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The Impact of Environmental Sustainability on Financial Performance in Airline Companies Based on Legitimacy Theory

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Abstract

The aim of this study is to examine the relationship between environmental sustainability discourses and financial performance of companies operating in the aviation industry within the framework of legitimacy theory. Legitimacy theory suggests that businesses seek to gain legitimacy by aligning their actions with social norms and values. In this context, it was investigated whether environmental sustainability discourses have a direct relationship with financial performance. The sample of the study consists of the top 30 airline companies in the Skytrax 2024 ranking. The annual and sustainability reports of these companies were examined using the content analysis method and the obtained data were subjected to statistical tests and correlation and regression analyses were performed. The analysis results show that there is no significant relationship between financial performance and sustainable environmental discourse performance. This finding, in line with legitimacy theory, reveals that environmental sustainability discourses are used as part of corporate legitimacy and reputation strategies rather than gaining financial gain. At the same time, as a result of the study, it was determined that the ranking made by Skytrax was also considered outside the financial performance variable and that the awards given as a result of this ranking were a legitimacy tool.

This study was presented as an abstract at the Safe and Green Tomorrow Congress on April 17, 2025.

1. Introduction

The concept of sustainability has become one of the key topics discussed in almost all organizations in recent years and has been increasingly included in their discourse and actions. Increasing environmental, social and economic problems have become important within organizations, and these problems, which were previously addressed under corporate social responsibility, have now become strategically managed practices within the concept of sustainability. Practices that emerge in the production processes of organizations and harm the macro, micro, and internal environments are met with reactions from individual, national, and international actors. Responding to these reactions drives organizations more towards sustainable practices. At the same time, organizations aim to reduce costs through sustainability practices. In this sense, sustainability initiatives are no longer something organizations can afford to ignore. When literature and practices are reviewed, three different sustainability dimensions are generally encountered: environmental, social and economic. Organizations continue their sustainability efforts by addressing these three categories.

Studies (e.g., Kılıç et al., 2022; Oncioiu et al. 2020; Abdi et al., 2022) argue that sustainability discourses and practices directly or indirectly affect the financial performance of organizations. The criteria that show how efficiently and effectively an organization uses its financial resources in a given period are evaluated as financial performance (Cavlak, 2021). For this reason, sustainability initiatives, which are believed to affect efficiency and productivity, are also considered among the influencers of financial performance. Although sustainability is considered as an indicator of financial performance, it is also considered a way for organizations to legitimize themselves within their environment (Fahmi et. al., 2022).

Legitimacy theory, which provides a theoretical foundation for understanding organizational behavior within societal contexts, posits that organizations continuously seek acceptance and approval from their stakeholders by conforming to social norms and values (Dowling et all., 1975). This conformity not only ensures survival but also enhances organizational reputation and stakeholder trust (Suchman, 1995; Bitektine, 2011). Within this framework, sustainability practices have gained importance as strategic tools for gaining and maintaining legitimacy, especially in sectors facing intense environmental scrutiny.

One of the fundamental steps for organizations to maintain their existence on legitimate grounds is to act in accordance with the expectations of their stakeholders. From the perspective of legitimacy theory, it is suggested that organizations seek legitimacy by conforming to social norms and values, thereby achieving success. Not complying with

social expectations may carry reputational risks. To avoid these risks, organizations may act as if they are complying with societal expectations. These practices, often referred to as greenwashing, can also serve to legitimize the organization. The gap between sustainability discourse and actual practice is also discussed within the framework of legitimacy theory.

The purpose of the present study, within the context of legitimacy theory, is to examine the effects of the environmental sustainability discourses of organizations operating in the aviation sector on their financial performance. The aviation sector, due to its global nature, struggles with both national and international pressures. Environmental sustainability significantly impacts the aviation sector and imposes responsibilities on the organizations involved.

