It was a secondary surprise because the participants and their companies were not tracking ESG compliance as part of their daily business operations. There was no possibility that the companies regularly tracked the link between ESG compliance and their financial performance. Millions of dollars might have been invested to obtain ESG compliance without any clear metrics to track its impact on financial performance.

Conclusions

I conducted extensive in-depth interviews with follow-up questions to ensure the clarity of the answers with 20 selected participants from 20 publicly traded glove companies in China, Japan, Malaysia, Thailand, UK, and US. To validate the data collected, the study included a triangulation analysis that looked at these participants' companies' financial reports, such as net income, as well as their ESG ratings and rankings on CSRHub.

The study's findings are consistent with the literature review, which shows a growing recognition of the importance of ESG practices in the glove industry, with varying levels of adoption and integration. Glove companies are becoming more aware of the strategic importance of ESG in improving business resilience, meeting consumer expectations, and fostering long-term success. However, the significance of this study is that glove companies' financial performance was influenced by their ESG practices in both the short and long term. Short-term financial performance would be impacted by investments in ESG initiatives, which resulted in high implementation costs and a relative increase in operating costs and decrease in profitability. Long-term financial performance would be positively impacted, allowing for sustainable growth, access to more capital, and profitability generation, allowing for continued growth, brand recognition, improved reputation, market differentiation, innovation, stakeholder engagement, risk management, and capital access.

The study also found that glove manufacturers engage in several ESG initiatives, including the use of renewable energy, waste reduction, increased corporate social responsibility, and third-party certification; glove manufacturers participate moderately in key ESG issues; participants have little awareness of their own ESG ratings and rankings. Sustainability practices present both short- and long-term challenges and benefits to glove manufacturers; most participants believed that glove manufacturers' sustainability practices did not correspond to their financial statements; it is difficult to establish a direct correlation between their ESG ratings and net income; and the relationship between glove manufacturers' ESG rating and net income fluctuates and is influenced by glove brand recognition, profit margins, and macroeconomic factors such as COVID-19.

Implications for Actions

This qualitative study used sustainable development (ESG) theory to investigate the relationship between sustainable business practices and the financial performance of glove manufacturers. The theoretical framework is an essential component of research because it lays the theoretical groundwork for the study, guides the research process, and aids in the interpretation of research findings. The Brundtland Report introduced the concept of sustainable development, highlighting the importance of addressing environmental, social, and economic issues in a balanced and integrated manner (Brundtland, 1987). The Brundtland Report is widely regarded as a foundational document that paved the way for the development of the ESG framework. ESG criteria are a set of standards that investors and organizations use to assess a company's or investment's sustainability and ethical impact.

The study discovered that glove companies' ESG practices have an impact on glove manufacturers both short- and long-term financial performance. The study implied that glove companies are aware of the importance of ESG practices and apply this theory. Glove companies that practiced ESG would gain prominence for long-term sustainability, which includes addressing environmental and social concerns while maintaining high governance standards. ESG practices can improve a company's reputation and brand image. Consumers, investors, employees, and other stakeholders are increasingly favoring companies that prioritize ESG principles, resulting in higher brand loyalty and trust. Glove companies that have strong ESG performance may find it easier and less expensive to raise capital.

Through these actions and outcomes, glove companies can help shape the evolution of ESG theory and practice, driving continuous improvement and progress toward a more sustainable and responsible business ecosystem. Some potential ways in which these practices could influence and inform ESG theories.

The study makes ESG factors a bigger part of the glove companies' business plans. Glove manufacturers are more likely to succeed in a constantly shifting global market if they place a high priority on sustainability and responsibility. Long-term financial performance, risk management, reputation, capital access, operational efficiency, talent attraction, regulatory compliance, and long-term sustainability can all be improved by ESG initiatives.

Recommendations for Future Research

The study's findings demonstrate that sustainable business practices have an impact on glove manufacturers' financial performance in both the short and long term. Although implementing sustainable practices takes time and money in the beginning, the study found that glove manufacturers will eventually reduce operating risks and costs while increasing profitability. Learning more about how sustainable practices affect glove manufacturers' financial performance would benefit business practitioners in glove industry and investors, as no company can survive without a good financial performance.

