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Sustainable Practices in Global Food Service: An Examination of Food Packaging and Recycling Strategies in Finland and Australia

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Title
Sustainable Practices in Global Food Service: An Examination of Food Packaging and Recycling Strategies in Finland and Australia

The general purpose will be to examine sustainability of the global food service sector by exploring effective strategies and opportunities for improvement. The comprehensive understanding of the present level of food packaging and recycling practices in Finland and Australia and international business dynamics peculiarities will contribute to the comprehension of the degree to which global forces affect sustainability in these countries.

This study aims to conduct a comparative analysis through a mixed-method approach. Both qualitative and quantitative research to comprehensively explore sustainable practices in food packaging and recycling in the food service industries of Finland and Australia.

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1 Introduction

Sustainable practices in the global food service industry have become increasingly essential in the current business environment as the world is facing growing environmental challenges. These sustainable practices help to reduce the ecological footprint caused by various industries, conserve resources and to meet the rising demand for eco-friendly options. The main focus in sustainability among businesses in the food service sector lies in food packaging. This has prompted businesses in the industry to transition from traditional plastic packaging to biodegradable alternatives made from materials like cornstarch, sugarcane or bamboo, since unlike plastic these materials break down more easily in the environment. (Beltran, Tjahjono, Bogush, Julião & Teixeira 2021, 2.) Recycling has also become increasingly important in the food service industry: food service businesses are implementing robust recycling programs for materials like glass, paper and certain plastics to reduce the volume of waste sent to landfills. (Deshwal, Panjagari & Alam 2019, 4391-4403.) The aim of this study is to conduct a comparative analysis of the sustainable practices undertaken in food packaging and recycling in the food service industries of Finland and Australia so as to identifying effective strategies and areas for improvement that would allow similar businesses to enhance sustainability efforts within the global food service sector.

1.1 Background of the Problem

Sustainability in the food service sector would entail balancing the present needs with the future generation's ability to accomplish their own needs. Incorporating economic, social and environmental concerns into the business practices will see the company remain profitable in the long term business while reducing the negative impact on the environment and the society. Sustainability in the food service industry mainly entails minimizing the adverse environmental effects associated with food production, distribution and consumption by reducing greenhouse gas emissions, water consumption and waste generation through strategies that may involve sourcing local and organic ingredients, optimizing energy use and minimizing food and packaging waste. (Reisch,

Eberle & Lorek 2013, 7-25.) Sustainable practices that focus on conserving natural resources, such as responsible management of water resources, soil quality and biodiversity, are crucial for food production and sustainable agriculture and food service practices aim to prevent overexploitation of resources and protect ecosystems. The largest environmental issue is the quantity of packaging waste food service generates. Single-use plastics have been singled out, as items like plastic straws, utensils, and takeaway boxes poison landfills and oceans, emitting warm industries and injuring organisms. (Ncube, Ude, Ogunmuyiwa, Zulkifli & Beas 2021, 12.)

1.2 Research Scope

1.2.1 Research Aim

The aim of this study is to investigate and compare sustainable practice among food packaging and recycling in the food service segment in both Finland and Australia. The ultimate goal, in this case, is to find the best practices, their strengths, and weaknesses and improve sustainability in the global food service sector.

1.2.2 Research Questions

1. What are the existing practices of sustainability for food packaging and recycling in the Finnish food service industry?
2. What are the similar techniques in Australia, and how are they different from the Finnish ones in terms of sustainability
3. Which international business aspects may have an impact on sustainable food service practices in Finland and Australia?
4. What lessons can be learned from the Finnish and Australian contexts, and how can they inform recommendations for enhancing sustainable practices in food packaging and recycling within the global food service industry?

1.2.3 Research Objectives

- 1) To assess the status of sustainable food packaging and recycling practices in the food service sector in Finland
- 2) To assess the status of sustainable food packaging and recycling practices in the food service sector in Australia.
- 3) To analyze the effects of international business conditions such as trade agreements and cultural integration on sustainability outreach in the food service sector in Finland and Australia.
- 4) To recommend the available strategies to enhance sustainability in global food services specifically with respect to the Finnish and Australian contexts.

1.3 Research Significance

The research can have a significant impact on reducing the food service industry's harmful effects on the environment by identifying possible sustainability approaches. In particular, one can be worried about carbon emissions, packaging waste, and ecological harm. Moreover, it is essential to introduce sustainable approaches to significant areas such as biodiversity maintenance and marine life protection. Thus, the specific environmental consideration of countries such as Australia and Finland will help in lessening the degree of damage that plastic and waste do to ecosystems. In addition, the study can be beneficial to food service businesses and offer insights into how to adopt sustainable practices to gain a competitive advantage. The understanding of the benefits of eco-friendly initiatives will help companies draw responsible consumers as well as create a positive image. (Currin 2012, 3.) Additionally, with growing regulatory pressure on single-use plastics and sustainability in the food service sector, the research can help businesses understand and adhere to evolving legal requirements. Non-compliance can lead to fines and legal issues that can affect the profitability of the business. The study addresses the increasing awareness and demand among consumers for sustainable and eco-friendly food service options that can help consumers make informed choices and encourage them to support businesses that prioritize sustainability. (Banyte,

Brazionienė & Gadeikienė 2010, 2.) The research aligns with the United Nations Sustainable Development Goals (SDGs), including those related to responsible consumption and production, climate action, and life below water. Contributing to these goals is significant for global sustainability efforts, as lessons learned from the Finnish and Australian contexts can be applied globally.

1.3.1 Methodology Outline

The study will utilize a mixed method approach that will entail both the qualitative and quantitative research. This approach is particularly beneficial in capturing the richness and depth of a phenomenon as it allows the researcher to triangulate findings and enhance the overall validity and reliability of the study. Participants will be chosen from the food service industry in both Finland and Australia, and they will include restaurant owners, managers, sustainability officers, and individuals with expertise in food packaging and recycling practices.

Online surveys are the data collection tool used to collect quantitative data. Five-point Likert scale questions are used to measure attitudes, opinions, or perceptions of the respondents, as they are asked to express their level of agreement or disagreement with a statement using a scale that typically ranges from "Strongly Disagree" to "Strongly Agree." Secondary sources will be used to collect qualitative data with publications on the sustainable practices in food packaging and recycling in the food service industry of Finland and Australia being used as data sources.

1.3.2 Dissertation Structure

The initial chapter of this study commences with an introductory section, which provides a background on both the realms of the global food industry and sustainability, along with an overview of their interplay. Moving on to Chapter 2, the study delves into the literature review, where a critical analysis of academic sources is undertaken to assess the existing body of knowledge regarding the sustainability in the global food service with a focus on food packaging and recycling strategies. Chapter 3 encompasses the methodology section,

encompassing the research philosophy, research approach, and the methods employed for data collection and sampling. In Chapter 4, data analysis examines the results and presents the study's findings. In the last chapter the study draws conclusions based on the findings and provides recommendations to organizations on the most effective ways to implement sustainable practices in the food service industry.

2 Literature Review

2.1 Sustainability in the Food Service Industry

Sustainability refers to adopting approaches that address economic, social, and environmental aspects in order to meet current needs without affecting the capacity of future generations to satisfy their own. The food service industry must integrate ethics in its operations to be effective in developing sustainable sources. Economic sustainability in the food service industry entails ensuring the financial viability and profitability of businesses by implementing practices that contribute to the economic well-being of the community, such as supporting local economies through sourcing ingredients locally. (Connelly, Markey & Roseland 2011, 308-324.) Social sustainability entails looking after the well-being of the people within the industry and those that are affected by engaging in fair labor practices, the ethical treatment of employees and community engagement. This is achieved by conducting practices such as providing fair wages, promoting diversity and inclusion and supporting local community initiatives. (Rogers, Duraiappah, Antons, Munoz, Fragkias & Gutscher 2012, 61-73.)

Environmental sustainability is another aspect of sustainability that entails addressing the impact of food service operations on the natural environment by considering aspects such as reducing greenhouse gas emissions, conserving resources, minimizing waste and preventing pollution. In the context of the food service industry it involves the choices the businesses make that are related to sourcing, packaging, waste management and energy use. (Baldwin, Wilberforce & Kapur 2011, 40-49.)

Sustainability also entails making economic considerations, since sustainable practices are viewed through an economic lens as businesses seek to achieve sustainability by being cost efficient. Businesses achieve cost efficiency by investing in energy-efficient equipment, waste reduction and responsibly sourcing materials. Even though these practices may initially require a lot of capital, they can lead to long-term savings. (Glover, Champion, Daniels & Dainty 2014, 102-111.) Social sustainability involves considering the well-being of employees; therefore, businesses that prioritize fair wages, provide a safe and inclusive workplace, and offer employee benefits contribute to social sustainability.

The result is happy and satisfied employees, thus, increased productivity as well as a positive company image. Businesses are becoming aware of their environmentalism and due to this, they have adopted the actions of minimizing energy consumption, dependence on renewable energy sources and waste reduction through measures like composting, recycling, and packaging that is environment friendly of their footprints. Businesses are also recognizing the importance of a sustainable supply chain; therefore, they have been assessing and managing the environmental impacts of the entire supply chain, from raw material sourcing to production and distribution. (Revell, Stokes & Chen 2010, 273.)

2.2 Australian Food Service Industry

The Australian food service industry is a growing industry that recorded a revenue of AUD 86.6 billion in 2022 with forecasts predicting a compound annual growth rate of 4% from 2022 to 2027 (Global Data 2023). Like many industries across the globe, the Australian food industry experienced challenges during the Covid-19 pandemic. When restrictions were lifted, it bounced right back, as home deliveries, takeaways and dine-in services gradually recovered, thus contributing to the growth of the industry (Global Data 2023). The Australian food industry has been embracing sustainability initiatives over the last decade due to the growing concerns of food waste and the negative impacts that the industry has on the environment.