The aviation sector, characterized by its substantial environmental footprint, serves as a critical context to explore how sustainability discourse influences financial outcomes while also shaping corporate legitimacy.

In this context, the study analyzes the impact of environmental sustainability discourse on the financial performance of organizations operating in the aviation sector. The annual and sustainability reports of the top 30 airlines in the Skytrax 2024 ranking were examined using content analysis, and the data obtained were subjected to statistical tests. There are several reasons for selecting 30 companies. The top 30 airlines represent the largest and most influential actors in the industry. Therefore, it is essential to provide a relevant and representative sample to understand general trends and sustainability practices in the sector. Moreover, the reports of these airlines are generally publicly available and detailed, ensuring sufficient and reliable data for content analysis. The analysis results show that there is no significant relationship between environmental sustainability discourse and financial performance. This finding, in line with legitimacy theory, suggests that sustainability discourse is used as part of corporate legitimacy and reputation strategies rather than for financial gain. In addition, it has been found that the Skytrax ranking functions as a legitimacy tool shaped by factors beyond financial performance, and that the awards granted through this ranking are used similarly within legitimacy strategies.

This study contributes to the literature by providing a theoretically grounded analysis of environmental sustainability discourse and its relationship with financial performance specifically within the aviation industry—a sector characterized by a significant environmental impact and intense regulatory and societal scrutiny. Unlike many previous studies that address sustainability in aviation without a solid theoretical framework, this research employs legitimacy theory to interpret sustainability efforts as strategic actions aimed at gaining and maintaining organizational legitimacy. This approach helps to reveal that sustainability discourse in the aviation sector functions more as a legitimacy and reputation strategy than as a direct driver of financial performance, highlighting the complex role of sustainability in corporate strategy.

2. Conceptual Review

2.1. Environmental Sustainability

In order to understand and comprehend the concept of sustainability, it is essential to first examine the factors that led to the emergence of this concept. The increasing needs of humanity with the increase in population, the industrial revolution shaped by technological developments and the discussions in the supply-demand balance resulting from these changes/developments, the strategies that emerged as a result of the capitalist class's motivation to maximize profits, have led to the uncontrolled consumption of natural resources, while causing serious damage to the environment (Tıraş, 2012; Bolayır et al., 2024; Belli et al., 2022). This rapidly increasing destruction brings sustainability discussions to the agenda.

The concept of sustainability, which was not widely discussed/discussed until the 1980s, has gained rapid momentum in recent years and has become multidimensional, based on the protection of forests dating back to 1713 (Şen et. al., 2018).

The concept of sustainability has undergone many changes throughout history until it became multidimensional status. The concept of sustainability, which first addressed the need to manage forests without depletion (Carli et al., 2013), was expanded in scope with the environmental pollution problems that emerged as a result of industrialization in the 20th century (Bahçeci Başarmak et al., 2019). In 1987, the Brundtland Report defined sustainability as "meeting the needs of the present generation without endangering the ability of future generations to meet their own needs" (WCED, 1987), adding a new dimension to the concept. With this definition, sustainability is not only an issue related to environmental pollution, but is primarily addressed as a development model that touches on every issue that may threaten the lives of future generations, including economic and social dimensions (Redclift, 2005). Development in industry has also made the issue of sustainability an issue in the business world. Until the 1990s, businesses that acted solely for profit were required to consider their environmental and social impacts along with sustainability (Elkington et al., 1999). In the 21st Century, the United Nations (2015) included poverty, inequality, education, health and gender issues in the scope of the concept as a result of their studies on sustainability. Today, the concept has become universal and has come to the agenda of national and international organizations, placing studies such as climate change and green energy at the center of the concept of sustainability (Rockström et al., 2009).

When this change in sustainability is examined, although there have been many developments from the beginning to the present, environmental sustainability has maintained its current status. Redclift (2005) mentions environmental sustainability as the consumption of natural resources, which are scarce resources, in a way that can meet the needs of future generations. Based on these definitions, the aim of environmental sustainability is to prevent activities that degrade the environment, to use resources efficiently, and to work to ensure that ecosystems continue in a healthy way (Geng et al., 2008; Geng et al., 2012).

