



RESEARCH ARTICLE

Green marketing strategies and climate change awareness in sustainable transportation: The case of airline companies

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ABSTRACT

The aviation industry contributes significantly to global greenhouse gas emissions, thereby contributing to the phenomenon of climate change. Green marketing strategies, which integrate environmental considerations into marketing practices, have emerged as a potential solution for reducing the environmental impact of airlines. This study's primary objective is to examine how airline companies address the challenges of climate change, sustainability, and green marketing in the transportation sector. The investigation utilized qualitative analysis, employing the MAXQDA-20 program to meticulously examine a variety of corporate documents, including sustainability reports, business reports, and investor presentations, to gain insight into how these companies address critical sustainability challenges and promote environmentally responsible practices. The findings emphasize the substantial overlap between climate change and sustainability-related topics, emphasizing their interdependence in academic discourse and business practices. The study illuminates the crucial role of green marketing in promoting eco-friendly travel options to consumers, suggesting that it can boost a company's reputation, appeal to environmentally conscious consumers, and contribute to a more sustainable future. This study offers valuable insights into the transportation sector's efforts to comply with sustainability-related regulations, particularly the carbon tax, while also offering insights into future strategies.

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Introduction

The global transportation sector, a pillar of modern society, serves a crucial role in connecting people, products, and economies (Green et al., 2015; Lopez-Arboleda et al., 2019). It plays a significant role in contributing to climate change, and the need for sustainable transportation solutions has become increasingly significant (Simionescu et al., 2017). The sector accounts for roughly 20 percent of global CO₂ emissions and is one of the main contributors to global warming and climate change (Stamos et al., 2015). The incorporation of sustainability principles within the transportation sector has become a pressing concern (Zhang et al., 2017). To address this challenge, the integration of green marketing strategies within the transport sector is essential. Green marketing focuses on promoting environmentally friendly practices and products, which can contribute to reducing carbon emissions and minimizing the environmental footprint of the sector (Khalili et al., 2019).

The aviation industry within the context of transportation is a significant contributor to global climate change, and airline companies are increasingly being called upon to develop climate-friendly ethics and strategies (Ruban & Yashalova, 2020). In response to this, many airline companies have started to implement green marketing strategies and initiatives to promote sustainability and reduce their environmental impact (Goetz & Graham, 2004). Green marketing involves incorporating environmental considerations into the marketing process and business practices, with the goal of providing consumers with better information about the environmental properties of products and services (Gordon et al., 2011; Delcea et al., 2018). One area where green marketing strategies can have a significant impact is in sustainable transportation. Airline companies are exploring various strategies to reduce their carbon footprint and promote climate change awareness in the context of sustainable transportation (Harvey et al., 2013). These strategies may include initiatives such as reducing emissions, investing in green technologies, and promoting sustainable travel options to consumers (Chang et al., 2015; Epstein & O'Flarity, 2019).

Recent developments in air transportation have increasingly focused on addressing climate change, promoting sustainability, and incorporating green marketing strategies (Noy & Givoni, 2018; Koščák et al., 2020; Ogryzek et al., 2020; Ovdienko et al., 2021). The aviation sector is actively engaged in efforts to mitigate the carbon footprint, acknowledging the substantial influence that its activities have on climate change.

Efforts have been made to improve air quality and reduce emissions through advancements in engineering, operational practices, and the use of alternative fuels. Sustainable practices in air transportation not only contribute to mitigating climate change but also have positive effects on air quality (Kerimray et al., 2020; Bartle et al., 2021). Green marketing strategies have also gained prominence, with airlines and airports promoting their environmental initiatives and sustainable practices to attract environmentally conscious consumers (Noy & Givoni, 2018; Bartle et al., 2021).

This study seeks to investigate comprehensively how airline corporations in the transportation industry respond to and navigate the intertwined challenges of climate change, sustainability, and green marketing. The primary objective is to obtain insight into the strategies employed by these companies in addressing critical sustainability concerns and promoting environmentally responsible practices. It is noteworthy that this study is centered on a comparative content analysis of the two major airline companies in Türkiye. Through a qualitative analysis of two airline company reports, we explore the implementation of 'Green Marketing Strategies' and 'Climate Change Awareness' within the context of sustainable transportation. We analyze business reports, sustainability reports, investor presentations, and other relevant documents using Maxqda qualitative analysis software. We do so to uncover these organizations' sustainability policies, determine their green marketing priorities, and assess their climate change awareness. This study is significant because it has the potential to guide transportation companies in aligning their practices with sustainability objectives and green marketing strategies, which, according to the literature, can have a positive effect on corporate image, business performance, and market share. In addition, by identifying recurring themes and patterns related to sustainability, green marketing, and climate change awareness, this research provides a comprehensive framework for understanding the interrelationships between these concepts within the transportation industry. This study aims to inspire and inform future strategies and initiatives in the transportation industry to support a more sustainable and environmentally conscious future.