Many businesses in the industry are adopting strategies to minimize the waste they generate with zero waste practices being adopted throughout their operations. Restaurants in the country, such as Three Blue Ducks in Bronte and Nomad in Surry Hills, have adopted the use of biodegradable takeaway containers, recycling glasses, energy efficient lighting and recycling cooking oil for biodiesel. These are practices that have enabled the businesses to reduce waste. (Ordermentum 2021.) Businesses in the food service sector of Australia have also adopted the farm-to-table concept. This entails sourcing ingredients from local farmers or their own farms thus providing customers with fresher products and reducing the need for long-distance transportation, which emits greenhouse gases. Restaurants in the country are serving their customers meals that have been made with locally sourced and sustainable ingredients and they are educating their customers about sustainable production and the consumption of food. (Ordermentum 2021.)

2.3 The Finnish Food Service Industry

The Finnish food service industry is also steadily growing. In 2023, the industry had a market size of €6.6 billion. The industry grew at an average annual growth rate of 6.1% between 2019 and 2024 with the market size of the industry expected to grow by 2.3% in 2024. (IbisWorld 2023.) The industry has approximately 9,768 businesses with the average annual business growth of the industry between 2019 and 2024 being 4.3% and the growth of businesses in this industry in 2024 is expected to be 4.3%. (IbisWorld 2023.) The industry is very competitive, as there are no companies with more than a 5% market share and the market share concentration is low. (IbisWorld 2023.)

Organizations in the food service industry in Finland are committed towards sustainability, as they implement sustainability measures such as reducing food and other waste, lowering greenhouse gas emissions and minimizing the use of plastics. (Ministry of Environment 2022.) Organizations in the industry are voluntarily cooperating with government entities such as the Finnish Food and service Industries' Federation, Grocery Trade Association and Hospitality Association MaRa in sharing resources, expertise and information on best sustainability practices so as to achieve their sustainability goals. The Finnish

food service industry is also committed to establishing a circular economy by implementing materials efficiency measures and goals that prioritize reducing waste, optimizing resources and promoting circular product lifecycles that contribute to the goals that Finland has to becoming a carbon-neutral society. (Ministry of Environment 2022.)

2.4 Global Trends in Sustainable Practices

Global trends in sustainable practices within the food service industry have been responsive to the increasing awareness of environmental and social issues among consumers. One of the most significant global trends in sustainability involves engaging efforts to minimize single-use plastics in the food service industry, as businesses are increasingly adopting alternatives such as biodegradable packaging, reusable containers and compostable materials to reduce plastic waste. (Molloy, Varkey & Walker 2022, 1082-1094.) Over the last few decades consumers have increasingly preferred plant-based diets and sustainable food choices; therefore, food service providers are incorporating more plant-based options into their menus and they are sourcing their ingredients responsibly as well as emphasizing sustainable farming practices among their suppliers. Sourcing ingredients locally and seasonally is important as it helps to support local farmers, reduce the carbon footprint associated with transportation, and it ensures that the businesses in the food service industry receive the ingredients that are fresh and of high quality from their suppliers. The food service industry is also implementing strategies that will enable them to reduce waste by implementing measures such as composting and recycling which are strategies that create a circular economy. (Vargas, Moura, Deliza & Cunha 2021, 2206.)

The United Nations created a framework of 17 Sustainable Development Goals and among them, there are goals that can be applied to the food industry such as zero hunger, responsible consumption and production and climate action. The United Nations encourages governments as well as businesses across the globe to align their sustainability efforts with these development goals to ensure a sustainable future. (Fonseca, Domingues & Dima 2020, 3359.) The concept of a circular economy which promotes reducing, reusing and recycling resources is

also being emphasized among food businesses, and these are adopting these circular economy principles to minimize waste, repurpose by-products and create closed-loop systems that are more sustainable in the long run. (Patwa, Sivarajah, Seetharaman, Sarkar, Maiti & Hingorani 2021, 725-735.) The European Union's Farm to Fork Strategy includes targets to reduce the use of pesticides, fertilizers and antibiotics, promote organic farming and improve food labeling for better consumer information are also being implemented by food service industries in the continent as a way to promote sustainability in the industry. (Mowlds 2020.)

2.5 Environmental Impact of the Food Service Industry

The food service industry has a significant impact on the environment as the transportation of food products over long distances contributes to carbon emissions. Imported foods and ingredients, especially those transported by air contribute, a higher carbon footprint, thus local sourcing and sustainable supply chain practices can help mitigate these emissions. The energy-intensive nature of food production, processing, and distribution also contributes to carbon emissions from energy used in refrigeration, cooking, and to other aspects of food service operations. Therefore, implementing energy-efficient practices and adopting renewable energy sources can help reduce this impact. (Neira, Fernández, Rodríguez, Montiel & Cabeza 2016, 37-48.)

Improper disposal of food waste, cleaning agents, and other pollutants can lead to water pollution as restaurants and food service establishments that discharge untreated wastewater can introduce contaminants into water bodies and negatively affect aquatic ecosystems. Cooking processes, particularly in commercial kitchens, can release pollutants into the air. This includes emissions from cooking appliances, such as particulate matter and volatile organic compounds (VOCs). The use of certain cleaning agents, pesticides, and food additives in the food service industry can contribute to chemical contamination thus ensuring proper waste disposal and adopting eco-friendly cleaning products can minimize this impact. (Wang, Xiang, Jing, Lou, Tao, Yu, Li, Lin & Chen 2018, 1300- 1309.)

Excessive use of single-use plastics in items such as plastic straws, utensils, and packaging contribute vast amounts of plastic waste that often end up in landfills or oceans where it takes years to break down. Many food packaging materials like mixed plastics and laminated packaging are challenging to recycle and they put pressure on waste management systems and have negative effects on the environment. (Bauer, Tacker, Uysal-Unalan, Cruz, Varzakas & Krauter 2021, 2702.)

2.6 Sustainable Practices in Food Packaging

Sustainable practices in food packaging play a crucial role in reducing the environmental impact of the food industry with biodegradable alternatives, such as cornstarch, sugarcane and bamboo offering several environmental benefits. Bera (2023), ascertains that Cornstarch-based packaging is derived from renewable resources. This means that it breaks down more easily in the environment compared to traditional plastics and thus reduces the persistence of plastic waste in the environment. Sugarcane-based packaging is made from the fibrous byproduct of sugarcane processing; therefore, it is biodegradable and compostable. Using it instead of traditional plastics reduces the environmental impact caused by traditional plastic derived from petroleum. Bamboo is a fast-growing and renewable resource that requires minimal water and no pesticides to grow. Since it is biodegradable and compostable, bamboo-based packaging breaks down into natural components without leaving harmful residues in the environment, thus making it a sustainable mode of food packaging in the food service industry. (Nurul, Fazita, Jayaraman, Bhattacharyya, Mohamad Haafiz, Saurabh, Hussin & HPS 2016, 435.)

The Production of traditional plastics involves fossil fuels, which contribute to carbon emissions. Since biodegradable alternatives are derived from renewable resources, they generally have a lower carbon footprint. Maraveas (2020), points out that materials like cornstarch and sugarcane support sustainable agriculture practices, and their cultivation can be managed responsibly. This reduces the environmental impact of farming, as biodegradable materials contribute to the development of closed-loop systems where waste is returned to the environment as natural components thereby completing the cycle without

causing long-term harm. Ensuring that biodegradable materials meet recognized standards for compostability is essential as it helps to avoid potential greenwashing or misleading claims. The benefits of biodegradable packaging are most significant when disposed of in composting facilities; however, the availability and accessibility of such facilities may vary regionally. (Nortner 2011.) Striking a balance between the functionality of packaging and its sustainability is crucial, as biodegradable materials must meet the necessary performance standards to ensure the protection and preservation of food products.

2.7 International Business Dynamics and Sustainability

International business dynamics such as trade agreements play a role in shaping sustainability initiatives in the food service sector with trade agreements harmonizing sustainability and environmental practices by implementing regulations on food safety, packaging and labeling that are almost similar across the globe. (Friel, Hattersley, Snowdon, Thow, Kelly & Kumanyika 2013, 120-134.) These trade agreements require businesses to adhere to specific sustainability standards if they are to gain access to certain markets. This encourages businesses to adopt sustainable practices if they are to operate there. Beske, Land & Seuring (2014, 31- 143), affirm that these international business dynamics dictate the sourcing of ingredients and materials for the food service industry by mandating them to use ingredients that are locally produced and responsibly harvested, thereby making the traceability of ingredients a main aspect in the sustainability initiatives of the businesses.

Cultural factors in the countries these businesses operate in influence the preferences and behaviors of consumers. Since some cultures have a strong emphasis on locally sourced and organic foods businesses in the food service sector, there is a need to align their practices with the values and expectations of these consumers. Marketing sustainable practices requires cultural sensitivity: messages that resonate with consumers in one region may not be as effective in another, and understanding cultural nuances is essential for successful communication of sustainability initiatives. International business dynamics facilitate cross-border collaboration and partnerships. Businesses may work with international organizations, NGOs, and local entities to address global

sustainability challenges with collaborative efforts, taking forms of sharing best practices, conducting joint research, and participating in global initiatives. (Chhabra 2010.)

2.8 Consumer Behavior and Sustainable Choices

Consumers have increasingly started to emphasize sustainability. This has led them to prefer eco-friendly food service options. In order for businesses in the food service industry to attract these customers, they need to align their business practices with the values of their customers. The shift in consumer preferences is due to the fact that they are becoming more aware of environmental issues such as climate change, pollution and resource depletion. This has motivated them to seek sustainable and eco-friendly options in various aspects of their lives including in their food choices. Many consumers align their purchasing decisions with personal values, and sustainability has become a core value for a significant segment of the population. Therefore, individuals who prioritize environmental conservation are more likely to choose food service options that reflect these values. (Buerke, Straatmann & Müller 2017, 959- 991.)