When the literature on environmental sustainability is examined, a comprehensive and multidimensional structure emerges. Goodland (1995) provides a foundational perspective on environmental sustainability by defining it as the maintenance of natural capital and ecosystem services. He emphasizes the necessity of respecting ecological limits and preventing the overuse of environmental sinks. His work laid the groundwork for later multidimensional sustainability frameworks by linking ecological health with long-term human well-being. Following this, Araújo et al. (2023), in their systematic literature review, emphasize the critical role of environmental innovation in corporate sustainability, demonstrating that green innovations significantly enhance

environmental quality and economic performance. Similarly, Barbosa et al. (2021) analyze the conceptual foundations of environmental sustainability strategies and their impact on international markets. Aldowaish et al. (2022) provide a comprehensive overview of the integration of Environmental, Social, and Governance (ESG) elements into business models, focusing on the incorporation of the environmental component into business processes. Yang et al. (2024) empirically examine the scaling of ESG performance and its relationship with corporate performance. In et al. (2024) offer a bibliometric analysis detailing the theoretical evolution of corporate sustainability research from 1973 to 2019, along with the impact of ESG on financial performance.

2.2. The Concept of Financial Performance

Businesses need to analyze their current financial situation in order to make decisions in economic, social and environmental dimensions. For this analysis, they measure their financial performance by calculating various financial ratios and applying multi-criteria decision-making methods.

According to Verboncu and Zalman (as cited in Taouab et al., 2019), performance is defined as a specific result obtained in the fields of management, marketing and economics, which provides competitiveness, efficiency and effectiveness features to the structural and procedural components of businesses. Performance measurement is the process of measuring the effectiveness and efficiency of a business's past activities (Neely et al., 2005). According to Moullin (2007), performance measurement is the measurement of how well businesses are managed and the benefits they provide to their stakeholders with whom they have commercial relations.

Financial performance is the measurement of the results of the activities of the companies and the policies they implement regarding their monetary situation. By measuring financial performance, the risk levels and financial positions of the companies can be determined. In addition, it can ensure the effective use of resources, the ability to make financing and investment decisions, and the correct evaluation of past performances (Uygurtürk et al., 2012).

Financial performance is not measured solely through a single method; instead, various financial indicators and models are utilized in the literature to capture different dimensions of organizational success. Commonly used measures include Return on Assets (ROA) and Return on Equity (ROE), which reflect a company's ability to generate profit relative to its assets or equity (Delen et al., 2013). Tobin's Q is another widely accepted metric, often employed to evaluate a firm's market-based performance and future growth potential (Chung et al., 1994). In addition, the Economic Value Added (EVA) model, developed by Stern Stewart & Co., is frequently used to assess value creation beyond traditional accounting profits (Stewart, 1991). Each of these techniques provides a different lens for evaluating how effectively an organization utilizes its resources to generate financial value.

2.3. Legitimacy Theory

Legitimacy theory posits that for organizations to gain legitimacy in society, they must operate in alignment with social values in order to gain legitimacy in society (Dowling et al., 1975). Organizations must continue to operate in accordance with social values in order to survive. It is argued that Legitimacy is directly linked to organizational reputation and arises from social judgments (Bitektine, 2011). Suchman (1995), who discusses how important legitimacy is for the survival of organizations, explains legitimacy as the process of acceptance by the organization's stakeholders.

Based on these explanations, it can be seen that the acceptance of legitimacy theory by the societies and stakeholders around the organizations is a critical factor for their long-term success.

Sustainability, especially with its environmental and social dimensions, emerges as an important strategy in increasing institutional legitimacy (Suchman, 1995).