This study is divided into several sections to investigate the confluence of climate change, sustainability, and green marketing in the transportation industry. In the "Conceptual Background" section, we provide context by discussing climate change, sustainability, and green marketing. The section titled "Methodology" describes our data collection and analysis procedures. The "Findings and Discussion" section presents

our research outcomes and discussions, and the “Conclusion” section concludes by synthesizing our findings and providing recommendations for the transportation industry.

Conceptual Background

Climate Change and Sustainability

Long-term changes in temperature, precipitation patterns, and other characteristics of the Earth’s climate system are referred to as climate change. It is mostly driven by human actions such as the use of fossil fuels and deforestation, both of which emit greenhouse gases into the atmosphere and contribute to global warming. Climate change is a complex and multifaceted topic with profound implications for various industries, including the business sector (Linnenluecke et al., 2013). Extensive research has shown that climate change can have unpredictable, substantial, and strategic effects on firm value (Tyler & Chivaka, 2011). The strategic influence of climate change on enterprises primarily revolves around its potential consequences for competitiveness. For instance, changes in operational costs due to rising energy prices, shifts in consumer demand towards low-emission products, and the introduction of new technologies that may render existing competences obsolete are all examples of the potential consequences of climate change (Renukappa et al., 2013).

Sustainability and climate change are closely interconnected. Climate change poses significant threats to the sustainability of ecosystems, human health, and socio-economic systems. Sustainability practices and strategies play a crucial role in mitigating and adapting to climate change. Sustainable development goals, such as those outlined by the United Nations, aim to address the complex relationship between climate change, poverty, gender, and food security (Sopdie et al., 2021). By promoting sustainable practices in transportation and other sectors, it is possible to reduce greenhouse gas emissions, enhance resilience to climate change impacts, and promote the long-term sustainability of ecosystems and societies (Karakosta, 2016).

From a marketing standpoint, sustainability and climate change are becoming increasingly essential marketing considerations for the firms. Consumers are pursuing products and services that align with their values and contribute to sustainability initiatives (Fuller, 1999; Bruce & Daly, 2006). Climate change awareness and perceived effectiveness of actions can positively influence consumers’ attitudes and intentions towards sustainable practices (Perera & Hewege, 2018; Alam et al., 2020). Green or sustainable marketing entails

the promotion of products and services that have a reduced environmental impact, are ethically sourced, and satisfy the requirements of environmentally conscious consumers (Urhan et al., 2023). By incorporating sustainability into their marketing strategies, businesses can attract and retain consumers, improve their brand reputation (Park et al., 2022), and obtain a competitive edge in the marketplace (Taoketao et al., 2018). Sustainable practices may improve a company’s reputation and brand image, resulting in improved consumer loyalty and trust (Kreiss et al., 2016).

Green Marketing

Green marketing is a marketing strategy that promotes environmentally friendly and sustainable products and services. It includes a variety of actions aimed at decreasing the negative social and environmental consequences of existing products and industrial systems while also promoting less harmful alternatives (Arseculeratne & Yazdanifard, 2013; Lu et al., 2013). Green marketing’s major goal is to address environmental problems and encourage sustainable corporate practices. Companies use it to represent themselves as environmentally responsible and to fulfill the rising demand for environmentally friendly products and services. Green marketing methods seek to educate customers about the environmental advantages of products, influence consumer behavior toward more sustainable choices, and distinguish businesses from the competition (Yadav & Sharma, 2020). Consumers are increasingly conscious of the environmental impact of their purchasing decisions and actively seek out environmentally favorable alternatives (Priti, 2021). Green products and services may satisfy these consumers’ desires and preferences, resulting in greater customer satisfaction and loyalty (Widyastuti et al., 2019). By adopting green marketing practices, companies can enhance their brand image, attract environmentally conscious consumers, and contribute to a more sustainable future (Lu et al., 2013). Green marketing, climate change, and sustainability have a complex and interwoven relationship within the framework of company management. Green marketing, or the promotion of environmentally responsible products and actions, is essential for combating climate change and achieving sustainability goals. (Islam et al., 2019).