Clear and transparent labeling indicating sustainable and eco-friendly practices, as well as recognized certifications (e.g., organic, Fair Trade, Rainforest Alliance) significantly influence consumer choices. These certifications provide assurance that the products meet specific environmental and ethical standards. Consumers are increasingly interested in the traceability of their food, wanting to know where and how it was produced. Thus, food service providers offering information about the sourcing of ingredients and the sustainability of their supply chain can build trust with environmentally conscious consumers. Many consumers prefer food service options that prioritize local and seasonal ingredients, and this preference is driven by a desire to support local economies, as it reduces the carbon footprint associated with transportation, and allows enjoying fresher, more flavorful produce. Consumers also often appreciate food service providers that use minimal and eco-friendly packaging alternatives to single-use plastics, such as compostable materials or reusable containers as it is a reflection of their commitment to reducing waste. (Chen and Huang 2013, 313-319.)

2.9 Competitive Advantage through Sustainability

Businesses can gain a competitive advantage by adopting sustainable practices in various aspects of their operations as sustainability has evolved from a niche consideration to a key factor influencing consumer choices and shaping corporate reputations. Adopting sustainable practices builds trust with environmentally conscious consumers: a positive brand image as a socially responsible and environmentally friendly company can enhance customer loyalty and attract new customers. (Hillestad, Xie & Haugland 2010, 440-451.)

Sustainability can set businesses apart from competitors, as consumers increasingly seek out companies that align with their values, and a strong commitment to sustainability can be a unique selling proposition (USP). As awareness of environmental issues grows, consumers are actively seeking products and services that align with their values and businesses that meet or exceed these expectations and thus gaining favor among a growing segment of the market. (Ottman 2017.) The demand for sustainable products and services is on the rise, and businesses that anticipate and respond to this demand position themselves to capture a larger market share. Sustainable practices often lead to increased resource efficiency through energy conservation, waste reduction and streamlined supply chain processes, and these efficiencies contribute to cost savings over the long term. (Abreu, Alves & Moreira 2017, 846-853.)

2.10 Theoretical Frameworks

2.10.1 Triple Bottom Line

The triple bottom line is a concept that evaluates the performance of a business by considering three dimensions: their economic, social and environmental impacts. This acts a framework for understanding and assessing the impact of the sustainability initiatives that businesses implement. (Arowoshegbe, Emmanuel & Gina 2016, 88-126.) According to Loucks, Martens & Cho (2010, 178-200), from an economic standpoint, businesses in the food service industry may initially incur costs associated with sustainability initiatives, such as

adopting new technologies, sourcing sustainable ingredients or implementing waste reduction strategies. However, they stand to gain long-term benefits from implementing these initiatives such as cost savings from efficiency improvements, access to new markets and enhanced brand value.

The social dimension entails the relationships and interactions between businesses and their stakeholders, including the employees, customers, local communities and suppliers. Thus, sustainable practices that positively impact these stakeholders contribute to the social bottom line. Social sustainability entails emphasizing aspects such as employee satisfaction, fair labor practices and creating a positive workplace. Businesses can achieve this by providing fair wages to their employees, offering training on sustainability and creating a supportive work environment that promotes the well-being of the employees. (Macassa, McGrath, Tomaselli & Buttigieg 2021, 866-883.)

The environmental dimension of the triple bottom line entails assessing how businesses minimize the impacts they have on the environment. This is achieved by undertaking practices such as using biodegradable packaging materials, reducing carbon emissions and implementing recycling programs. Businesses in the food service industry should also address the negative impacts that food production and packaging have on the environment by sourcing ingredients responsibly and locally, reducing waste and minimizing pollution so as to promote their triple bottom lines. (Notarnicola, Hayashi, Curran & Huisingh 2012, 1-8.)

2.10.2 Diffusion of Innovation Theory

The Diffusion of Innovation Theory evaluates how new ideas and practices are adopted by society. It can be used to evaluate how businesses in the food service industry adopt sustainability practices such as using biodegradable packaging materials and the implementation of recycling programs. (Kaminski 2011, 1-6.) Boz, Korhonen & Koelsch (2020, 2192), point out that in order for businesses to easily adopt sustainable practices, they must be more advantageous than the practices they currently have in place. Since sustainability practices offer businesses advantages such as cost savings, improved efficiency and enhanced brand image, it is easier to implement these

practices. In order for sustainable practices to be adopted in the industry, they must also be compatible with the norms, values and practices that currently exist within the industry. If they align with the goals and values of the industry, businesses find it easier to adopt and integrate them into their practices. The diffusion of sustainable practices within the food service industry is dependent on how complex it is to adopt them as practices that are easy to understand and implement and can be adopted quickly, while those that are perceived as complex may face resistance in the industry. The way sustainable practices are communicated plays a crucial role in their adoption as effective marketing and the clear communication of benefits. The use of appropriate channels (e.g., industry conferences, social media, sustainability reports) influence how quickly and widely these practices are adopted. (Babiak and Trendafilova 2011.)

2.11 Gaps in the Literature

There is a lack of comprehensive comparative studies analyzing sustainable practices in the food service industry across different countries or regions, and it is crucial to conduct a detailed comparative analysis of sustainable practices in food packaging and recycling in multiple countries, addressing variations, successes, and challenges. The literature also predominantly focus on specific sustainable practices (e.g., biodegradable packaging) rather than providing a holistic view of sustainable initiatives in the food service industry. Therefore, it is important that in future research, the scope is broadened to encompass various sustainable practices, including packaging, waste reduction, sourcing, and energy efficiency to offer a comprehensive overview. There has not been sufficient research conducted on the influence that international business dynamics, trade agreements and cultural factors have on sustainability initiatives, especially in the food service sector, and this makes it important for this study to investigate the impact that international business dynamics have on the adoption and success of sustainable practices.

3 Methodology

3.1 Research Philosophy

A research philosophy is a set of beliefs that guide the way researchers approach their research questions and make sense of their findings and the research philosophy that a researcher uses influences the research design, methodology and the way they interpret the results. (Khatri 2020.) The research approach that will be used in this study is pragmatism, which entails applying the knowledge gained practically. It points out that the research methods to be used should effectively provide practical outcomes. (Kaushik and Walsh 2019, 255.) Pragmatism has been chosen for this study as it will allow the researcher to adopt a methodology that is flexible and appropriate for different aspects of the research question.

Pragmatism is also inherently problem-centered, as it focuses on addressing real-world issues and solving practical problems. This makes it particularly suitable for research that aims to produce actionable solutions and contributes to the resolution of concrete problems. This in turn aligns with the aim of this research to identifying effective strategies and areas for improvement in enhancing sustainability efforts within the global food service sector. (Morgan 2014.) The primary emphasis of pragmatism is on the practical application of knowledge, as research conducted within a pragmatic framework is intended to have real-world implications that make it valuable for addressing practical concerns. This aligns with the ultimate goal of this study, which is to contribute to mitigating environmental issues such as packaging waste, carbon emissions and pollution in natural ecosystems. Pragmatism also encourages the integration of theoretical insights with practical applications, as researchers can draw on both theoretical frameworks and empirical observations to develop comprehensive understandings of the research problem. This integration enhances the relevance and applicability of the research findings. (Kelly and Cordeiro 2020.)

3.2 Research Approach

A mixed-method research approach will be used for this study. It will entail using both qualitative and quantitative research approaches to gather data and conduct data analysis. It has been chosen for this study to enable the researcher to obtain the insights from qualitative and quantitative data. This research method offers the researcher flexibility, as they can tailor the research method to suit the objectives of the study thus allowing the researcher to explore the phenomena in a way that reduces the limitations of the qualitative and quantitative research methods if they were used by themselves. (McKim 2017.) Morse (2016), affirms that the researcher can use the mixed-method approach to conduct triangulation, where they will compare the findings of each of the two methods so as to ensure that the results are credible and reliable by reducing the potential for bias, which would have arisen if only one of the methods were to be used.

Researchers can use quantitative research approaches to gather numerical data using standardized methods. This will make it easier for other researchers to replicate the study, and the results of the study will also be more reliable. (Creswell 2011.) The quantitative research approach will allow the researcher to measure and quantify the variables of the research precisely by generating numerical data that can be statistically analyzed. (Morgan 2013.) The qualitative research approach will allow the researcher to explore the complex phenomena being studied by generating rich and contextual data which will allow the researcher to deeply understand the social, cultural and behavioral phenomena that is being studied. (Richards and Morse 2012.)

3.3 Research Design

Wright, O'Brien, Nimmon, Law & Mylopoulos (2016, 97-98), mention that the research design will shape the research process, as it will guide the decisions that the researcher will make about the type of research methods, the sampling strategy and the data analysis techniques they will use. This study will utilize a case study research design which will entail examining a specific case within a real-life context so as to understand the phenomenon more deeply. This will be done by using sources of data such as interviews, observations, documents and

archival records. (Hancock, Algozzine & Lim 2021.) Case studies will enable the researcher to explore the real-world situation by gathering rich contextual data. Since the aim of this study is to explore the sustainable practices that have been implemented by the businesses in the food service industries of Finland and Australia, the case study research design will be suitable for this study. According to Ridder (2017), case studies emphasize understanding the phenomenon within its natural context. Given that sustainability practices are influenced by cultural, economic and environmental factors, a case study design allows the researcher to explore these contextual influences and their impact on sustainable practices. Sustainable practices in the food service industry also involve a multitude of factors such as packaging materials, recycling programs, cultural influences and international business dynamics. Thus, a case study approach is well-suited for studying complex phenomena with multiple interacting variables. (Harrison, Birks, Franklin & Mills 2017.)

3.4 Sampling

The sampling strategy that will be used for this study when choosing survey participants is purposive sampling. Campbell, Greenwood, Prior, Shearer, Walkem, Young, Bywaters & Walker (2020, 652-661), affirm that in purposive sampling the researcher will use their judgment and expertise to choose participants who possess characteristics or experiences that are considered essential for the study. This sampling strategy is particularly useful when the goal is to gain in-depth insights from specific individuals or groups who can provide valuable information related to the research focus. The inclusion criteria for this study will be participants who hold key roles in the food service industry, such as restaurant owners, managers, sustainability officers or individuals with expertise in food packaging and recycling practices. This ensures that participants have a direct impact on decision-making related to sustainability practices. The participants must also be from Finland and Australia as these are the geographic regions that are the foci of this study. The researcher will select 30 participants who fit this criteria, with 15 participants coming from each country. This number has been chosen as it is feasible, and it will not be resource intensive to collect data from these participants.