Deegan (2002) theoretically examines how companies' social and environmental disclosures help them gain societal acceptance and legitimacy. İlter (2022) examines how Koza Gold Mining Company uses its corporate social responsibility practices as a tool to gain organizational legitimacy, and it also touches upon the company's environmental policies.

2.4. Environmental Sustainability Discourses and Financial Performance Relationship

Aydıngülü Sakalsız et al. (2025) stated in their study of 251 enterprises that there is no significant relationship between the environmental performance of enterprises and their return on equity. While a considerable number of studies report no relationship between financial performance and sustainability performance (e.g., Jha et al., 2020; Acar et al., 2021; Özdarak, 2021; Doğukanlı et al., 2020; Önder, 2017), there are also studies that identify a positive relationship between the two (e.g. Bäckström & Karlsson, 2015; Esteban-Sanchez et al., 2017; Hu et al., 2018; Ohaka et al., 2021; Emir et al., 2021; Düzer, 2018).

When the studies for the aviation sector are examined, it is seen that there is no significant relationship between the variables in the studies addressing financial performance and sustainability performance. Abdi et al. (2020) examined the extent to which environmental, social and corporate governance data of companies affect their financial performance by using the financial and non-financial data of 27 airline companies between 2013 and 2019. As a result of the research using the panel data analysis method, it was determined that the environmental and governance dimensions positively affect financial performance, but the social dimension affects financial performance to a lesser extent.

In their study, Şişman et al. (2021) aimed to measure the impact of environmental, social and corporate governance data on the financial performance of companies by using financial and non-financial data of 26 airline companies between 2010 and 2017. As a result of the research using the panel regression analysis method, it was determined that environmental, social and corporate governance scores had a significant relationship only between active stability rates and did not have a significant relationship on the financial performance of the companies.

Orazayeva et al. (2022) observed the relationship between environmental, social and corporate governance data and financial performance of companies by using financial and non-financial data of 33 airline companies between 2016 and 2020. As a result of the research, it was determined that environmental, social and corporate governance scores did not have a significant impact on the financial performance of companies.

Ay et al. (2023) investigated how corporate sustainability performance affected financial performance during the covid-19 pandemic by using financial and non-financial data of 43 airline companies between 2015 and 2021. As a result of the research using panel data analysis method, they determined

that the financial performance of companies was negatively affected during the pandemic, but companies with high corporate sustainability performance were less affected by the negativities of this period.

Based on all these explanations, the basic hypothesis of the study was developed as follows.

H1: Environmental sustainability statements by companies operating in the aviation sector do not affect their financial performance.

H1a: Environmental sustainability statements by companies operating in the aviation sector do not affect their return on assets.

H1b: Environmental sustainability statements by companies operating in the aviation sector do not affect their return on equity.

H1c: Environmental sustainability statements by companies operating in the aviation sector do not affect their net profit margin.

H1d: Environmental sustainability statements by companies operating in the aviation sector do not affect their equity ratio.

3. Methods

This study employs a mixed methods approach to observe the relationship between environmental sustainability performance and financial performance in the aviation industry. Qualitative data were collected through content analysis and statistical analysis was performed on these data. The sample of the study consists of the top 30 airlines in the Skytrax ranking as of 2024.

The data regarding the environmental sustainability discourses were obtained through content analysis of the sustainability reports of the companies for the year 2024 on their websites. Environmental sustainability is studied in 8 categories as recycling, energy consumption, emissions, waste management, spills, environmental impacts, effluents and biodiversity These categories were developed by the Global Reporting Initiative (GRI) and serve to measure the environmental sustainability performance of the companies (Global Reporting Initiative, 2021). The data obtained through the content analysis conducted within these categories are evaluated for each company and total environmental sustainability scores are obtained.

To measure financial performance, the financial reports of the top 30 airlines in the Skytrax 2024 ranking for the year 2023 were used. These reports were obtained from the companies' websites and the Investing.com database. As a method, TOPSIS, a multi-criteria decision-making method, was applied for ratio analysis and financial performance ranking.