Green marketing plays a crucial role in the air transportation industry, considering its environmental impact and the growing demand for sustainable practices (Kulanovic & Nordensvard, 2021). With concerns about climate change and the need to reduce carbon emissions, green marketing

initiatives help promote the industry's commitment to sustainability. By highlighting efforts to improve fuel efficiency, reduce emissions, and adopt sustainable practices, airlines and airports can attract environmentally conscious consumers (Karagiannis et al., 2019; Choi & Park, 2020). Moreover, green marketing strategies contribute to the overall image and reputation of the industry, demonstrating its dedication to environmental responsibility. These initiatives also align with the increasing importance of sustainability reporting and accountability in the airport industry. Additionally, the inclusion of air transportation in emissions trading schemes, such as the European Emissions Trading Scheme, further emphasizes the significance of green marketing in reducing greenhouse gas emissions (Anger, 2009; Karagiannis et al., 2019). Furthermore, green marketing efforts can drive innovation in the industry, encouraging the development and adoption of alternative fuels and technologies (Zhang et al., 2016).

Methodology

In this study, we conducted a comprehensive content analysis of documents using MAXQDA-20, a professional computer-assisted qualitative data analysis. This program is a widely utilized software application in research for the in-depth analysis of qualitative data (Lungu, 2022). It enables researchers to import and manage large volumes of data, conduct coding and categorization, and perform advanced data analysis techniques, such as thematic analysis and qualitative content analysis (Creswell & Clark, 2017; Jaafari et al., 2022).

In the methodology section, the concepts identified in the existing literature related to climate change, sustainability, and green marketing served as the foundation for our coding procedure. During the text coding, additional codes not initially identified in the literature were added to the list. This comprehensive strategy ensured that all relevant concepts were considered in the analysis. Utilizing thematic analysis, recurring themes, patterns, and trends related to sustainability, green marketing, and climate change awareness were identified. This robust methodology provides a comprehensive framework for gaining a deep understanding of how companies operating within the transportation industry navigate the complex landscape of sustainability, green marketing, and climate change awareness. To mitigate any potential biases, all relevant documents were carefully reviewed by two researchers. Both coders adhered to the same set of rules and instructions for coding to ensure consistency and data accuracy. In cases where

disagreements emerged, thorough discussions were held to reach a consensus, thus establishing inter-coder dependability (Krippendorff, 2013). The inter-coder similarity between the two researchers' coding was 85 percent, which is an acceptable rate (Creswell, 2009).

Findings and Discussion

In this section, we summarize the findings and discussion of our study. The results of the content analysis on sustainability-related initiatives, green marketing techniques and climate change awareness mentioned in the reports of the two airlines in the study are compiled below. Themes in the study were initially identified through a review of the literature, and additional themes emerged during text analysis and classification. Notably, we observed a substantial overlap between climate change and sustainability-related topics. This overlap demonstrates their interdependence in both academic literature and business practices. Recognizing their inherent similarity and interdependence, we therefore present and discuss these themes collectively. This study provides a comprehensive review of how companies in the air transportation sector are approaching the intertwined challenges of climate change and sustainability, and reveals their common emphasis on green marketing concepts.

Based on our findings, Figure 1 visualizes an overview of the density of sub-themes under the main headings of climate change, sustainability and green marketing in the reports. Both group of reports prominently feature climate change-related expressions like "climate-related risk," "climate-related issues," "climate-related targets," and "climate-related legislations," indicating a significant focus on climate change in corporate communications. Additionally, as illustrated in Figure 1, the terms "emission" and "energy/fuel efficiency" as well as "renewable resources" are extensively discussed in both corporate documents as integral components of the topic of climate change and sustainability, respectively. Air transportation companies place a high value on energy efficiency. Because this industry is notorious for its high energy consumption, energy efficiency is a significant aspect of lowering costs and limiting environmental consequences. Terms like energy/fuel reduction" "fuel efficiency" "mitigation of fuel consumption" "energy policy" and "energy reduction" highlight corporations' efforts to save fuel and improve energy efficiency. Similarly, commonly used phrases such as "renewable energy/sources" "sustainable biofuels" and "clean energy" indicate companies' interest in renewable energy

sources. Renewable energy sources are less harmful to the environment than conventional fossil fuels and have the potential to decrease carbon footprints. Transportation firms may reduce their energy use by shifting to or employing renewable energy sources. This is an important step in implementing a more ecologically friendly company strategy and maintaining control over energy expenditures. These methods allow businesses to embrace sustainability for both environmental and commercial goals while also satisfying consumer expectations through green marketing techniques.