Purposive sampling will also be used to select the academic publications that will be used as secondary sources of the qualitative data for this study. The inclusion criteria will include academic publications that directly address or provide insights into sustainable practices in the food service industry in Finland and Australia, as it ensures that the selected publications contribute relevant information. The publications must be from reputable sources such as peer-reviewed journals, conference proceeding, and scholarly books with the researcher prioritizing publications from well-established journals in fields related to sustainability, environmental science, business or the food service industry. In order to ensure that the information is current and reflects recent developments in sustainable practices, the researcher will only select publications that have been published over the last 10 years.

3.5 Data Collection

The data collection tool that will be used to collect the quantitative data is online surveys. These allow the researcher to collect data without geographic restrictions. The researcher will reach out to participants via social media platforms such as LinkedIn, Twitter and Instagram, and 30 participants will be chosen that fit the sampling criteria, again 15 participants from each country involved. The number of participants was chosen as it allows the researcher to obtain data in a manner that is not laborious, resource intensive and that is less time-consuming. The researcher will develop survey questions that will be based on a five-point Likert scale based on the objectives of this study. The researcher will ensure that they are clear and unbiased. After generating the survey questions, the questions will be posted on the Qualtrics platform, which is the online platform where the surveys will be conducted. The researcher will then conduct a pilot test by giving the survey to five of the participants to ensure that the researcher identifies any issues with question clarity, survey flow or technical glitches and they will make necessary adjustments based on feedback.

Online surveys will be used for this study, as they are generally more cost-effective than traditional methods like paper surveys or in-person interviews. There are no printing or postage costs, and researchers can reach a large

audience without significant expenses. Conducting surveys online also saves time for both researchers and participants since the process of distributing surveys, collecting responses and analyzing data is streamlined thus allowing for quicker data gathering and analysis compared to traditional methods. (Nayak and Narayan 2019.) Participants can also complete online surveys at their convenience as they can choose the time and place that best suits them, which leads to increased response rate. This convenience is especially beneficial for busy individuals who may find it challenging to participate in traditional methods. (Ball 2019, 413-417.)

Academic publications have been chosen as a data source for this study since academic publications, especially those published in peer-reviewed journals, undergo rigorous scrutiny by experts in the field, and this peer-review process enhances the credibility and reliability of the information presented, ensuring that the data is of high quality. The academic publications are also authored by researchers, scholars and experts with deep knowledge and expertise in a specific subject area. Therefore, utilizing these publications as data sources adds authority to research as it draws on the insights of recognized experts in the field. (Geisler 2013.)

3.6 Data Analysis

Data analysis for the quantitative data will be done using statistical analysis, which is a method of collecting, summarizing, interpreting and drawing conclusions from data by applying statistical techniques to quantify patterns and relationships within the data. This makes it a powerful tool for researchers to derive meaningful insights with. Descriptive statistics was conducted on the data. This entailed calculating the mean, median, and mode as it provided information about the central or typical value of a dataset. (Mishra, Pandey, Singh, Gupta, Sahu & Keshri 2019.) The standard deviation and range were also calculated so as to comprehend the spread or variability of the data. A comparative analysis on the data obtained from Finland and Australia was conducted by comparing means or medians between different groups or categories using t-tests.

The qualitative data was analysed using thematic analysis, which is a qualitative method used to identify, analyze and report patterns or themes within qualitative data. The researcher systematically segmented the data into meaningful units or codes that represent the essence of the data and can be phrases, sentences or paragraphs that encapsulate specific. (Braun and Clarke 2012.) The codes was organized into potential themes that emerge from patterns in the data and capture recurring concepts, ideas or experiences and the themes was refined and reviewed by checking for coherence and relevance within each them and ensuring they accurately represent the data they encompass.

3.7 Ethical Considerations

A number of ethical considerations was made when conducting the study. One of these considerations included clearly communicating the purpose and nature of the survey to the participants so as to ensure that they offer informed consent to participate. The participants were also informed that participation is voluntary and they could withdraw from the study any time that they wished. The researcher also ensured the anonymity of the participants by using unique identifiers instead of personal information to identify the participants so that the responses cannot be traced to an individual and the responses were stored securely in a password protected computer. When using the academic publications, the researcher gave appropriate credit to the original authors by citing the sources accurately and providing clear references to acknowledge the intellectual contributions of others.

3.8 Limitations

A number of limitations are associated with this study. One of them involves the use of a case study design. Purposive sampling may limit the generalizability of the findings, as the in-depth exploration of specific cases may not be representative of the broader food service industry in Finland and Australia. Thematic analysis of qualitative data is inherently subjective, since different researchers may interpret themes differently, thus leading to potential bias in the identification and interpretation of patterns. Despite the advantages of online

surveys, they may exclude individuals without internet access or those not active on social media platforms. This could potentially introduce a selection bias. Since online surveys rely on self-reported data which may be subject to response bias, the participants may provide socially desirable responses or may not accurately represent their actual behaviors.

4 Analysis and Results

4.1 Data Cleaning

The researcher undertook the data cleaning process to ensure the accuracy and reliability of the collected data and they achieved this by carefully reviewing the survey and its responses to understand the dataset's structure and check for missing data or duplicate entries. I went through the data to ensure consistency in data formatting. I standardized categorical variables so as to eliminate variations in labeling and to identify outliers. None were found that could significantly impact the analysis. The data was cross-checked against the predefined logic of the survey design to verify its alignment with the intended structure. This was followed by converting the text responses from the Likert scale survey into their corresponding numerical values so as to facilitate quantitative analysis. The aim of the data cleaning process was to improve the quality of the dataset so as ensure and consistency in the data analysis process so as to gain informed insights from the data that would allow for meaningful comparisons.

4.2 Data Description

The data utilized in this study was collected from participants who worked in the food service industry in Australia and Finland using an online survey. The aim of the study was to compare the sustainability initiatives being undertaken in the food service industry of both countries. The survey employed a five-point Likert scale format to assess the attitudes and opinions of the respondents by measuring the intensity of the agreement or disagreement of the respondents

with statements that would help provide insights into the objectives of the study. In the survey the participants are presented with a series of statements and are prompted to express their level of agreement or disagreement on a five-point scale by selecting the option that most accurately represent their perspective on each statement thus providing the researcher with insights into the perspectives of the respondents.

The survey was undertaken by 30 participants who worked in the food service industry with 15 of the participants being from Finland and 15 being from Australia. Eight of the participants were restaurant owners; 14 were managers, three were sustainability officers, and five were waiters.

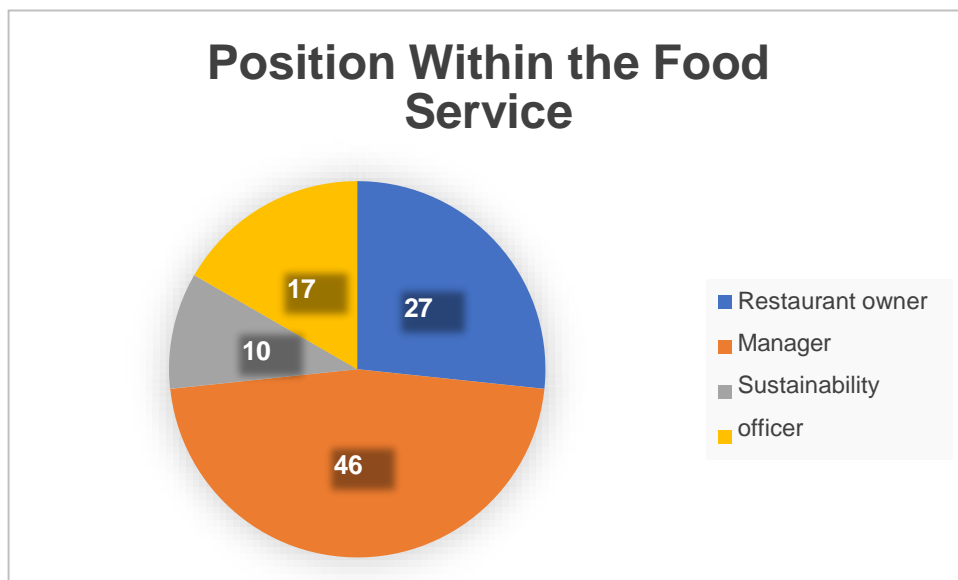


Figure 1. Position within the food service industry.

Twelve of the 30 participants had been working in the food service industry in their country for 0-5 years with another 12 having 6-10 years of experience within the industry and 6 had worked in the industry for 11-15 years.