Ratio analysis is defined as "the process of establishing mathematical relationships between accounts or groups of accounts in order to assess the economic and financial structure of the business" (Akdoğan et al., 2007). In the study, profitability ratios and financial structure ratios were used as a result of observing the studies conducted to measure the impact of sustainable performance discourses on financial performance. The ratios and calculation formulas used are given in the table below.

Table 1. Financial Performance Measurement Variables

Financial Ratios	Calculation Formulas
Return on Assets Ratios (ROA)	Net Profit for the Period / Total Assets
Return on Equity Ratios (ROE)	Net Profit for the Period / Equities
Net Profit Margin (NPM)	Net Profit for the Period / Net Sales
Equity Ratio (ER)	Equities / Total Assets

TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution), a multi-criteria decision-making method, is based on identifying the ideal and negative-ideal solutions and comparing the distance of each alternative from these solutions. It was developed by Hwang and Yoon in 1981 (Papathanasiou et al., 2018). The method consists of 6 stages. These stages are (Ren et al., 2007; Kendirli et al., 2021);

Step 1: Create the decision matrix

Step 2: Edit the normalized decision matrix

Step 3: Edit the weighted standard decision matrix

Step 4: Calculate ideal and negative ideal solutions

Step 5: Calculate the distance measures between alternatives

Step 6: Calculate the similarity with the ideal solution

4. Findings

The findings regarding the environmental sustainability performance, based on the data obtained through the content analysis, are presented in Table 2.

Significant differences are observed among companies in terms of environmental sustainability scores. While the highest score belongs to Cathay Pacific Airways with 9.75, some companies such as Hainan Airlines have very low scores (around 0.11), indicating limited environmental sustainability activities or discourse. Companies like Cathay Pacific Airways, Air France (8.13), Turkish Airlines (7.39), and Lufthansa (5.41) demonstrate more comprehensive environmental sustainability efforts or communicate more actively in this area compared to others. This may indicate that these companies place greater importance on their environmental responsibilities or are more actively seeking legitimacy in this field. On the other hand, some major airlines show lower performance in terms of environmental scores. For example, Emirates (1.81), Qatar Airways (1.83), and Swiss International Air Lines (1.5) have more limited sustainability discourse. These data reveal that environmental sustainability awareness and practices within the aviation sector are heterogeneous across companies; some prioritize sustainability more, while others have taken only limited steps in this area so far.

Table 2. Environmental Sustainability Performance of Airline Companies[1]

	Business	Environmental Score
1	Qatar Airways	1 .83
2	Singapore Airlines	5 .22
3	Emirates	1 .81
4	ANA All Nippon Airways	2 .65
5	Cathay Pacific Airways	9 .75
6	Japan Airlines	4 .59
7	Turkish Airlines	7 .39
8	EVA Air	2 .18
9	Air France	8 .13
10	Swiss Inter. Air Lines	1 .5
11	Korean Air	5 .2
12	Hainan Airlines	0 .11
13	British Airways	3 .99
14	Fiji Airways	0 .27
15	Iberia	3 .87
16	Vistara	3 .52
17	Virgin Atlantic	1 .54
18	Lufthansa	5 .41
19	Etihad Airways	4 .25
20	Delta Air Lines	2 .41
21	Air New Zealand	3 .64
22	Finnair	3 .22
23	Qantas Airways	3 .25
24	Oman Air	0 .34
25	KLM Royal Dutch Airlines	4 .35
26	Bangkok Airways	0 .85
27	Austrian Airlines	3 .67
28	Air Canada	0 .61
29	AirAsia	3 .12
30	China Southern Airlines	1 .33
Total		**100**

In addition, the results of the ratio analysis applied in the study, which reflect the financial ratios of the 30 airline companies, are presented in Table 3.