Sustainability is becoming more essential in business, particularly in transportation. Examining the relevant documents for the two firms reveals that they have comprehensive sustainability reports. Furthermore, these companies engaged in aviation transportation which has Carbon Disclosure Project (CDP) report. The CDP is an internationally recognized non-profit organization that oversees a comprehensive worldwide disclosure system aimed at effectively managing the environmental consequences of enterprises, communities, and governments. A CDP report refers to a formal document generated by this organization as a

response to CDP’s annual data request. Climate change, water security, and deforestation are the core concerns of CDP. Sustainability-focused practices offer a multifaceted approach that aims not only to reduce environmental impacts, but also to increase consumer satisfaction and brand value. In this context, the examined documents disclose that companies are actively attempting to stay abreast of developments in the field of sustainability. This effort correlates with the increasing expectations of their consumers, who place a greater emphasis on environmentally responsible transportation practices. The statement in P1 company’s CDP climate change report that reads, “Sustainability is an increasingly critical aspect of our industry and – most importantly – the expectations of our customers” underscores the profound influence of sustainability, including green marketing, in shaping strategies and practices in the transportation industry. As transportation companies adapt to this changing environment, green marketing strategies have emerged as a key component of their approach, allowing them to not only meet sustainability goals but also satisfy customer preferences, fostering environmental responsibility and market competitiveness.