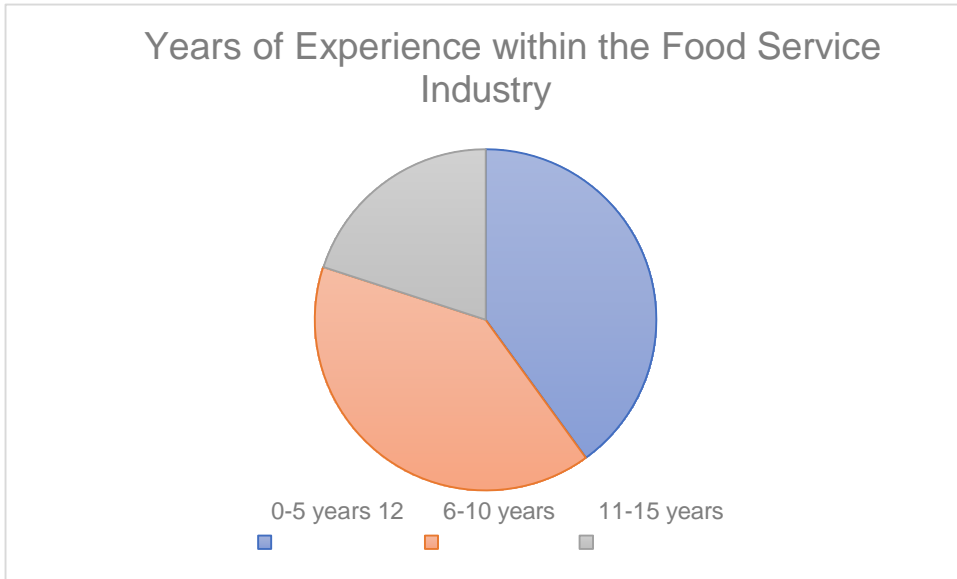


Figure 2. Years of experience within the food service industry

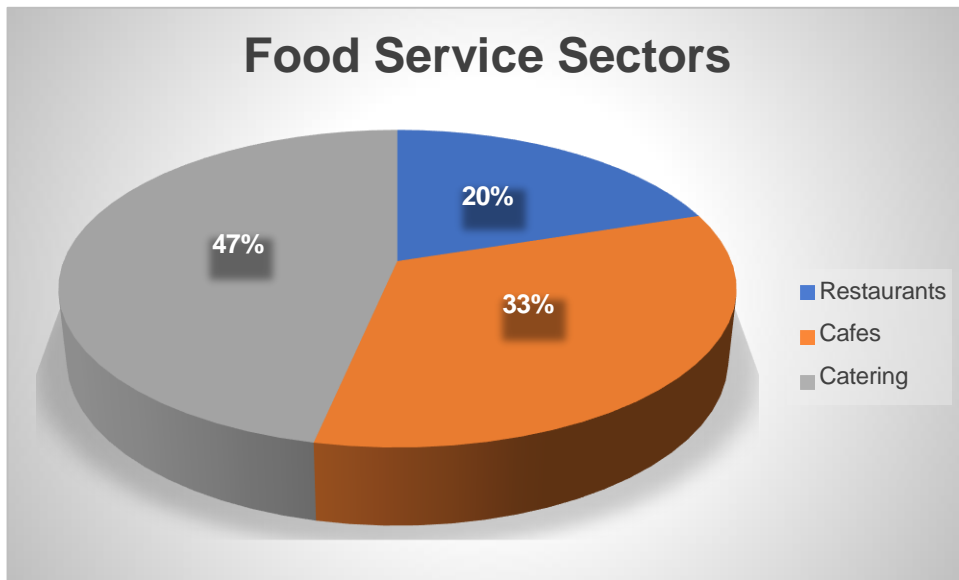


Figure 3. Food Service Sectors.

4.3 Descriptive Analysis

The participants in both countries were asked if they felt sustainable practices in food packaging are adequately implemented in their business. Among the 15 participants from Australia, three of them strongly agreed, four agreed, five were neutral and three disagreed. The mean in their responses was 3.5 with a standard deviation of 1.06, which indicated a moderate level of agreement within the Australian cohort. Four of the 15 participants from Finland strongly agreed with the sentiment that sustainable practices in food packaging are adequately implemented in their business. Six agreed, and 5 were neutral. The mean in their responses was 3.9, with a standard deviation of 0.80. This suggested a more consistent alignment in their perceptions compared to the Australian respondents. Overall, these responses highlight some differences between the two countries, with a relatively higher level of agreement observed in Finland regarding the adequacy of sustainable practices in food packaging implementation in the food service industry than in Australia.

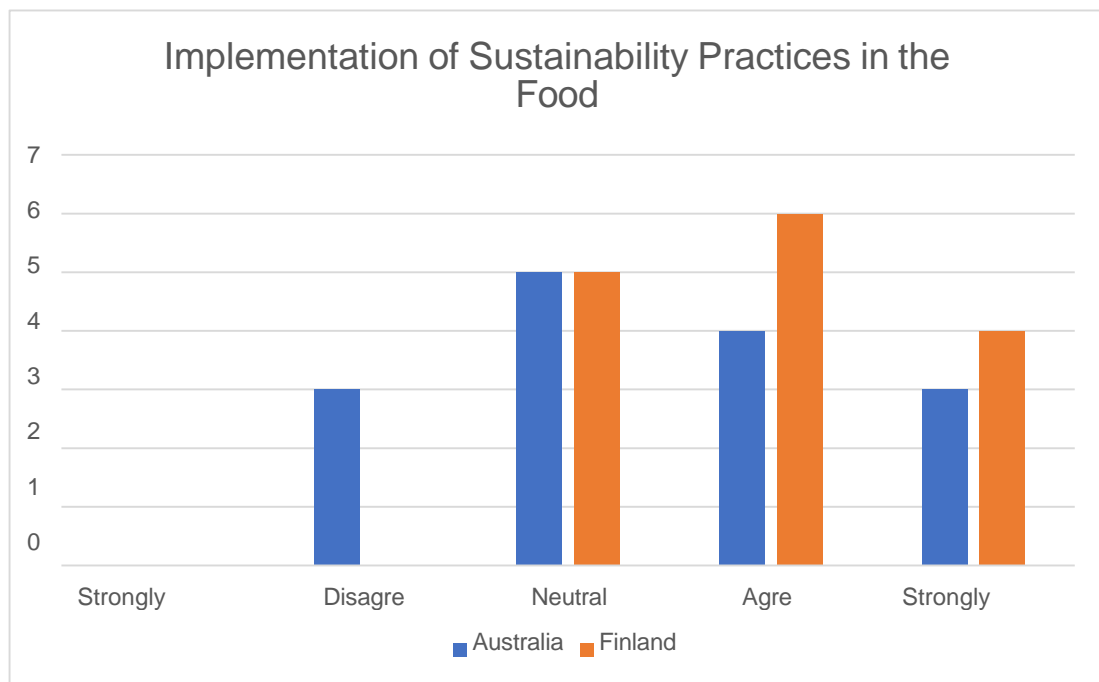


Figure 4. Implementation of sustainability practices in the food service industry.

In both Australia and Finland participants were asked to evaluate the effectiveness of recycling initiatives in the food service industry in reducing environmental impact and in Australia the responses were distributed with eight participants expressing agreement (six agreed, two strongly agreed), two participants providing neutral responses, and five participants indicating disagreement. The mean response for Australia was 3.1, with a standard deviation of 1.03 which suggested a moderate level of agreement with room for variability. In Finland, the participants generally displayed a more favorable view of recycling initiatives with a higher mean response of 3.9 and a lower standard deviation of 0.92. A total of 10 participants (6 agreed, 4 strongly agreed) perceived recycling initiatives as effective, while 4 were neutral and only 1 participant disagreed. This indicates a more consistent positive perception of the effectiveness of recycling initiatives in reducing environmental impact within the Finnish food service industry compared to their Australian counterparts and overall, these responses point to variations in attitudes toward recycling initiatives between the two countries with Finland showing a higher overall positive sentiment.

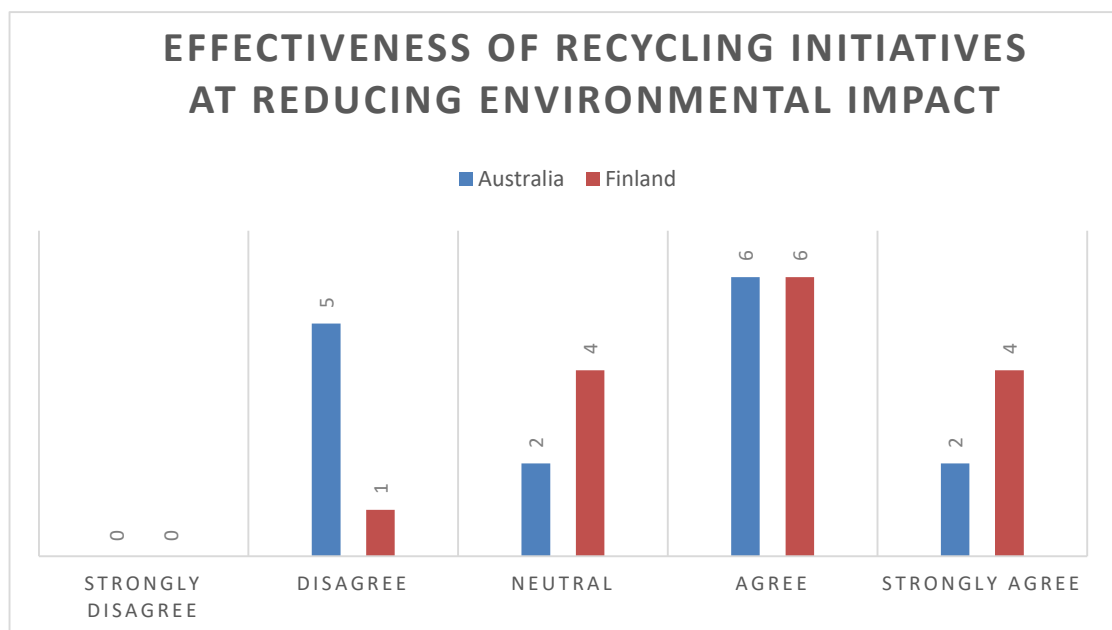


Figure 5. Effectiveness of recycling initiatives at reducing environmental impact.

In evaluating the influence of international trade agreements on sustainability practices in the food service sector, participants in both Australia and Finland provided comparable responses with the majority of participants from Australia leaning towards agreement with 11 respondents (7 agreed, 4 strongly agreed) expressing positive sentiments. Three participants were neutral, and one disagreed and the mean response for Australia was 4.1 thus suggesting a generally positive perception of the impact of international trade agreements on sustainability practices. The standard deviation of 0.7 indicated a relatively consistent agreement among Australian participants. In Finland there was a similar pattern of responses with a total of 12 participants (7 agreed, 5 strongly agreed) supporting the positive influence of international trade agreements on sustainability practices. Three participants were neutral, and none disagreed. The mean response for Finland was also 4.1 with a slightly higher standard deviation of 0.74, indicating a comparable but slightly more varied level of agreement among Finnish participants. Overall, both countries demonstrated a shared belief in the positive impact of international trade agreements on fostering sustainability practices in the food service sector.