Table 3 shows the key financial ratios of 30 airline companies, including Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Equity Ratio (ER). These ratios help us understand how profitable and financially healthy these companies are.

ROA measures how effectively a company uses its assets to generate profit. We see that companies like Emirates (64.1%) and Oman Air (16.0%) have much higher ROA values compared to others, suggesting they use their assets more efficiently or have strong profitability. On the other hand, Virgin Atlantic and China Southern Airlines have ROA values close to zero, which may indicate low profitability or losses during the period.

Table 3. Ratio Analysis Results[2]

	Business	ROA	ROE	NPM	ER
1	Qatar Airways	0 .037	0 .135	0 .076	0 .276
2	Singapore Airlines	0 .058	0 .148	0 .141	0 .696
3	Emirates	0 .641	0 .018	0 .010	0 .972
4	ANA All Nippon Airways	0 .061	0 .165	0 .076	0 .293
5	Cathay Pacific Airways	0 .043	0 .145	0 .091	0 .345
6	Japan Airlines	0 .037	0 .109	0 .055	0 .358
7	Turkish Airlines	0 .037	0 .379	0 .261	0 .435
8	EVA Air	0 .080	0 .217	0 .122	0 .354
9	Air France	0 .021	1 .690	0 .004	0 .014
10	Swiss International Air Lines	0 .039	0 .174	0 .047	0 .214
11	Korean Air	0 .038	0 .118	0 .611	0 .311
12	Hainan Airlines	0 .019	0 .224	0 .025	0 .012
13	British Airways	0 .060	0 .447	0 .081	0 .135
14	Fiji Airways	0 .033	0 .635	0 .072	0 .052
15	Iberia	0 .099	0 .883	0 .135	0 .113
16	Vistara	0 .055	0 .420	0 .110	0 .142
17	Virgin Atlantic	0 .000	0 .000	0 .000	0 .000
18	Lufthansa	0 .148	0 .338	0 .433	0 .438
19	Etihad Airways	0 .058	0 .127	0 .133	0 .454
20	Delta Air Lines	0 .063	0 .415	0 .079	0 .151
21	Air New Zealand	0 .015	0 .064	0 .037	0 .230
22	Finnair	0 .069	0 .441	0 .085	0 .156
23	Qantas Airways	0 .045	7 .462	0 .078	0 .006
24	Oman Air	0 .160	0 .285	0 .165	0 .562
25	KLM Royal Dutch Airlines	0 .056	0 .890	0 .059	0 .063
26	Bangkok Airways	0 .054	0 .184	0 .143	0 .292
27	Austrian Airlines	0 .148	0 .338	0 .433	0 .438
28	Air Canada	0 .075	2 .859	0 .104	0 .026
29	AirAsia	0 .106	2 .460	0 .132	0 .043
30	China Southern Airlines	0 .000	0 .000	0 .000	0 .337

ROE reflects the return shareholders get from their investments. Some companies such as Qantas Airways (746.2%) and Air Canada (285.9%) show extremely high ROE, which might be due to either very high profits or operating with low equity levels. However, the sustainability of such high ROE figures should be examined carefully. In contrast, companies like Virgin Atlantic with zero ROE may be experiencing financial difficulties.

NPM indicates the percentage of revenue that turns into net profit. Korean Air stands out with a very high net profit margin (61.1%), indicating strong profitability per unit of sales. Meanwhile, some airlines like Air France (0.4%) and Virgin Atlantic (0%) have very low or zero net profit margins, possibly due to higher costs or operational challenges.

[1] "The data sources were obtained from the annual sustainability reports and annual reports of the companies included in the study sample. These reports were accessed from the companies' official websites."

[2] The data were obtained from the financial statements published on the companies' official websites and from the investing.com website.

The ER shows the level of debt compared to equity. Airlines like Emirates (97.2%) and Oman Air (56.2%) have high debt ratios, implying higher financial risk and leverage. Conversely, some companies maintain low debt levels, such as Air France (1.4%) and Hainan Airlines (1.2%).