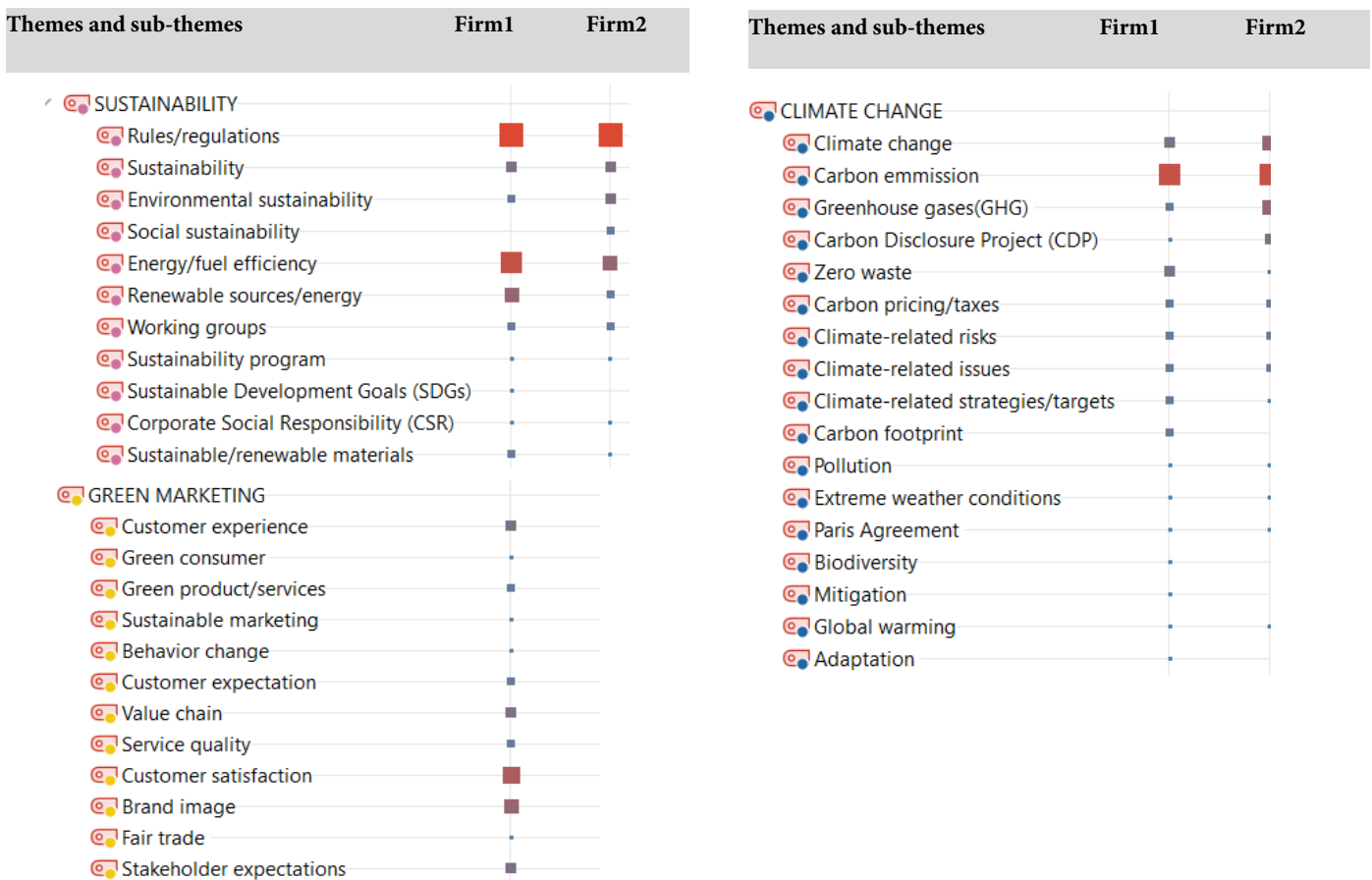


Figure 1. The intensity of the themes for each firm

Table 1. Frequency of the themes

Themes	Related-Themes	Frequency
Emission/GHG	carbon emission, net zero carbon emission, emission intensity, emission efficiency, CO ₂ emission, net-zero CO ₂ , zero emission, emission reduction, GHG emissions, lower emission, low emission rates, carbon reduction, reducing emission, emission reduction projects, emission reduction activities, emission performance calculations	183
Climate-related words	climate change, climate-related issues, climate-related risks, climate-related risk assessments, climate-related opportunities, climate-related impacts, climate-related scenarios, climate-related responsibilities, climate-related disclosures, climate-related requirements, climate-related strategies/targets, climate-related regulations, climate-related legislations, climate-related reporting	124
Carbon Disclosure Project (CDP)	Carbon Disclosure Project (CDP)	32
Carbon Trade System	Emission Trading System (ETS), Cap and Trade system, emission trading schemes, carbon pricing	30
Waste Management	waste management, zero waste, zero waste regulation, net-zero waste, recyclable waste, waste water management, waste sent for recycling, waste management education, zero waste project	29
Carbon footprint	carbon footprint	22
Adaptation	sustainability adaptation, sustainability principles adaptation, adaptation to environmental standards, adaptation to environmental regulations, adaptation to emissions monitoring, adaptation to international standards	19
Paris Agreement	Paris Agreement	17
Mitigation	mitigate environmental impacts, mitigate emissions, mitigate carbon footprint, mitigation of risks, mitigate the severity of the risks, mitigate a detected risk, risk mitigation activities, mitigation measures	14
Climatic conditions	temperature extremes, climatic conditions, extreme temperatures, severity of extreme weather	12
Global warming	global warming, greenhouse warming	9
Pollution	air pollution, land pollution, water pollution, noise pollution, environmental pollution	8
Biodiversity	biodiversity	5
Deforestation	deforestation	3

CLIMATE CHANGE

Table 1. (continued)

Themes	Related-Themes	Frequency
Rules-Regulations	<ul style="list-style-type: none"> • BIST Sustainability Index • EN ISO 14001: 2015 Environmental Management System Standard • IATA Environmental Assessment Management System Program (IEnvA) • Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) • Carbon Disclosure Project (CDP) • IATA Net Zero Carbon Emissions by 2050 • IPCC Guidelines for National Greenhouse Gas Inventories, 2006 • Sustainalytics: Environmental, Social, Governance • European Union Emissions Trading System (EU ETS) • International sustainability indices (Dow Jones Sustainability Index, FTSE4Good, MSCI, ESG Indices, etc.) 	140
Energy/Fuel efficiency	Fuel saving, fuel-saving policy, fuel efficiency, mitigation of fuel consumption, energy policy, energy efficiency, energy reduction, lowering energy consumption, saving energy	94
Sustainability/sustainable-	Sustainable transportation, sustainable development, sustainable aviation, sustainable sources, sustainability risks, sustainability offerings, sustainability efforts, sustainability performance, sustainability report, sustainability experience, sustainability awards, sustainability rating organizations	59
Renewable energy/sources	Sustainable fuel alternatives, Sustainable Aviation Fuel (SAF), Microalgae-Based Sustainable Bio-Jet Fuel Project (MICRO-JET), biofuels/bio-based fuels, renewable fuels, renewable energy, renewable sources, sustainable sources, sustainable biofuels, clean energy	44
Environmental sustainability	sustainable environment, environmental principles, environmental effects, environmental benefits, environmental strategies	38
Sustainability-governance	sustainability strategy, sustainability related targets, sustainability policy, sustainability approach into its business strategy, sustainability program	33
Sustainable materials	recyclable, renewable materials, sustainable packaging, environmentally friendly materials	23
Social sustainability	social responsibility, Discrimination, inequality, human rights violations, forced labor and preventive and corrective practices	17
Working groups	Sustainability Working Group (SWG), Sustainability Committee, Sustainability Environmental Advisory Council	18
Corporate Social Responsibility (CSR)	Corporate Social Responsibility (CSR)	17
Life cycle assessment	life cycle stage(s), life cycle analysis	9
Sustainable Development Goals (SDGs)	Sustainable Development Goals (SDGs)	6

SUSTAINABILITY

Table 1. (continued)

Themes	Related-Themes	Frequency
Customer satisfaction	customer satisfaction, passenger satisfaction	55
Value chain	value chain	42
Brand	brand awareness, brand identity, brand value, brand positioning, brand recognition, brand vision, brand communication, brand value, brand loyalty	34
Stakeholder expectations	stakeholder expectations, expectations of the stakeholders, stakeholder participation, stakeholder satisfaction	27
Customer experience	customer experience, passenger experience	26
Customer expectations	customer expectations, expectations of customers	16
Service quality	service quality	17
Behavior change	behavior change, changing customer behavior, behavioral change	11
Green product/service	eco-friendly product, sustainable product/services, low-carbon products, sustainable products/services,	10
Fair trade	fair trade	7
Green consumer	environmentally friendly customers, environmentally conscious customers	4