Figure 6. Influence of international trade agreements on sustainability practices in the food service sector.

The question about the role of cultural influences in shaping sustainable initiatives in the food service industry yielded interesting insights from participants in both Australia and Finland. In Australia a majority of respondents expressed agreement with 12 participants (10 agreed, 2 strongly agreed) endorsing the significance of cultural influences. Three participants were neutral, and none disagreed. The mean response for Australia was 3.9, indicating a generally positive perception, while the standard deviation of 0.59 suggested a relatively consistent level of agreement among Australian participants. Similarly, in Finland there was a notable consensus among participants on the importance of cultural influences in shaping sustainability initiatives, as a total of 13 participants (8 agreed, 5 strongly agreed) acknowledged the role of culture, two participants were neutral, and none disagreed. The mean response for Finland was slightly higher at 4.2 suggesting a slightly stronger collective agreement. The standard deviation of 0.68 indicated a modest level of variability in the responses. While both countries acknowledge the impact of culture, Finland's participants tended to express a slightly higher level of agreement.

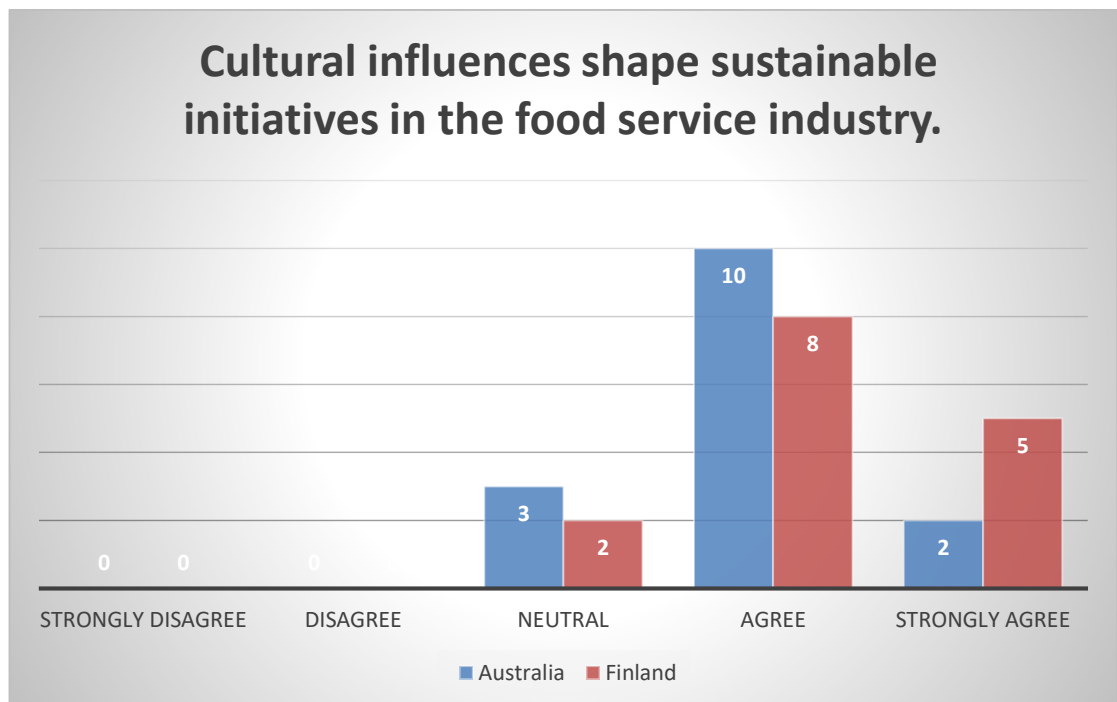


Figure 7. Cultural influences shape sustainable initiatives in the food service industry.

The assessment of the current level of awareness about sustainable food packaging among industry professionals in Australia and Finland revealed distinct perceptions since in Australia, responses were distributed with a substantial number of participants expressing neutrality (5 neutral), while others were evenly divided between disagreement (5 disagree) and agreement (5 agree). No participants strongly disagreed or strongly agreed. The mean response for Australia suggested a somewhat balanced view, while the standard deviation of 0.86 indicates moderate variability in responses. In Finland, a more pronounced trend emerged with a majority of participants leaning towards agreement, as eight participants (4 agree, 4 strongly agree) viewed the current awareness as sufficient while a smaller number were neutral (4 neutral) or disagreed (3 disagree). The mean response for Finland was 3.6, indicating a relatively higher level of agreement compared to Australia, and the standard deviation of 1.12 implied some variability in responses thus reflecting diverse perspectives among Finnish industry professionals. The assessment of awareness about sustainable food packaging reveals a more nuanced perspective in Australia, with a balanced distribution of responses. Finland demonstrates a more favorable overall perception among industry professionals although with greater variability in individual viewpoints.

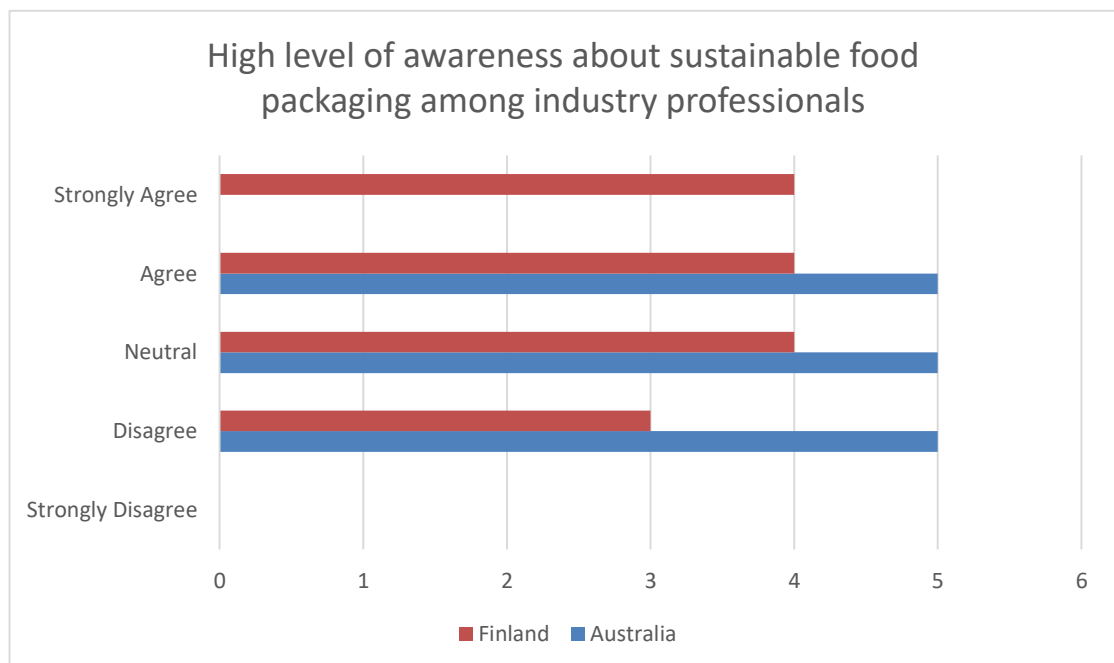


Figure 8. High level of awareness about sustainable food packaging among industry professionals.

The evaluation of the practicality of using biodegradable packaging materials in the food service industry displayed a notable similarity in responses between Australia and Finland. In both countries, there were no participants who strongly disagreed or disagreed with the statements, with a significant number of participants leaning towards agreement. In Australia 12 participants (6 agree, 6 strongly agree) expressed a positive view, while 3 were neutral. Similarly, in Finland 11 participants (4 agree, 7 strongly agree) endorsed the practicality of biodegradable packaging with four participants being neutral. The mean response for both Australia and Finland was 4.2, indicating a strong collective agreement on the practicality of using biodegradable packaging materials. The standard deviation values of 0.77 for Australia and 0.86 for Finland suggested relatively low variability in responses, thereby showcasing a consistent positive perception among participants in both countries. These results indicate a shared belief in the feasibility of implementing biodegradable packaging materials in the food service industry, thus highlighting a potential commonality in sustainable practices between Australia and Finland.

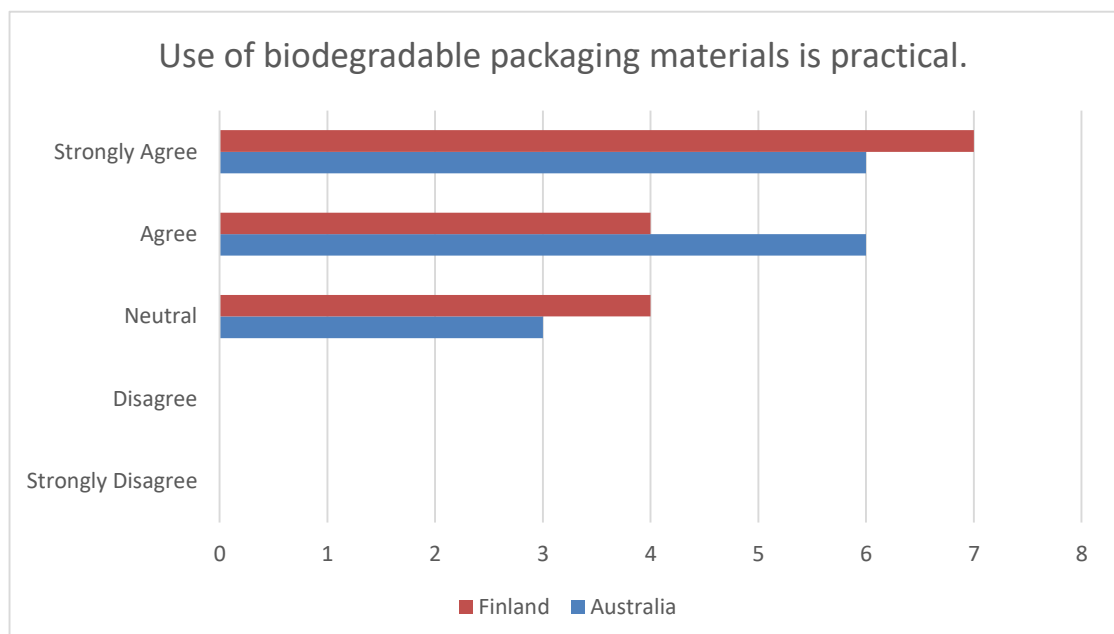


Figure 9. Use of biodegradable packaging materials is practical.