Overall, the financial ratios highlight significant differences in profitability, financial structure, and operational efficiency among these airlines. These variations may reflect different business models, market conditions, or management strategies. They also suggest that while some companies manage to maintain strong financial performance, others face considerable challenges.

Following this, Table 4 presents the financial performance rankings of the airline companies, as determined through the application of the TOPSIS method.

An examination of Table 4 reveals that the Skytrax rankings and the financial performance rankings of the companies differ. For instance, Qatar Airways, which holds the first position in the Skytrax ranking, is placed 18th in terms of financial performance. Conversely, Qantas Airways ranks first in financial performance but is positioned 23rd in the Skytrax rankings. This indicates that while airlines may enjoy a strong reputation and positive market and customer perception, such esteem does not necessarily correspond with superior financial outcomes.

The regression analysis for hypothesis H1 is given in Table 5.

Table 5 shows the results of the regression analysis related to the hypothesis. The dependent variable, environmental sustainability discourse, has no significant effect on the independent variable, financial performance. In this case, the H1 hypothesis is accepted.

Table 4. TOPSIS Results

Skytrax Ranking	Business	Ci	Performance Ranking
1	Qatar Airways	0 .047	18
2	Singapore Airlines	0 .261	3
3	Emirates	0 .422	2
4	ANA All Nippon Airways	0 .052	16
5	Cathay Pacific Airways	0 .072	13
6	Japan Airlines	0 .077	11
7	Turkish Airlines	0 .113	9
8	EVA Air	0 .076	12
9	Air France	0 .041	19
10	Swiss International Air Lines	0 .028	21
11	Korean Air	0 .059	15
12	Hainan Airlines	0 .001	29
13	British Airways	0 .012	27
14	Fiji Airways	0 .006	28
15	Iberia	0 .014	24
16	Vistara	0 .013	25
17	Virgin Atlantic	0 .000	30
18	Lufthansa	0 .114	7
19	Etihad Airways	0 .122	5
20	Delta Air Lines	0 .014	23
21	Air New Zealand	0 .032	20
22	Finnair	0 .015	22
23	Qantas Airways	0 .578	1
24	Oman Air	0 .18	4
25	KLM Royal Dutch Airlines	0 .012	26
26	Bangkok Airways	0 .052	17
27	Austrian Airlines	0 .114	7
28	Air Canada	0 .116	6
29	AirAsia	0 .086	10
30	China Southern Airlines	0 .069	14

Table 5. Effect of Independent Variable on Dependent Variables

	Dependent Variables									
	Financial Performance									
	ROA		ROE		NPM		ER		Cİ	
Independent Variable	β	t	β	t	β	t	β	t	β	t
Environmental Sustainability	-0 .153	-0.806	0.019	-0.1	0.254	1.363	0.128	-0.67	0.015	0.079
F	0 .65		0.01		1.858		0.448		0.006	
R2	0 .024		0		0.064		0.016		0	

* p<0.05 ** p<0.01

5. Conclusion and Discussion

This study aimed to examine the impact of environmental sustainability discourses on the financial performance of airline companies operating in the aviation sector within the framework of legitimacy theory. Since this study employs both quantitative and qualitative methods, the research design is based on a mixed methods approach. The annual and sustainability reports of the top 30 airline companies in the Skytrax 2024 ranking were evaluated using content analysis; the extent to which companies addressed environmental sustainability issues is analyzed.

The financial performance findings of the study have been interpreted in relation to key concepts within financial theory, such as capital structure, profitability, and market performance. For instance, variations in ROA (Return on Assets) and ROE (Return on Equity) ratios reflect how efficiently companies utilize their assets and equity. Within this context, financial theory posits that a high ROE indicates

a more efficient use of shareholders' equity, rendering the company more attractive to investors.

However, the lack of statistically significant impact of environmental sustainability discourse on financial performance in our study suggests that sustainability initiatives may not yield immediate financial returns in the short term. This finding can be interpreted within financial theory as indicating that long-term investments and sustainability strategies may gradually generate positive effects on market perceptions and investor sentiment, but these effects may not be immediately observable in profitability and performance metrics.

As a result of the analyses, the hypotheses developed in the study were accepted; in other words, it was concluded that environmental sustainability discourses in the aviation sector do not have a significant effect on financial performance. All the developed hypotheses were supported. This finding supports the fundamental assumptions of the legitimacy theory. Organizations appear to adopt environmental sustainability discourses primarily to maintain their social legitimacy rather than to achieve financial gains. Legitimacy theory emphasizes that organizations encounter fewer problems when they behave in accordance with the expectations of their external environment. Environmental sustainability is increasingly valued by stakeholders and organizational expectations in this regard are increasing. However, organizations that wish to maintain their existence must exhibit behaviors aligned with the norms established by national and international actors. Airlines, shaped by pressures from international institutions, invest in environmental sustainability initiatives to ensure their survival and to avoid sanctions.

The findings of this study align with a significant portion of the existing literature that reports no statistically significant relationship between environmental sustainability efforts and financial performance. For instance, Aydıngülü Sakalsız et al. (2025) found no significant relationship between environmental performance and return on equity in their study of 251 enterprises. Similarly, several studies (e.g., Jha et al., 2020; Acar et al., 2021; Özdarak, 2021; Doğukanlı et al., 2020; Önder, 2017), indicate a lack of significant association between financial performance and sustainability performance. Focusing specifically on the aviation sector, previous studies corroborate the mixed evidence. For example, Abdi et al. (2020) observed that while environmental and governance dimensions positively influenced financial performance, the social dimension had a limited effect. Meanwhile, Şişman et al. (2021) reported that environmental, social, and governance scores were only significantly related to active stability rates but did not significantly affect overall financial performance. Orazayeva and Arslan (2022) similarly found no significant impact of ESG scores on financial performance of airline companies. Consistent with these findings, this study also reveals that environmental sustainability discourses in airline companies do not have a significant impact on financial performance.

Consequently, within the framework of legitimacy theory, the environmental sustainability discourses of airline companies can be evaluated as strategic communication tools aimed at preserving corporate legitimacy.

These results should be interpreted within the limitations of the study. The primary limitation is that only the top 30 airlines on the Skytrax 2024 list were analyzed. Moreover, the fact that Skytrax is a private research and rating organization raises concerns regarding the objectivity of the rankings, as the institution distributes awards based on these evaluations. To achieve higher rankings and receive awards, companies may shape their sustainability efforts strategically, aiming to enhance their perceived legitimacy. Another limitation is that the study focused solely on discourses rather than actual practices. Additionally, the analysis was restricted to environmental sustainability, excluding social and governance dimensions.

Future studies using larger sample sizes would enhance the generalizability of the findings. Furthermore, considering the private and independent nature of Skytrax, future research could incorporate data from alternative ranking or rating organizations to establish more robust foundations for the results. Lastly, while this study concentrated on the environmental sustainability discourses of airline companies, future studies could also investigate the alignment between discourses and actual practices to provide a more comprehensive evaluation.

Based on the findings of this study, recommendations have been proposed for airline companies, industry stakeholders, and policymakers. In particular, considering the limited direct impact of environmental sustainability practices on financial performance in the short term, it is advised that companies develop their sustainability strategies with a long-term perspective. Furthermore, investing in environmentally friendly technologies and operational improvements across the industry is essential. Policymakers, on the other hand, should focus on establishing regulations and incentive mechanisms that support sustainability standards. These recommendations aim to enhance both the competitive advantage of companies and the reduction of the aviation sector's environmental footprint.

Conflicts of Interest

The authors declare that there is no conflict of interest.

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