GREEN MARKETING

As seen in Table 1, one of the frequently mentioned codes regarding sustainability and climate change is rules and regulations. In particular, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) Regulations, the European Union Emissions Trading System (EU ETS), ISO 14001:2015 – Environmental Management Systems, the CDP results of two major airlines are mentioned extensively. CORSA is a sector-specific compliance carbon pricing strategy that aims to ensure environmentally sustainable international aviation by addressing carbon emissions. To comply with CORSA, the global aviation industry has a range of strategies at its disposal (ICAO, 2019). These include the utilization of eligible carbon credits, the adoption of sustainable aviation fuel (SAF), and the implementation of enhanced ground operations, air traffic management, infrastructure enhancements, and the incorporation of more fuel-efficient aircraft. ISO 14001:2015 is an Environmental Management System (EMS) standard that offers a framework for businesses to manage their environmental obligations and enhance their environmental performance. It aids in the integration of environmental management into overall company strategy and has been shown to boost top management commitment and communication (Fonseca & Domingues, 2018). The European Union Emissions Trading System (EU ETS) is a cap-and-trade system that the EU has developed to decrease greenhouse gas emissions. It is the world's first and biggest emissions trading program. It has acted as a model for various other worldwide carbon trading programs (Borghesi et al., 2019). It mandates

energy-intensive facilities to minimize their CO₂ emissions and provides for the selling of CO₂ permits. The system is based on a cap-and-trade structure, which allows installation operators to freely exchange carbon emissions permits with one another. This allows for emissions reductions to be achieved in a cost-effective manner (Dechezleprêtre et al., 2023). These specific programs demonstrate firms' commitment to environmental sustainability and ethical corporate practices and boost their brand image as ecologically and socially responsible. These firms, who declare their environmental operations and efforts to the public and appropriate authorities, help create a greener future and boost their brand value with stakeholders and customers. In addition, frequently mentioned concepts such as "IATA Environmental Assessment Management System Program (IEnvA)", "IPCC Guidelines for National Greenhouse Gas Inventories", "Sustainalytics" and international sustainability indices (Dow Jones Sustainability Index, FTSE4Good, MSCI ESG Indices, etc.) reflect the standards, regulations and assessment tools used by companies to measure and report their sustainability efforts and environmental impacts. Furthermore, organizations directly related to sustainability, such as the Sustainability Working Group (SWG), Sustainability Committee, and Sustainability Environmental Advisory Council, are commonly cited in corporate reports. These teams inside the organization show increased knowledge of sustainability decision-making, strategy formulation, and execution. These teams' responsibilities go beyond sustainability to include topics like

climate change and green marketing. Businesses handle their sustainability goals and green marketing practices via these working groups, while also supervising the implementation of these initiatives.



Figure 2. Word cloud for firm 1



Figure 3. Word cloud for firm 2

When examining the outputs of the word cloud for Firm 1 as in Figure 2, terms “sustainability, environment, emissions, carbon, fuel, climate-related, CDP, CO₂e, fuel, risk, customer, corporate, social, metric” appear frequently. Similarly, in the word cloud for the second company in Figure 3, terms including “sustainability, management, emission, environment, carbon, fuel, IATA, CO₂e, CDP, value, customer, investor, social, and education” are prominent. Based on these results, it is evident that Firm 1 and Firm 2 share a similar

emphasis on essential sustainability-related concepts. Both companies prioritize sustainability-related topics such as carbon emissions, energy efficiency, and environmental responsibility. Additionally, Firm 1 places a strong emphasis on customer satisfaction, customer-centricity, value, and value chain concepts, which are prominently featured in its word cloud.

Figure 4 compares the two sets of documents via two case model. The chart shows the distribution of codes from both sets of documents, including how often they occur. Both groups place a heavy focus on ideas related to climate change and sustainability, as seen by the use of phrases like “rules/regulations, carbon emissions, energy/fuel efficiency, renewable sources”. General marketing phrases like “customer satisfaction”, “customer expectation” and “brand image” however, are used far less often in the reports of Firm 2. In contrast, only Firm 1’s reports include phrases that are characteristic of green advertising, such as “green customer,” “fair trade,” and variations thereof. Furthermore, it is worth highlighting that only “biodiversity, deforestation, mitigation, adaptation,” and other terms largely connected to climate change appear in the reports of Firm 1. The findings highlight the importance of Firm 2 in the context of social sustainability.