The assessment of whether government regulations adequately support and promote sustainable practices in the food service industry revealed varying perspectives in Australia and Finland. In Australia participants expressed a range of opinions with seven participants (five agree, two strongly agree) endorsing the positive influence of government regulations. Eight participants were distributed among disagreement (three disagree) and neutrality (five neutral). The mean response for Australia was 3.4, indicating a somewhat mixed perception. The standard deviation of 0.99 suggested moderate variability in responses. In Finland a more cohesive stance emerged, with a majority of participants (8 agree, 4 strongly agree) expressing a positive view of government regulations supporting sustainable practices and only three participants distributed among disagreement (1 disagree) and neutrality (2 neutral). The mean response for Finland was 4, suggesting a stronger collective agreement compared to Australia, and the standard deviation of 0.85 indicated relatively low variability in responses, highlighting a more uniform perception among Finnish participants. While Australia exhibited a more varied view on the adequacy of government regulations, Finland demonstrated a more unified belief in the supportive role of regulations for sustainable practices in the food service industry.

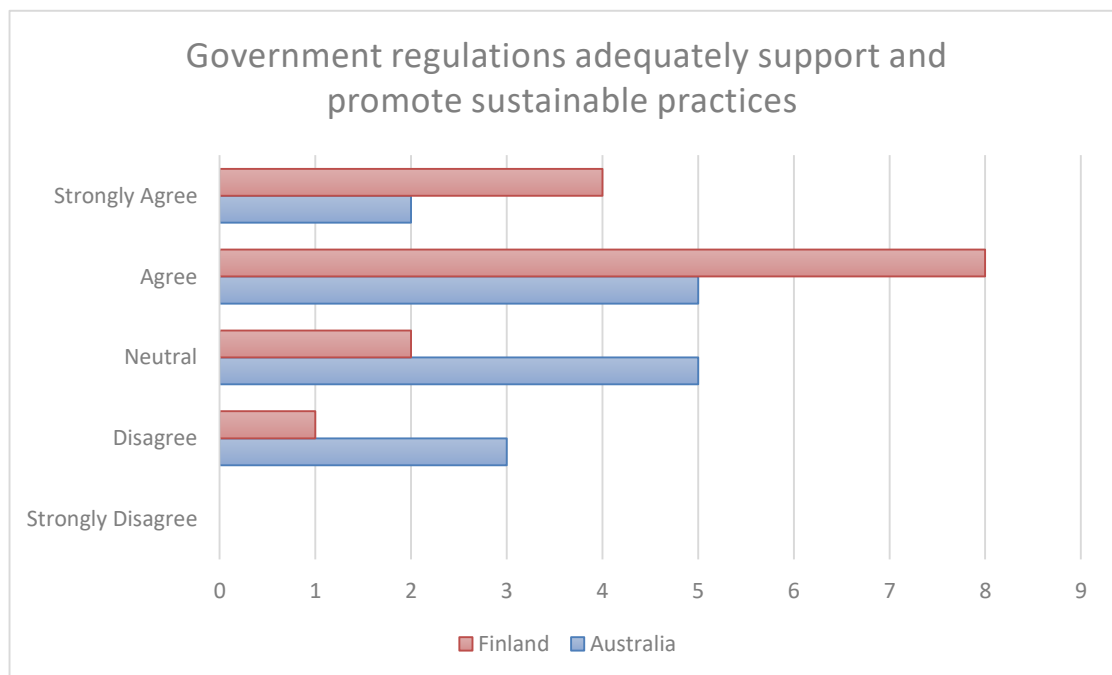


Figure 10. Government regulations adequately support and promote sustainable practices

4.4 Qualitative Analysis

4.4.1 Data Description

Qualitative data was obtained from secondary sources, primarily academic publications that have been published on sustainability initiatives in both Australia and Finland. The researcher evaluated common themes from these publications that provided insights into the research objectives.

Sustainable practices in food packaging and recycling in the food service industry in Finland and Australia

Theme	Publications about Finland	Publications about Australia
Biodegradable and Compostable packaging options	Koskinen (2022) Hamalainen (2019) Kovtoun (2021)	Fogarty, Clarke, & Ross (2021) Wurm, Spierling, Endres & Barner (2020)
Locally sourced recyclable packaging materials	Airaksinen (2023) Truong (2019) Dao (2020)	Fogarty et al. (2021) Dilkes-Hoffman, Lane, Grant, Pratt, Lant, & Laycock (2018)
Efficient waste management infrastructure	Cerniauskaite (2023) Piippo, Saavalainen, Kaakinen & Pongrácz (2015)	Hossaim et al. (2022) Fogarty et al. (2021)
Implementation of government policies that support eco-friendly initiatives	Tapiola, Varho, & Soini (2023) Dornyei, Bauer, Krauter, & Herbes (2022)	Fogarty et al. (2021) Hossaim et al. (2022)

In both Finland and Australia, the food service industry is increasingly embracing biodegradable and compostable packaging options to reduce environmental impact as biodegradable materials break down naturally over time thus minimizing waste in landfills. In Finland stringent waste management policies align with the adoption of these eco-friendly options. Australia is also witnessing a surge in sustainable packaging, driven by consumer demand and environmental awareness. While both countries share a commitment to eco-friendly practices, nuances exist in their waste management infrastructure and regulatory approaches, thus shaping the adoption and effectiveness of

biodegradable and compostable packaging in the respective food service industries.

Finland and Australia are incorporating locally sourced recyclable packaging materials in their food service industries as a measure to promote sustainability. Both countries emphasize the use of materials that can be easily recycled, which is a way to support a circular economy. Finland has a preference for locally sourced and recyclable packaging, which aligns with the Nordic commitment to environmental responsibility. In regards to this commitment, the country has implemented robust waste management systems. Australia is driven by consumer demand for eco-friendly practices, and this has prompted businesses in the food service industry of Australia to adopt locally sourced recyclable materials so as to meet the changing consumer demand.

Finland has implemented a well-established system that facilitates efficient waste separation and recycling thus contributing to a circular economy that aligns with a culture of responsible waste disposal and the Nordic commitment to environmental responsibility. Australia has waste management practices that are increasingly evolving, and this evolution is driven by growing environmental awareness among consumers. Despite the emphasis on recycling and waste reduction, the infrastructure to meet these objectives may vary across regions. Finland boasts comprehensive policies that encourage sustainable practices, and the Nordic commitment aligns with a culture valuing environmental stewardship. This in turn fosters a robust adoption of eco-friendly initiatives. In contrast, Australia's regulatory landscape is evolving, which reflects a growing emphasis on sustainability. Government support for eco-friendly practices is evident Australia's implementation vary across regions.

4.5 Discussion

Australia and Finland exhibit distinct yet evolving approaches to sustainable practices in food packaging and recycling within their food service industries. This is showcased in Australia, where there is a growing awareness and adoption of eco-friendly initiatives. Businesses in the country are increasingly utilizing biodegradable and compostable packaging materials to minimize environmental impacts. (Hossain, Islam, Ghose & Sahajwalla 2022.) However,

the level of agreement regarding the adequacy of sustainable practices in food packaging implementation varies, which indicates ongoing adjustments within the industry. Recycling initiatives reflect a more diverse perception, thus highlighting the need for continued efforts to enhance effectiveness.

The governments have implemented policies that support the eco-friendly initiatives that are adopted by the businesses, and this allows them to integrate the sustainability principles more effectively. (Dorneyi, Bauer, Krauter & Herbes 2022.) Businesses in Finland and Australia have encountered various challenges and opportunities as they implement sustainability practices due to the cultural, regulatory and industry- specific factors that influence sustainability. As more people become aware of environmental issues, businesses are prompted to adapt their sustainability practices in ways that enable them to meet the expectations of their consumers.

International business dynamics also determine the sustainable practices that are implemented by businesses in the food service sector in Finland and Australia. Both countries are participants of the global market and they follow international trends, standards and consumer demands. International dynamics often amplify the commitment to sustainability in Finland, as global collaborations and partnerships inspire innovative solutions, and the exchange of best practices influences the adoption of eco-friendly initiatives in the food service sector. (Koskimaa, Rapeli & Hiedanpää 2021.) Australia is increasingly embracing sustainability although it faces unique challenges due to its geographic isolation. Despite this the international business dynamics expose Australian food service businesses to global sustainability benchmarks, thereby encouraging businesses in the country to adopt best practices for sustainability. (Kirkwood & Walton 2010, 200-217.)

Logistical considerations and market dynamics necessitate tailored approaches, and Australia's vast and diverse landscape prompt a focus on locally sourced solutions thus aligning with international trends but adapted to the Australian context (Reis 2013). In both nations international business dynamics serve as a catalyst for sustainability by promoting the exchange of knowledge, technologies and standards and as global awareness of environmental issues grows the food service sectors in Finland and Australia navigate international

influences to enhance their sustainable initiatives which contributes to a more eco-conscious and responsible global industry.