The recommendations for future research include changing the sampling demographics and time frame. As one of the findings is that the data saturated on the first 15 interviews. Participants in the sample are lacking awareness of their ESG rating and rankings. One recommendation for future research is to select participants who specialize in the field of the ESG ratings and know their financials in each of the selected glove manufacturers. Another recommendation for future research is a longitudinal study that examines these glove manufacturers' long-term financial impact from 2025 to 2030. One of the findings revealed that glove companies' net incomes were significantly impacted in 2021, a year after COVID. There was a surge in net income in 2021, followed by sharp drops since 2022 due to oversupply of gloves. A longitudinal study over a new time period from 2025 to 2030 would help to determine whether glove manufacturers improved their business performance after the economy returned to normal after 2025 as the glove industry has predicted.

Nevertheless, one of the noted weaknesses of this study was a lack of available financial statements and metrics offered by the participants. They were often apprehensive about providing such materials that were not publicly available. Furthermore, numerous potential participants decided not to take part in this study because they did not wish to ask their legal department for clearance to provide such metrics. Therefore, future studies should be conducted with participants who have experience and access to their financial performance metrics. According to a literature review, in measuring the success of ESG practices, participants must have access to their companies' income statements and balance sheets with an understanding of financial metrics such as ROI, ROA, and ROE. With the help of financial metrics, the study will provide more accurate results, allowing readers to better understand the relationship between revenue growth, cost savings, profitability, and ESG practices.

Companies with strong ESG practices may attract customers who prefer to support environmentally and socially responsible businesses, potentially increasing sales. They can charge premium prices for their products or services if they are perceived as sustainable or ethically produced. ESG initiatives, such as energy efficiency improvements or waste reduction programs, can lower operating costs. Initial costs might increase due to investments in sustainable technology or practices, such as renewable energy or eco-friendly materials. Improved processes and efficiencies from sustainable practices can enhance operating income. Better social practices, such as fair wages and good working conditions, can increase employee satisfaction and productivity, positively impacting operating income. Good governance practices reduce the risk of legal issues, fines, and penalties, which can protect net income. Sustainable practices contribute to long-term financial health, which might be reflected in consistent or growing net income. Although not directly shown in the income statement, an enhanced reputation due to strong ESG practices can lead to increased customer loyalty and long-term revenue growth. Adhering to stringent ESG standards may reduce the likelihood of regulatory fines and associated costs. Good ESG practices can lead to tangible and intangible benefits that enhance the overall financial health of a company, reflected in various components of the balance sheet. Investments in sustainable assets, improved profitability, and a stronger market position are some ways these benefits manifest in the balance sheet, contributing to the company’s long-term viability and attractiveness to investors. Therefore, future research should focus upon taking into account income statements and balance sheets when examining glove manufacturers' ESG practices.

Practical Recommendations

Glove companies can take significant steps toward becoming more sustainable, lowering their environmental impact and positively contributing to the global effort to combat climate change and environmental degradation. My recommendations for an ESG roadmap for glove companies are as follows.

Year 1-2:

- Conduct sustainability assessment
- Set sustainability goals
- Begin sourcing sustainable materials
- Start energy and water efficiency projects in manufacturing
- Certify with SBTi, CDP, EcoVadis, or CSRHub

Year 3-4:

- Implement sustainable packaging solutions
- Optimize logistics and begin transition to sustainable transport
- Launch recycling/take-back programs
- Certify products for sustainability in LCA, chemical footprint, or ISO 50001 (energy management)

Year 5 and Beyond:

- Achieve significant milestones (e.g., 50% renewable energy use)
- Regularly update and refine sustainability goals
- Continuously innovate and improve sustainability practices

Concluding Remarks and Reflections

My doctoral journey has been both challenging and rewarding. I believe that having higher education with good mentors in California Baptist University has increased my worldview and value in life. I also believed that earning a doctorate in business administration would help me improve my leadership skills, gain knowledge from current course materials, and allow me to interact with leaders from various industries to share ideas for running a sustainable business.

As a mentor in the glove industry, I aimed to assist glove manufacturers in developing a profitable, long-term strategy that benefits human well-being. During my study, I have gained valuable insights into the complex relationship between ESG practices and financial impacts in the glove industry. Through an in-depth analysis of the literature and empirical data, I have developed a deeper understanding of the challenges and opportunities facing glove companies in their pursuit of sustainable development.

This research included several key stages, from planning and data collection to analysis and reporting. While the research has provided valuable insights, it has its limitations. One limitation of the study is that not all glove manufacturers are publicly traded; therefore, their financial income statements and ESG ratings could be inaccessible. To remove this limitation, I selected the publicly traded glove companies and ensured that the participants could access their income statements and ESG ratings. The other limitation is that with samples and the selection of the instruments used to collect the data, there were time constraints in recruiting the right participants. To ensure the recruiting process went smoothly, I automated the process by using email, LinkedIn, and phone calls to screen and recruit the candidates. I also utilized Zoom to get the participants to sign consent forms and Calendly to schedule the interviews.

Moreover, when data collected by researchers is interpreted subjectively, it could affect the success of the research results. To maintain objectivity while conducting a study, developing a thorough research plan and reviewing the research procedure with the professor and cohort were essential. I also used triangulation to validate the study's findings and reliability to ensure a comprehensive and well-rounded analysis.

Overall, the dissertation process has been an invaluable experience, allowing me to grow and develop as a researcher in the following ways. The research has improved my skills, including literature review, data collection, and analysis. I gained a deeper understanding of the complexities of ESG practices and financial impacts in glove companies. The research has enhanced my critical thinking, problem-solving, and writing abilities. I developed a greater appreciation for the importance of ESG in business decision-making. The study provided rich, detailed insights into glove companies' ESG initiatives and their relationship to financial performance.

In conclusion, this dissertation has been both challenging and rewarding. It has given me valuable insights, contributed to the field, and aided my personal and professional development. I hope my findings will help with ongoing efforts to combat climate change, promote sustainable development, and create a more environmentally responsible glove industry. As a result, I believe this study effectively provided business practitioners and scholars with rich, detailed insights into glove companies' ESG initiatives and their relationship to financial performance.

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Appendix A: Glove Manufacturer List

A

ALLIANCE RUBBER PRODUCTS SDN BHD (52446-U)
ANSELL (KULIM) SDN BHD (57285-X)
ANSELL NP SDN BHD (159719-W)
APOLLO RUBBER SDN BHD (25665-K)
ASPEN GLOVE SDN BHD (1378483-U)
AT GLOVE ENGINEERING SDN BHD (202001014272)
AVECENA GLOVES SDN BHD (935383-V)
AXG INDUSTRIES SDN BHD (927814-W)

B

BETELCARE SDN BHD (120426-A)
BEYOND GLOVE SDN BHD (1373432-V)
BONRIC SDN BHD (208508-M)
BRIGHTWAY HOLDINGS SDN BHD (169521-T)

C

CAREGLOVE GLOBAL SDN BHD (933760-W)
CAREPLUS (M) SDN BHD (212677-K)
CE TECHNOLOGY BERHAD
CENTRAL MEDICARE SDN BHD (660896-T)
CLEAN Q GRIP (M) SDN BHD (841312-V)
COMFORT RUBBER GLOVES INDUSTRIES SDN BHD (260990-U)
CONCEPT RUBBER PRODUCTS SDN BHD (45723-K)
CRANBERRY (M) SDN BHD (104994-W)

D

DURAMITT SDN BHD (514146-K)
DYNACARE SDN BHD (1376544-A)

E

ECO MEDI GLOVE SDN BHD (815262-D)
ENCOMPASS INDUSTRIES SDN. BHD. (1160646-P)

F

FLEXITECH SDN BHD (165532-M)
FWK INDUSTRY SDN BHD (460085-W)

G

G. B. INDUSTRIES SDN BHD (166764-T)
GMP MEDICARE SDN BHD (116271-X)
GREAT ECO GLOVE (970327-V)

GX CORPORATION SDN BHD (752821-X)

H

HARTALEGA HOLDINGS BHD (741883-X)
HL RUBBER INDUSTRIES SDN BHD (621188-H)
HONG SENG GLOVES SDN BHD (1378973-A)

I

ICONIC MEDICARE SDN BHD (223748-A)
IDEAL QUALITY SDN BHD SDN BHD (404964-P)
IVORY GLOVE SDN BHD (1369703-K)

J

JR ENGINEERING AND MEDICAL TECHNOLOGIES (M) SDN BHD (549862-H)

K

KL-KEPONG RUBBER PRODUCTS SDN BHD (96464-V)
KOON SENG SDN BHD (107051-H)
KOSSAN LATEX INDUSTRIES (M) SDN BHD (169832-K)
KSG MEDICARE SDN BHD (1266665-X)

L

LATEXX MANUFACTURING SDN BHD (165989-U)
LIENTEH TECHNOLOGY SDN BHD (1366767-K)
LONGCANE INDUSTRIES SDN BHD (357944-W)

M

MAH SING HEALTHCARE SDN BHD (358843-A)
MARCON RUBBER INDUSTRY SDN BHD (171564-K)
MAXTER GLOVE MANUFACTURING SDN BHD (229862-H)
MAXWELL GLOVE MANUFACTURING BERHAD (99472-X)
MEDI LEGION SDN BHD (1376544-A)
MULTISAFE SDN BHD (236507-X)

N

N. S. UNI-GLOVES SDN BHD (104031-V)
NASTAH INDUSTRIES SDN BHD (164985-K)

O

ONETEXX SDN BHD (399028-W)
OON CORP RESOURCES (M) SDN BHD (134976-H)

P

PENTAVEST HOLDING SDN BHD (120726-W)
PERUSAHAAN GETAH ASAS SDN BHD (89708-V)
PLATINUM GLOVE INDUSTRIES SDN BHD (661291-W)
PROFESSIONAL LATEX SDN BHD (1038089-A)

Q

QUALITY LATEX PRODUCTS MALAYSIA SDN BHD (59087-U)
QUBE MEDICAL PRODUCTS SDN BHD (827379-P)

R

RIVERSTONE RESOURCES SDN BHD (229842-A)
RUBBERCARE PROTECTION PRODUCTS SDN BHD (169997-P)
RUBBEREX (M) SDN BHD (81107-V)

S

SANCHEM CORPORATION SDN. BHD.
SIGMA GLOVE INDUSTRIES SDN BHD (978489-V)
SM GLOVE SDN BHD (1368065K)
SMART GLOVE CORPORATION SDN BHD (403570-D)
SOUTHERN LATEX PRODUCTS SDN BHD (167224-K)
SUMIRUBBER MALAYSIA SDN BHD (172875-K)
SUPERMAX CORPORATION BERHAD (420405-P)
SUPERMAX GLOVE MANUFACTURING SDN BHD (218698-T)

T

TAN SIN LIAN INDUSTRIES SDN BHD (204308-D)
TEKMEDIC (M) SDN BHD (170720-T)
TG MEDICAL SDN BHD (283358-W)
TOP GLOVE CORPORATION BHD (474423-X)

U

UG GLOBAL RESOURCES SDN BHD (899229-P)

W

WEAR SAFE SDN BHD (204396-X)
WRP ASIA PACIFIC SDN BHD (147817-V)

Y

YTY GROUP (176157-M)

Appendix B: Informed Consent Form

Dear Business Executive,

I am pursuing a Doctor of Business Administration degree at California Baptist University. I am working on a study titled “How Sustainable Practices Affect the Financial Performance of Glove Manufacturers.” The study investigates the relationship between sustainable business practices and the financial performance of the major players in the glove industry. The study wants to know what you think about the sustainable activities your company is doing.

I identified your firm with the Malaysian Rubber Glove Manufacturers Association (MARGMA). Compliance with US research regulations necessitates your permission for your organization to participate in this research study. I would appreciate your permission to interview you. By signing in the signature section at the bottom of this form, you grant yourself and your organization permission to participate in this study and grant me, the researcher, access to you to be interviewed and access to financial documents of your choosing. Because you are the firm’s leader, your perspective is critical to the study’s success. Your participation will consist of one 60-minute interview designed to elicit your unique perspectives on this research topic.

CONFIDENTIALITY

The information gathered during the interviews will be kept strictly confidential. The following steps will be taken to keep information confidential and protect it from unauthorized disclosure, tampering, or damage: To avoid using names, all participants will be de-identified and assigned a coded participant number throughout the interviews. All study findings will be stored (digitally) in a locked cabinet behind a single locked door.

Furthermore, work stored in computer files such as USB Flash Drives will be password protected, and the computer itself will be kept in a locked cabinet when not in use. No participant statements will be quoted or summarized in a way that reveals the participant’s identity or agency. The study’s overall findings will be examined, analyzed, and discussed in general at the scheduled dissertation defense, but no personally identifying information will be included.

INCENTIVES

There will not be any incentive for this voluntary participation.

YOUR RIGHTS AS A RESEARCH PARTICIPANT

Your participation is entirely voluntary. You may opt out of the study at any time without penalty. The study’s findings will be published, but your name will not be used, and your individual findings will be kept confidential. Your anonymity is ensured by coding the names of individuals and organizations on interview transcripts. All information about your company will be kept in a locked container in my office for three years before being destroyed.

There are no known risks to you except for the loss of time caused by participating in the interview. Although there may be no direct benefit to you or your organization, your participation may benefit the overall ESG implementation in the glove industry. Another example is the new knowledge that may strengthen the study of ESG in the glove industry.

If you have questions about your rights as a research participant, would like to talk with someone about this research other than the researchers, or would like to report an adverse experience, you can contact the IRB, the ethics committee that oversees research at CBU, at irb@calbaptist.edu.

CONTACTS FOR QUESTIONS OR PROBLEMS

If you have any questions or concerns about your participation, please call Willis Chou at (650) 619-6235, email willisl.chou@calbaptist.edu. Alternatively, you may contact my research chair, Kenny George at (951) 343-5567 and email kgeorge@calbaptist.edu.

By signing this form, you acknowledge that you understand the nature of the study, the requirements for your organization's participation, and the researcher's commitment to maintain confidentiality with your firm. Your signature on this form indicates that you are over the age of 18 and that you grant permission for your company to participate voluntarily in the study as mentioned above. Your signature also grants Willis Chou, a researcher from California Baptist University, permission to access your organization to conduct this research.

(CHECK ONE) ☐ I accept the above terms**.** ☐ I do not accept the above terms.

Signatures:

____ __________________

Interviewee Date

____ __________________

Willis Chou Date

Appendix C: Interview Questions

IQ1. What initiatives has your organization made to encourage sustainability?

IQ2. What are the renewable energy sources during the manufacturing process?

IQ3. How does implementing waste reduction and recycling initiatives in your organization affect financial performance?

IQ4. How do environmental regulations in your organization affect financial performance?

IQ5. How does ESG compliance in your organization affect financial performance?

IQ6. How do sustainable certifications in your organization affect financial performance?

IQ7. What is your organization’s overall ESG ranking and rating?

IQ8. How does the perception of gloves made in a sustainable manner affect your organization’s financial performance?

IQ9. How does the willingness to pay for gloves made in a sustainable manner affect your organization’s financial performance?

IQ10. How does the financial performance of your organization change when sustainable supply chain practices, like ethical labor practices and responsible sourcing, are implemented?

IQ11. What are the potential dangers and difficulties of using sustainable manufacturing techniques for gloves, and how do they affect the financial result?

IQ12. How do environmentally friendly manufacturing techniques for gloves support the development of a positive brand image and customer loyalty, and how does this affect your financial performance?

IQ13. Overall, what are the ESG criteria (key issues) used in your organization? That is the overall ESG against the 35 sustainable key issues referred to in Table 1.

IQ14. Overall, how does the financial performance of your organization change when sustainable manufacturing practices are implemented? Very high, high, average, low, or not applicable?