In addition, the extensive use of climate-related terms, green marketing-related phrases like “green strategies” and “sustainable products,” in the examined sustainability reports reveals a multifaceted approach by companies in addressing climate change and promoting sustainability. This signifies those businesses not only recognize climate change as a complex issue but also actively engage in sustainable practices and environmentally responsible marketing. This academic insight sheds light on how companies navigate the intricate landscape of sustainability, climate change, and green marketing, aligning their strategies with environmental consciousness and regulatory compliance to foster a sustainable future. Additionally, these reports underline the criteria for selecting collaborators within their supply chain. For example, CDP report of Firm 1 states that “Our company uses the ‘Supplier Evaluation Procedure’, which was implemented in 2021, and evaluates its suppliers based on its safety, quality, environmental, customer satisfaction, and occupational health and safety policies.” The utilization of ISO 14001: Environmental Management Standards in this assessment elevates supplier quality and environmental awareness, allowing the organization to prioritize stringent environmental management requirements when selecting suppliers.

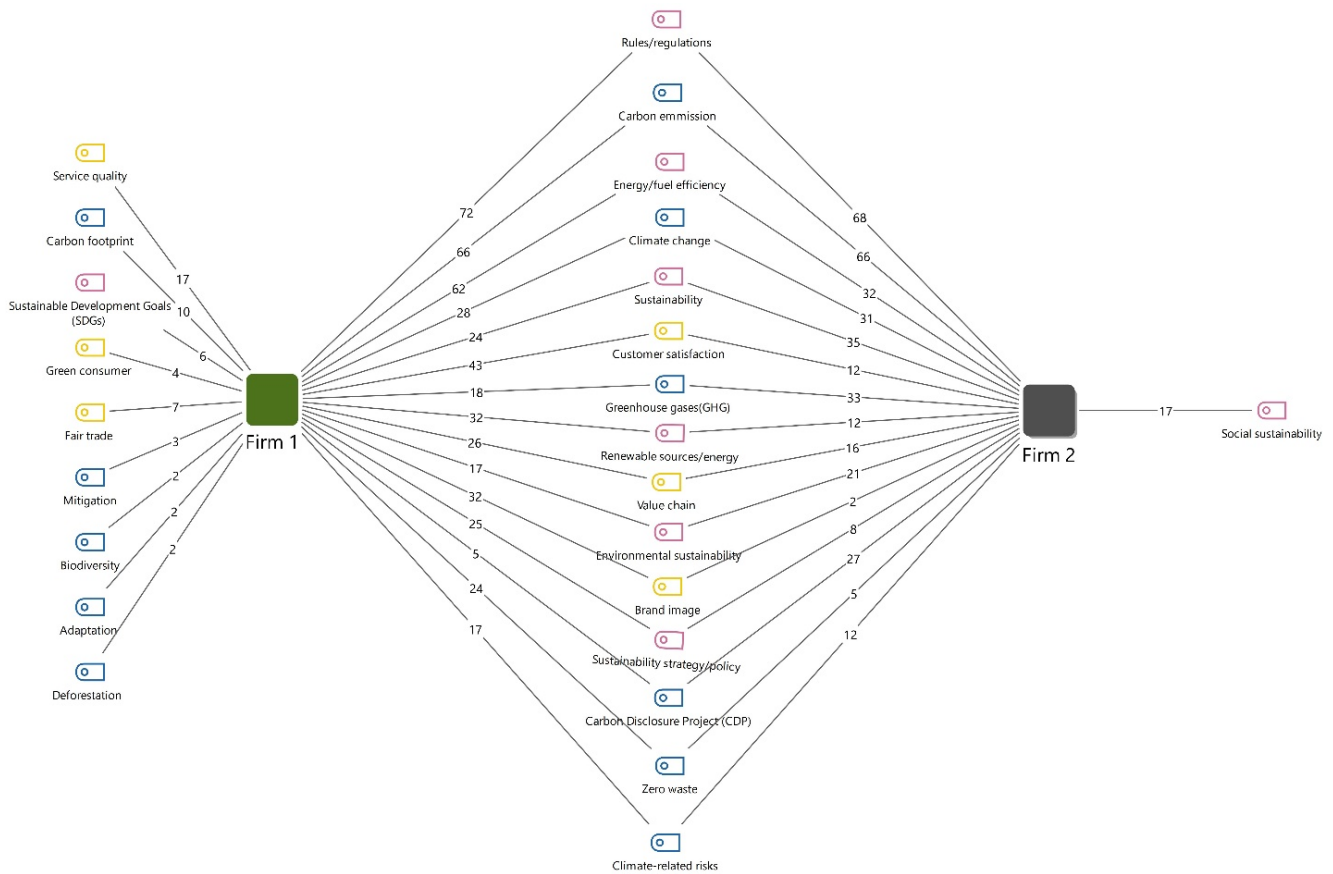


Figure 4. Two case model of the firms

Simultaneously, these reports emphasize the concept of the “value chain,” recognizing its central role in the fields of sustainability and green marketing. They underline the need for an all-encompassing strategy that extends beyond their immediate operational boundaries and incorporates the entire value chain. By incorporating sustainability principles into the value chain, these companies aim to reduce their environmental impact, develop more sustainable products and services, and demonstrate their commitment to green marketing. These reports also examine the behavior and expectations of stakeholders, recognizing the importance of aligning with stakeholders who share similar sustainability objectives. This engagement with stakeholders highlights their commitment to transparency, responsibility, and responsiveness to evolving societal and environmental demands, as well as their dedication to sustainable business practices with an emphasis on green marketing principles.

In the transportation industry, companies can enhance their reputation, appeal to environmentally conscious consumers, and contribute to fostering a more sustainable future by implementing green marketing strategies (Khalili et al., 2019). Another pivotal facet of green marketing within the domain of sustainable transportation is the active promotion of eco-friendly travel options to consumers. Airlines play a crucial role

by providing information about the environmental impact of various travel choices, which includes advocating for the use of fuel-efficient direct flights and encouraging the utilization of public transportation at destinations (Chang et al., 2015). The findings of this study align with these practices, underscoring that both companies have invested efforts similar to these examples to motivate environmentally conscious behaviors among their customers.

When examining marketing-related concepts, the reports revealed that brand, customer satisfaction, quality of service, behavioral change, and customer expectations were prevalent terms. This demonstrates that companies are attempting not only to promote sustainability, but also to integrate brand identity, customer satisfaction, service quality, and green marketing strategies with sustainability objectives. Synergy between these factors highlights the significance of raising awareness of climate change and meeting consumer expectations to motivate behavioral change toward more sustainable decisions. This comprehension contributes to a comprehensive comprehension of transportation companies’ strategies by illuminating how these elements, including green marketing, are seamlessly incorporated into their sustainability initiatives.

Conclusion

This research has thoroughly investigated the relationship between climate change, sustainability, and green marketing in the aviation industry. It has provided significant insights into the strategies and practices of two large airline companies. The study has revealed some significant results and consequences via a thorough content analysis.

The study highlights a significant correlation between sustainability-related topics and climate change, highlighting the interdependence of these critical notions in scholarly discussions and the operational approaches of the two airlines. This discovery underscores the degree to which the aviation industry is intrinsically connected to efforts to mitigate climate change and promote sustainability. The role of green marketing in the transport sector is particularly significant. It's clear that promoting environmentally friendly travel choices is essential to building a company's image and drawing in environmentally concerned customers. Examples of these travel options include pushing for direct flights that use less fuel and encouraging customers to use public transit while at their destination. The study has reaffirmed that these airlines actively use green marketing strategies to encourage their consumers to adopt eco-friendly practices. It is clear that these organizations prioritize the various dimensions of green marketing, and are aware of the important role that green marketing plays not only in meeting sustainability goals, but also in raising consumer awareness and improving market positions. Moreover, the importance of climate change awareness in shaping these strategies emerges through various indicators and institutional statements, reaffirming the increasing impact of sustainability and environmental issues on operational frameworks.

This study provides invaluable insight into the transportation industry's efforts to comply with sustainability-related regulations, specifically the carbon tax. In addition, it offers a compelling insight into the future strategies of this industry. This research facilitates a nuanced comprehension of transportation companies' multifaceted approaches by casting light on the intersection of sustainability, green marketing, and climate change consciousness. As these businesses respond to shifting market dynamics, they not only strengthen their commitment to sustainability, but also improve their corporate image and competitive advantage by incorporating green marketing.

This study has limitations due to its reliance on data from only two airline companies, rendering it unrepresentative of a larger and more diverse sample. This focused approach was

deliberately selected to facilitate an in-depth comparison between these two specific enterprises. However, future research endeavors should utilize a larger sample size to allow for more extensive sectoral comparisons. In addition, the duration of the study could be extended to monitor industry developments over a lengthier period of time, and the research scope could be expanded to assess customer perceptions and measure the actual impact of sustainability strategies. If implemented, these recommendations have the potential to considerably enhance our comprehension in this domain and significantly contribute to the transportation industry's future sustainability and environmental consciousness.

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Compliance With Ethical Standards

Conflict of Interest

The author declares that there is no conflict of interest.

Ethical Approval

For this type of study, formal consent is not required.

Data Availability Statement

The data that support the findings of this study are available from the author upon reasonable request.

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