Finland's cultural values foster a collective responsibility for environmental impacts. This works to motivate businesses to align with these principles. In Australia cultural influences also contribute to an evolving sustainability landscape, as the nation's diverse cultural fabric prompts a nuanced approach to eco-friendly initiatives. While there is a growing awareness of sustainability, cultural variations influence consumer behaviors and business practices with indigenous perspectives also contributing to sustainable initiatives. This emphasizes the importance of respecting and harmonizing with the land. Both nations navigate the intersection of cultural values and sustainability by adapting initiatives to resonate with local beliefs and practices. This is showcased in Finland, where a cohesive cultural commitment reinforces sustainability practices, while Australia's multicultural influences contribute to a dynamic and evolving landscape. Understanding and integrating cultural influences are essential for fostering effective and culturally resonant sustainable practices in the food service sector in both Finland and Australia. (Klocker & Head 2013, 41-62.)

5 Summary

Over the last few decades sustainable practices have become imperative in the global food service industry as a result of escalating environmental changes with the primary focus being to reduce the industry's ecological footprint, conserving resources and meeting the growing demand for eco-friendly alternatives. Two significant aspects of this shift are: transitioning from conventional plastic packaging to biodegradable options like cornstarch, sugarcane or bamboo, which decompose more effectively, and recycling, where businesses implement robust programs for materials like glass, paper and specific plastics to decrease landfill waste.

Sustainability in the food service sector integrates economic, social and environmental considerations to ensure long-term viability and minimize negative

impacts. This includes strategies such as sourcing local and organic ingredients, optimizing energy use, and reducing greenhouse gas emissions, water consumption and waste generation.

The aim of this study was to evaluate sustainable practices in food packaging and recycling in the food service industry of Finland and Australia and to compare the sustainability initiatives conducted in both countries so as to identify effective strategies to enhance sustainability efforts within the global food service sector.

This study employs a mixed-methods research approach that combines both qualitative and quantitative data to comprehensively explore and compare sustainable practices in the food service industry of Finland and Australia. The research design adopted a case study approach, which allowed an in-depth examination of sustainable practices within the real-life context of each country.

Purposive sampling was employed to select 30 participants, 15 from each country, and the participants were chosen based on their roles in the food service industry. The data collection involved online surveys for quantitative data where the researcher utilized a five-point Likert scale. Statistical analysis was conducted on this data using descriptive statistics to analyze the quantitative data. Academic publications were used as sources for qualitative insights. Thematic analysis was used to analyze the qualitative data for themes that arise in the publications in regards to the sustainable practices being undertaken in the food service industry for both countries. This methodology aimed to provide a nuanced understanding of sustainability practices by incorporating both quantitative precision and qualitative depth in the analysis so as to obtain in-depth insights into the phenomenon being studied.

The study reveals distinct yet evolving approaches to sustainable practices in food packaging and recycling in the food service industries of Australia and Finland with Australia demonstrating a growing awareness of eco-friendly initiatives through the increasing adoption of biodegradable and compostable materials. The variability in the perception of sustainable practices indicates ongoing adjustments in terms of aspects of sustainability within the industry. This emphasizes the need for continuous improvement in the Australian food service industry. The food service industry of Finland has a proactive commitment to sustainability, as it emphasizes the use of locally sourced and recyclable

materials, which align with the strong environmental values and commitment of the Nordic region. Government regulations shape the sustainability initiatives that have been implemented in both countries, as governments develop policies that promote the integration of sustainability principles in the food service industries of Finland and Australia. International business dynamics enable businesses in the food service industry to be innovative, as they enable them to learn the best sustainability practices that have been implemented across the globe. Businesses can implement these practices and they also allow for the exchange of ideas on sustainability. Sustainability is also impacted by cultural influences that are present in both countries, as they motivate businesses in the food service industry to prioritize sustainable practices. The cultures help to recognize that sustainability is the collective responsibility of an entire nation. Businesses are able to contribute to a more sustainable future when they adapt their sustainability practices to meet the expectations that consumers have and the international benchmarks and policies on sustainability.

6 Conclusion

The study showcases the evolving landscape of sustainability in food packaging and recycling within the food service industries of Finland and Australia which is evident in Australia where businesses are increasingly engaging in eco-friendly initiatives by adopting biodegradable and compostable packaging materials due to the growing awareness of the environmental impact of the food service industry. (Hossain et al. 2022.) The level of agreement regarding the implementation of sustainable practices in food packaging in Australia varies, which means that there are ongoing adjustments within the industry and also the need for continuous efforts to enhance the effectiveness of sustainability initiatives in the country.

The food service industry of Finland is proactively committed to sustainability, as it is increasingly emphasizing the use of locally sourced and recyclable packaging materials when packaging food as dictated by the strong commitment to environmental sustainability. (Hamalainen 2019.)

Government regulations play a pivotal role in shaping sustainability practices in both countries, as they face unique challenges and opportunities that are driven by cultural, regulatory and industry-specific factors with international business dynamics significantly influencing sustainable initiatives by fostering global collaborations and encouraging the adoption of eco-friendly practices. Cultural influences also play a pivotal role in shaping sustainable initiatives, as the cultural values of Finland emphasize collective responsibility for the environmental impact of the food service industry, while the multicultural influences of Australia contribute to its dynamic and evolving sustainability landscape.

6.1 Recommendations

1. Businesses in the food service industry should promote the use of biodegradable and compostable packaging, as this would help mitigate the environmental impact of the industry and this can be achieved by encouraging the adoption eco-friendly alternatives to packaging. The businesses can collaborate with suppliers in this endeavor by educating them about the benefits of implementing sustainability practices. This can foster awareness and encourage the suppliers to make informed choices that align with sustainability goals, thus creating a supply chain that is more accessible and affordable. (Escamilla, Fransoo & Tang 2021, 676-688.) This multifaceted approach would allow businesses in the food service industry to address these environmental concerns and enable them to establish a foundation that would help them to implement long-term industry practices that prioritize eco-conscious packaging solutions.
2. Businesses in the food service industry should use locally sourced and recyclable materials when packaging their food and they should also promote the use of these products in their industry. This would help them to minimize the impact that the food service industry has by creating a circular economy. (Derqui, Fayos & Fernandez 2016, 693.)
3. Businesses should also develop waste management systems that support the disposal of waste in a responsible manner. This would allow them to minimize the environmental impact caused by waste generated from the food service industry. Creating waste disposal systems would allow these businesses to

actively participate in reducing the overall environmental footprint caused by the industry. (Martin-Rios, Demen-Meier, Gössling & Cornuz 2018, 196-206.)

4. Collaborating with governments is essential as it would aid in establishing and reinforcing policies that promote eco-friendly initiatives in the food service industry. Consistent and well-enforced regulations can ensure widespread adherence to sustainable practices among businesses. (Sarkar 2013, 171.) This collaborative approach would create a supportive regulatory environment that encourages the adoption of environmentally responsible measures, and it would help create a framework that incentivizes and enforces sustainable practices thereby contributing to the overall environmental responsibility and long-term viability of the food service industry.

6.2 Future Work

Future research in the field of sustainable practices in the global food service industry could explore several promising areas to enhance understanding and contribute to the advancement of environmentally responsible practices with one of these areas being to investigate emerging technologies in packaging materials. This may include advancements in biodegradable polymers or innovative recycling processes, since understanding the environmental impact and feasibility of these technologies can guide the industry toward more sustainable choices. Future research also needs to explore consumer attitudes, behaviors and preferences regarding sustainable practices in the food service sector by analyzing the factors influencing consumer choices, awareness and acceptance of sustainable initiatives, as this can provide insights for businesses to tailor their strategies to meet evolving consumer expectations. Comparative studies also need to be conducted across diverse geographic regions to identify regional variations in sustainable practices. Understanding how cultural, economic and regulatory differences shape sustainability efforts can inform targeted approaches for specific contexts. Comprehensive life cycle assessments of various packaging materials and waste management practices in the food service industry should also be conducted, as this research can offer a holistic view of the environmental impact of different choices. This would aid businesses and policymakers in making informed decisions.

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Appendices

Appendix 1: Survey questions

Demographic Questions:

1. In which country are you located?
 - a. Finland
 - d. Australia
2. What is your role in the food service industry?
 - a. Restaurant owner
 - b. Manager
 - c. Sustainability officer
 - d. Waiters
3. How many years of experience do you have in the food service industry?
 - a. 0-5 years
 - b. 6-10 years
 - c. 11-15 years
 - d. 16-20 years
 - e. 20+ years
4. Which sector of the food service industry do you primarily operate in?
 - a. Restaurants
 - b. Cafes
 - c. Catering
 - d. Other (please specify) _____

5. How familiar are you with sustainable practices in food packaging and recycling?

- a. Not at all familiar
- b. Slightly familiar
- c. Moderately familiar
- d. Very familiar
- e. Extremely familiar

Likert-5 Scale Survey Questions:

1. Sustainable practices in food packaging are adequately implemented in my business.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

2. Recycling initiatives in the food service industry are effective in reducing environmental impact.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

3. International trade agreements positively influence sustainability practices in the food service sector.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

4. Cultural influences play a significant role in shaping sustainable initiatives in the food service industry.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

5. The current level of awareness about sustainable food packaging is sufficient among industry professionals.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

6. The use of biodegradable packaging materials is practical for businesses in the food service industry.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

7. Government regulations adequately support and promote sustainable practices in the food service industry.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

8. Collaboration among businesses is essential for the successful implementation of sustainable practices.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

9. Consumer preferences strongly influence the adoption of sustainable practices in the food service industry.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

10. Technological advancements contribute significantly to enhancing sustainability in food packaging.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

11. The cost of sustainable packaging materials is a major barrier for businesses in implementing such practices.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

12. Sustainable practices in the food service industry contribute to positive public relations for businesses.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

13. Educational programs on sustainability are effective in influencing behavior within the food service industry.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

14. The level of government support for sustainable practices differs between urban and rural areas.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

15. Social media plays a significant role in promoting awareness and adoption of sustainable practices.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

16. Collaboration with suppliers is crucial for implementing sustainable practices in the food service industry.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

17. Business size significantly influences the ability to adopt and implement sustainable practices.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

18. There is a need for standardized global guidelines on sustainable practices in the food service industry.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

19. Financial incentives are effective in encouraging businesses to adopt sustainable food packaging.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

20. Employee training programs are essential for successful implementation of sustainable practices.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree