



## **The integration of hybrid business model strategies and technologies about LCCs and FSCs**

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## Abstract

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<p>The COVID-19 pandemic has had an unprecedented impact on the global economy, with the aviation industry being particularly affected as a crucial part of international transportation. Not only has the pandemic significantly reduced global travel demand, but it has also forced airlines to face unprecedented operational challenges, leading them to reevaluate and adjust their business models. In this context, both the traditional full-service carrier (FSC) and low-cost carrier (LCC) models have shown their limitations and challenges. Meanwhile, a new emerging hybrid business model has started to emerge, integrating the high service level of FSCs with the cost efficiency advantages of LCCs, better catering to the diversified needs of consumers in the modern economic environment.</p> <p>This article aims to delve into the core characteristics of the hybrid model and its competitive advantages in the current market environment. Through comparative analysis of the strategies and performance of FSCs and LCCs, this article explores how the hybrid model can leverage market changes to achieve growth during the pandemic and its adaptability and sustainability under different market conditions. Furthermore, this article will also discuss the key requirements for implementing the hybrid model, including market positioning, cost management, and service innovation, and validate its practical effectiveness and feasibility through empirical market research. Therefore, the purpose of this article is to explore the feasibility of United Airlines' hybrid business model and the conditions that a hybrid business model needs to have.</p> <p>Through systematic theoretical analysis and empirical research, this article hopes to provide strategic insights for the aviation industry, helping industry professionals understand the potential value and implementation complexity of the hybrid model, and providing guidance for airlines' strategic adjustments in the post-pandemic era. The ultimate goal of this study is to evaluate the effectiveness of the hybrid business model and explore its potential for sustainable development in the modern aviation market.</p> <p>This article will explore the potential of United Airlines' hybrid business model through the example of ANA and Delta Air Lines.</p>
<b>Key words</b> Hybrid Strategies, LCCs, FSCs, Aviation Industry, Market Adaptability

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## 1 Introduction

Regarding the current aviation industry, the "aftermath" of Covid-19 remains the biggest issue. These impacts not only involve economic losses but also long-term changes to the industry's structure and operations. Here are some major effects:

1. Significant decline in passenger traffic: Due to international border closures and travel restrictions, airlines have experienced a sharp drop in passenger volumes. Many airlines have had to cancel or reduce the number of domestic and international flights, directly affecting their revenue.
2. Increased financial pressure: With plummeting income, airlines are facing immense financial pressure. To survive, many airlines have sought government aid, implemented layoffs, reduced salaries, or taken other cost-cutting measures.
3. Fleet adjustments and retirements: In response to the decreased demand, airlines have adjusted the size of their fleets and accelerated the retirement of aging aircraft, particularly fuel-inefficient large planes like the Boeing 747 and Airbus A380.
4. Strengthened health and safety measures: Airlines and airports have introduced new health and safety protocols, such as increased cleaning and disinfection procedures, implementation of social distancing measures, and mandatory mask-wearing for passengers and crew members.
5. Changes in business models: The pandemic has prompted airlines to reconsider their business models. For example, some companies have increased the focus on cargo operations to compensate for the decrease in passenger demand.
6. Digitalization and technological applications: To reduce contact and improve efficiency, the aviation industry has accelerated its digital transformation, such as promoting touchless boarding processes, using health codes, and implementing digital travel certificates.
7. Long-term impacts on international travel: While domestic travel is gradually recovering in some regions, the pace of international travel recovery has been slower due to entry policies and pandemic control measures implemented by various countries.
8. Market restructuring and consolidation: Economic pressures may lead to bankruptcies or acquisitions of some airlines, potentially resulting in a round of industry restructuring and consolidation.

Among these impacts, the changes in business models and the reform of commercial models are the main focus of this paper.

In conclusion, the impact of the Covid-19 pandemic on the aviation industry is comprehensive and profound. It has not only changed the operating models of airlines but may also alter the future landscape of travel and consumer behaviour. As the pandemic evolves and vaccination becomes more widespread, the recovery trajectory of the aviation industry will gradually become clearer, but some changes may be long-term or even permanent.

The article presents several relevant conclusions for reference: First, compared with traditional FSC and LCC, the hybrid business model is superior, but the conditions for its formation are rather stringent, including a market capable of accommodating it, a specific economic environment, a brand with significant influence, and clear and timely strategic planning. The paper will provide the specific process leading to this conclusion.

## **1.1 Research Background**

The current state of the aviation industry can be described as a "slow recovery in the face of significant setbacks." It is a complex and multifaceted process that is influenced by various factors, including global and regional control of the pandemic, easing of travel restrictions, recovery of consumer confidence, and improvement in the economic environment. On one hand, the gradual lifting of political and regional border restrictions by countries has directly contributed to the aviation industry's recovery. For example, the United States had fewer domestic travel restrictions in 2021, and domestic air travel recovered earlier than international travel. By 2022, with further relaxation of international travel restrictions, the demand for international routes began to increase. The European Union introduced the "Digital COVID Certificate" to facilitate free movement among member states, greatly promoting travel within the region and the recovery of the aviation industry. On the other hand, airlines themselves have made efforts to adapt to changing market demands by adjusting their business strategies, reconfiguring route networks, upgrading fleets, adjusting their business models, and introducing more flexible booking policies. For instance, airlines have introduced policies allowing passengers to change flight dates without additional fees in order to attract customers. For example, US carriers United Airlines and Delta Air Lines waived change fees for domestic flights during the pandemic. Additionally, Japan Airlines has focused on developing its subsidiary Peach Aviation to increase revenue and maximize profits. Consumer confidence is also a key factor, including regular disinfection, mandatory mask-wearing, and the promotion of contact-minimized boarding processes. For example, Singapore Airlines has implemented a series of enhanced hygiene measures, including the use of hospital-grade disinfectants on planes and at airports, as well as providing hygiene kits (including masks and disinfectant wipes) on all flights. Indeed, the changes in market demand and consumer behavior have laid the groundwork for the transformation of the aviation business model. Will the changing demands of air travel become a motive for airlines

to adapt? Factors such as customer sensitivity to prices and expectations of service quality may undergo corresponding changes due to the impact of the pandemic. This article will explore these factors in subsequent discussions. (IATA Annual-review-2023) Overall, the aviation industry is in an unstable state, and recovery is uneven, depending on the region, airline strategies, and the global economic environment. Despite the challenges, many airlines have started to show signs of recovery, especially in domestic markets and regions with freer international travel. This recovery process indicates that the aviation industry may continue to undergo changes and adapt in the coming years.

The financial situation is also a key reason why airlines are actively adjusting their business models. It has to be admitted that many airlines are still struggling to overcome financial difficulties. Despite the recovery in passenger traffic, the financial condition of many airlines has not reached pre-pandemic levels. Some airlines rely on government assistance or private capital injection to sustain operations. Can the original business model continue after the pandemic? We need to put a big question mark on it. The signs of market adjustments are imminent, which is crucial for airlines to quickly recover from the downturn. In the following articles, I will mention the differences, distinctions, and connections between full-service airlines and low-cost airlines. This article will explore how to organically combine the two. Although there are already some airlines with hybrid models in the market (such as Japan Airlines and Qantas, Singapore Airlines' subsidiary Scoot, Lufthansa's Eurowings, etc.), do these cases have universality? Or what efforts have they made to achieve such business models? We need to further explore.

## **1.2 Research Objectives, Questions, and Purposes**

**Research Subject:** The focus of this study is the hybrid business model that combines full-service airlines with low-cost airlines. Specifically, the research will analyze airlines that attempt to integrate these two models and explore how they achieve cost efficiency while maintaining service quality.

**Research Objectives:** This study aims to investigate the feasibility of the hybrid business model that combines full-service airlines with low-cost airlines, evaluate its competitiveness in the current airline market, and analyze its impact on airlines' operations, market strategies, and customer satisfaction. The research will be conducted through case studies, market data evaluation, and consumer feedback. The study will examine common characteristics of successful hybrid models, such as operational models, team structures, revenue composition, network planning, and marketing strategies, to derive specific necessary conditions for the success of this strategy.

**Research Questions:**

1. What is the definition and characteristics of a hybrid business model? Define what constitutes a hybrid model, and its main differences with traditional full-service and low-cost airlines. Conclusions can be found in Theoretical Framework 2.1-2.4.
2. Which airlines have adopted a hybrid model and what are their strategies? How does the hybrid model perform in the market? Analyze the achievements of hybrid airline companies in financial performance, market share, customer satisfaction, etc. Conclusions can be found in Theoretical Framework 2.5-2.6.
3. What are the main challenges and limitations faced by hybrid models? How can hybrid business models be operated more effectively? Conclusions can be found in Theoretical Framework 2.7.
4. What is the level of consumer acceptance towards hybrid models? Evaluate passengers' perceptions and satisfaction towards hybrid models through surveys and consumer feedback. Conclusions can be found in Questionnaire Survey 3.3 and Result Analysis 4.1.
5. What are the future prospects for hybrid business models? Conclusions can be found in Conclusion and Prospect 6.1.

End The purpose of this article is to explore the feasibility of United Airlines' hybrid business model and the conditions that a hybrid business model needs to have.

### **1.3 Previous Research**

People have mixed views on hybrid business models, mainly because some cases appear to be successful while others are the opposite. In terms of domestic research, there is no clear distinction between low-cost airlines and full-service airlines in China like there is in foreign countries. As a result, there is limited reference material available domestically, primarily due to the relatively high additional fees for domestic flights and the limited degree of market openness. Some budget subsidiaries of Chinese airlines are merely symbolic. Therefore, this paper is primarily based on foreign literature. This research examines the changes in airline business forms, different market shares, and the performance of hybrid business models. While the market segmentation of domestic airline business forms, especially low-cost airlines and full-service airlines, is not yet clear, it is worth noting that the development of airline partnerships is a positive aspect of these business forms, especially in the Chinese aviation industry, which has experienced a new turning point after organizational learning, cost control application, and airline company integration strategy innovation. In 2002, the Civil Aviation Administration of China (CAAC) decided to merge the six major state-owned airlines into three airline company groups: Air China Group (Air China, China Southwest Airlines, and China Aviation); China Eastern Airlines Group (China Eastern Airlines, China Northwest Airlines, China Yunnan Airlines, Wuhan Airlines); and China Southern Airlines Group (China Southern Airlines, China Northern Airlines, and China Xinjiang Airlines). In October 2002, all mergers

and acquisitions between the three airline company groups were completed, forming a relatively complete market structure in the domestic industry and laying the foundation for the development of different business models in the future. Additionally, the impact of Covid-19 has accelerated the rapid development of China's low-cost airline market, although there is not a significant difference in ticket prices among them in China. This will also provide more vitality for the future Chinese aviation market.

When reading foreign literature, it is obvious that there are more distinct boundaries in foreign countries when it comes to differentiating business models. There are significant differences in cost structure, market performance, and influencing factors. For example, David Gillen and Alicja Gados mentioned the practice of creating low-cost subsidiary airlines in full-service airlines. Broadly speaking, this is also a hybrid business model, just manifested in a different form. The study adopts a combination of historical analysis, case study, and business model evaluation to analyze the feasibility and operational complexity of operating dual business models in the aviation industry. It also evaluates the strategic, economic, and managerial impacts of creating low-cost airlines within existing full-service airlines. It compares similar strategies in other industries such as hotels and points out the source of cost advantages compared to traditional airlines. Finally, it explores potential future scenarios of airlines such as Tiger, Jetstar, and German Wings, contemplating their potential success and how they adapt to broader market dynamics.( David Gillen & Alicja Gados, 2008)

Compared to domestic research, foreign scholars have a clearer division of business models, especially in the aviation industry, including low-cost, full-service, long-haul low-cost, and ultra-long-haul models. Additionally, foreign scholars start their research from basic concepts and further extend to the influencing factors of business, before discussing their impact on the aviation industry. Furthermore, in order to analyze cost structures better, they tend to use variable control methods for careful research. Foreign research largely focuses on literature and is similar to domestic research, but it involves more data analysis of airline companies, making variable control crucial. Finally, this paper will analyze the deficiencies and research gaps of existing literature, conduct data analysis based on actual data, and combine previous research reports to discuss the feasibility of hybrid business models and discuss the necessary conditions for their formation.

#### **1.4 Identified Challenges and Issues**

The biggest challenge and adjustment for a hybrid business model is its fragility, as it requires specific conditions and operates in a dynamic market. Airlines need to adjust their strategy according to market changes. If they cannot keep up with the pace of market changes and insist on using a single business model, they will inevitably be eliminated by the market. Furthermore, there is no unified definition for a hybrid business model, as different airlines may have different implementation methods. In addition, the execution of the strategy presents certain complexities, and theoretically

effective hybrid models may encounter unexpected difficulties in practical operations, such as cost control and maintaining service quality. Market acceptance, which is crucial, also needs to be reflected in subsequent surveys.

In terms of challenges, the fierce competition in the aviation industry is evident, and hybrid airlines need to find a unique market position between full-service and low-cost airlines. This can be particularly difficult in a highly competitive market. Additionally, the integration and innovation of technology pose challenges for hybrid business models. Whether airlines can seize the trend of digitization and effectively combine it with advanced technology is crucial for their ability to gain a larger market share. These problems and challenges need to be overcome through detailed market analysis, strategic planning, and ongoing business adjustments.

### **1.5 Thesis Structure**

The paper will prioritize analyzing the differences and connections among various business models, further leading to the characteristics of hybrid business models. By examining the interrelationships between them, different market performance, and differences in target demographics, as well as conducting quantitative and qualitative analysis on financial indicators, the feasibility conditions of hybrid business models will be explored. After establishing the corresponding theoretical framework, a reasonable risk assessment will be conducted, supplemented by questionnaire surveys and literature research to obtain additional data support. Finally, the relevant findings will be summarized. Such a structure not only systematically presents the research content but also enhances our understanding of the operations, strategies, and market performance of hybrid mode airlines.

### **1.6 Literature Review**

This paper mainly investigates the views of domestic and international scholars on different business models, factors influencing the airline business models, and the study of cost structure and productivity in the aviation industry. People have mixed views on hybrid business models, mainly because some cases appear to be successful while others are the opposite. In terms of domestic research, the categorization of low-cost and full-service airlines in China is not as clear as in foreign countries. Therefore, in terms of literature retrieval, there are fewer references available domestically, mainly due to the relatively high additional fees for domestic air tickets and the limited extent of market openness in China. Some low-cost subsidiaries of China's national airlines are symbolic rather than significant. This study examines the changes in aviation business forms, different market shares, and the performance of hybrid business models through related research.

The existing methods for measuring business performance mainly involve data analysis and PCA (Principal Component Analysis) combined with questionnaire surveys.

Through the method of literature review and data analysis, explain how China's low-cost aviation has been shaped by historical, policy, socio-cultural, and industrial backgrounds. Based on recent changes and foreseeable developments in China's low-cost aviation, they look ahead to the future of the industry. They believe that the past history, policies, socio-cultural factors, and industrial background have hindered the development of China's low-cost aviation industry, but recent changes in this background could drive the industry's development in the future, despite the temporary difficulties caused by the pandemic. Jiang Yongzou conducted a literature review on organizational learning in Chinese airline companies, focusing on the wide-scale mergers and acquisitions of 12 Chinese airline companies from 1996 to 2014. The literature mentions the notorious reputation of most state-owned airlines in China for poor cost management. It is worth noting that compared to the consolidation in 2001/02, the operational costs of Chinese airline companies increased during the post-acquisition period due to limited integration from acquisitions in 2010. This also provides a path for the business model transformation (acquisition and consolidation form) of airlines. (Chen Zhuo & Li Yanhua & Shi Xiaoting)

When reading foreign literature, it is obvious that there is a clearer distinction in terms of business models. There are significant differences in cost structure, market performance, and influencing factors.

For example, they mentioned the practice of creating low-cost carrier (LCC) subsidiaries in full-service airline companies (FSC). Broadly speaking, this is also a hybrid business model, although manifested in different forms. The combination of historical analysis, case studies, and business model evaluation was primarily used to analyze the feasibility and operational complexity of operating dual business models in the aviation industry. It also assessed the strategic, economic, and managerial impacts of establishing low-cost airlines within existing full-service airline companies. Furthermore, comparisons were made with similar strategies in other industries such as hotels, highlighting the sources of cost advantages compared to traditional airlines. Lastly, the potential future scenarios of airlines like Tiger, Jetstar, and German Wings were explored, along with their potential for success and adaptation to broader market dynamics. (David Gillen & Alicja Gados)

Two scholars, employed quantitative analysis and the K-modes clustering method to analyze 49 European airlines, with a focus on estimating the number of different business models and identifying distinct characteristics of these models among airlines operating regular flights in Europe. They discovered that the FSC model partially adopted features of the LCC model in terms of efficiency, while LCC maintained its characteristic of no-frills services. Moreover, they found that the transition process between the two models was not linear, which contrasts with the complete opposite LCC characteristics domestically. This serves as an interesting point of discussion, as the aviation

industry may find success through these strategies as it transitions towards hybrid models in certain situations. The study provides valuable insights for aviation industry practitioners, such as airline executives or regulatory bodies, aiding in their understanding of competitive strategies and industry categorization. (Ana Magdalena & Martin Bouzaima)

Two scholars, highly praised the hybrid business model, stating that it leads to the emergence of complex, multifaceted, and robust business models in the aviation industry, which are unique or "unparalleled." They suggested conducting broader research on airline groups as a whole rather than individual companies. They also raised a crucial question regarding whether the current business models are moving towards homogenization and convergence. They took a new perspective – evaluating airline groups comprehensively rather than focusing on individual companies. In general, this perspective is crucial for the future development of hybrid models, and they emphasized the dynamic nature of the aviation industry, considering the evolution of business models as responses to competitive pressures and the pursuit of unique strategic advantages in the global market. The dynamic nature of the industry is also a limitation discussed in my paper. (Anna Tomová & Matúš Materná,)

Two scholars, also conducted a case analysis of the integration of the business models of airlines. They analyzed the specific differences in the levels of various airline business models using a sample of 26 European passenger airlines from 2004 to 2012. They found that homogenization among airlines is increasing, providing strong support for the commonly assumed trend of convergence. They also provided many references that supplement our understanding of the hybrid forms of the aviation industry. In summary, increasing convergence in business models will inevitably decrease airline profits and increase competition difficulty, while maintaining the original business models can provide more strategic flexibility. Hybrid models offer an alternative approach. (Jost Daft & Sascha Albers)

Two scholars, mentioned the impact of the Covid-19 crisis on the changes in the business models of airlines. The crisis prompted airlines to reconsider their business models. During the crisis, airlines began to increase revenue by changing their business models, such as offering sightseeing flights to attract passengers who want to experience the feeling of flying. Airlines such as Qantas, Starlux Airlines, and Smartwings adopted this approach and launched "destinationless flights," which exposed the potential for experimental business models in extreme situations. They also explained that the hybridization of business models has attracted attention, especially as LCCs have adopted pricing strategies similar to FSNCs, and even FSNCs have adopted some operational strategies of LCCs. The crisis prompted these airlines to converge in terms of pricing, services, and operational efficiency, which could be a trend towards the development of hybrid business models. In conclusion,

the routes for airlines after the Covid-19 crisis were filled with uncertainty, and some companies may need to change their core business models more effectively. Regardless of how the business models evolve, maintaining competitiveness and meeting consumer expectations will always be key factors in the development of airlines, and their research provides a good explanation of the external major factors driving the transformation of the aviation industry. ( Mária MRÁZOVÁ & Antonín KAZDA,)

Leonardo Corbo also conducted relevant research on business models, but he focused on the aspect of business model configuration, using the failed case study of a mix of Berlin Airlines and JetBlue Airways. This paper questions the feasibility of a mixed business model. ( Leonardo Corbo )By comparing and evaluating the business model innovation practices of the well-known airlines Berlin Airlines and JetBlue Airways, it emphasizes the importance of considering the various components of a business model when deciding to experiment with business models, as these choices have a significant impact on the development and performance of airlines. The research results indicate that inconsistency between value propositions and other elements of the business model will hinder airlines' ability to achieve sustainable competitive advantage after transitioning from a simplistic business model to a mixed one. In conclusion, it presents some disadvantages that may be exhibited when mixed models are proposed in unreasonable situations.

In summary, compared to domestic research, foreign scholars have a clearer distinction of business models, especially in the aviation industry, such as low-cost, full-service, long-haul low-cost, and ultra-long-range business models. Additionally, foreign scholars start their research from basic concepts, further extending to the factors influencing businesses, and then discussing the impact within the aviation industry. Furthermore, to analyze cost structures more effectively, they tend to prefer the method of variable control for in-depth research. Foreign research mostly leans towards literature studies, similar to domestic research, but with a greater focus on the processing of airline data, making controlled variables vital. Finally, this article will analyze the shortcomings and research gaps of existing relevant literature, conduct data analysis based on actual data, and explore the feasibility of mixed business models, considering the necessary conditions based on previous research reports.

## 2 Theoretical Framework

In the preceding text, we primarily outlined the research background, theme, objectives, as well as some of the existing challenges and issues of this paper. In the following section, we will delve into and address the aforementioned problems. It is worth noting that this paper has made certain improvements to the aviation business model theoretical framework compared to traditional frameworks. Specifically:

For this paper, the specific aviation business model theoretical framework includes: firstly, analyzing the overall situation of airlines through a market performance model. Then, examining the impact of its sub-factors using the resource-based view, followed by analyzing the strategic choices of mixed business models and similarities in business models through strategic group theory. Through these different perspectives, managers can identify key factors in business and potential areas for improvement. Each framework has its unique focus and application value.

Compared to traditional airline theoretical frameworks, this paper's theoretical framework not only focuses on traditional industry competitors, potential new entrants, threats of substitutes, supplier power, and buyer bargaining power, but also emphasizes the degree of market competition and market capacity. Similarly to traditional aviation business model theoretical frameworks, it also emphasizes the resource-based view theory (which highlights how companies gain competitive advantage through unique resources and capabilities. For airlines, this can include route networks, flight schedules, fleet, airport usage rights, technological systems, brand, and customer loyalty, among others). However, this paper places more emphasis on brand, customer loyalty, and route networks. Importantly, this paper provides a reasonable summary of mixed business models using strategic group theory. Specific details will be presented in the following sections.

### 2.1 Aviation Market Business Models

The aviation business model refers to a series of strategies and operational methods adopted by airlines to achieve profitability, including service delivery methods, pricing strategies, market positioning, cost control, route network design, aircraft configuration, and customer service decisions. These models define how airlines organize their business, attract customers, provide services, and differentiate themselves from competitors.

The commercial models in the aviation industry are diverse, each targeting different market demands and consumer preferences. Furthermore, due to different regional regulations and policies, the same aviation business model may have different commercial performances. However, the main commercial models can be categorized into the following:

1. Full-Service Carriers (FSC), such as Air China, United Airlines, British Airways, etc.
2. Low-Cost Carriers (LCC), such as Ryanair, Southwest Airlines, EasyJet, etc.
3. Regional Carriers, such as American Eagle, Eurowings, etc.
4. Hybrid Carriers, with various types based on different blends of commercial airline models.

The determinants of the aviation business model are primarily pricing strategies, market positioning, operational efficiency, cooperation, and alliances. The choice and execution of the aviation business model are crucial for the success of airlines as they directly impact market share, profitability, and industry position. Airlines must continuously evaluate and adjust their business models to adapt to rapidly changing market conditions, technological advancements, and consumer demands.

These business models demonstrate how airlines adjust their service and operational strategies based on different market demands and strategic positioning. Each model has its specific target customer group and market strategy to thrive in the highly competitive aviation market.

## **2.2 Full-Service (FSC) Airlines**

Full-service airlines refer to airlines that provide a wide range of services and a high level of customer experience. Such airlines typically offer comprehensive services including ticket sales, baggage handling, in-flight meals, various cabin classes, and airport lounges. The goal of full-service airlines is to provide a seamless, comfortable, and convenient travel experience, especially for business and long-haul international travelers. They have the following characteristics:

1. Full-service airlines usually offer multiple cabin classes, including economy class, business class, and first class. These different classes provide different levels of comfort and services, such as spacious seats, high-quality dining options, and personal entertainment systems.
2. They provide comprehensive customer service, including airport counter service, professional cabin service, assistance for special passengers, as well as online, telephone, and airport customer support.
3. Exclusive lounges are available at major airports for first class and business class passengers, as well as members of specific frequent flyer programs. These lounges offer dining services, shower facilities, work and rest areas.
4. They typically have an extensive domestic and international route network, including direct and connecting flights, connecting major cities and tourist destinations worldwide.

5. They offer free checked baggage service and have clear baggage policies to meet the needs of different passengers.

6. Complimentary in-flight dining services are provided, including beverages, snacks, and main meals depending on the length of the flight and cabin class.

7. They offer frequent flyer loyalty programs, allowing passengers to accumulate miles or points through flights, which can be redeemed for rewards such as tickets, upgrades, and hotel accommodation.

The business model of full-service airlines focuses on providing high-quality services and comprehensive customer experience to attract passengers with higher service quality requirements, especially business and long-haul travelers. This model has relatively higher operating costs, therefore ticket prices are usually higher than those of low-cost airlines. (CAAC, 2017)

### **2.3 Low-Cost (LCC) Airlines**

Low-cost airlines are a type of aviation business model aimed at offering lower ticket prices through simplified services and reduced operational costs. The core objective is to gain a competitive advantage in product or service pricing by lowering costs, improving efficiency, and optimizing resource allocation. Since the rise of this model in the 1970s in the United States, it has quickly spread worldwide and become an important part of the aviation industry. Low-cost airlines primarily attract price-sensitive consumers, including leisure travelers and budget-conscious business travelers. It differs from full-service airlines in several ways:

1. LCCs provide very basic ticket prices, and all additional services such as checked baggage, priority boarding, seat selection, and in-flight meals require additional fees. This "no-frills" model allows passengers to choose and pay for services based on their individual needs.

2. Most low-cost airlines use a single aircraft type, such as the Boeing 737 or the Airbus A320 series, in order to reduce maintenance costs, training costs, and spare parts inventory.

3. LCCs maximize aircraft utilization by minimizing ground turnaround times and extending daily flight hours, which helps recover costs more quickly.

4. They mainly offer point-to-point services rather than the traditional hub-and-spoke model. This approach reduces operational complexity and costs, while avoiding high airport usage fees at hub airports.

5. Low-cost airlines tend to use secondary airports, which typically have lower fees compared to major airports and less competition.

6. Complimentary meals and drinks are not provided onboard; all food and beverages are available for purchase as needed. This reduces service costs and complexity.

7. LCCs favor self-service options such as online check-in and self-tagging for baggage, which reduces the need for personnel at airport counters.

Southwest Airlines is a well-known low-cost airline, renowned for its excellent customer service and straightforward pricing strategy.

The business model of low-cost airlines has made air travel more accessible and provided an affordable way to travel, disrupting the traditional aviation market structure. The success of this model lies in its ability to consistently offer low fares while maintaining operational efficiency and cost control. Additionally, a rational allocation of costs and resource allocation are crucial for implementing low-cost strategies to ensure optimal resource utilization. The low-cost strategy has a positive impact on the market position and competitiveness of airlines.

## **2.4 Emerging Hybrid Business Models**

In general, the term "Hybrid Business Model" in the aviation industry refers to an operational model that combines the characteristics of both Full-Service Carriers (FSCs) and Low-Cost Carriers (LCCs).

However, the ways in which it operates can vary greatly. As mentioned by David Gillen and Alicja Gados in their article, a hybrid business model refers to the operation of different business models or subsidiaries within the same airline, while maintaining a certain level of control. This is considered an efficient strategy and is the mainstream approach to hybrid business models (David, 2008).

In certain Chinese airlines, the definition of a hybrid business model is described as "one high, three lows, one constant, one variable, one added, one reduced."

- "One high" refers to high-density seating, which means increasing the number of available seats through high-density layouts in the economy class.

- "Three lows" refers to low marketing costs, low management costs, and low ticket prices. This involves reducing marketing and management costs through strategies such as increasing direct sales, optimizing booking systems (TRS) and departure control systems (DCS), improving intelligent terminal infrastructure, and streamlining service processes. It also includes reducing seat space and lowering seat costs to achieve lower ticket prices.

- "One constant" means maintaining the same service model for amenities and baggage for passengers.
- "One variable" refers to changes in meal offerings and replacing traditional meals with alternatives.
- "One added" refers to the addition of cabin classes, specifically introducing a new business class with higher profit contribution on top of the existing single class.
- "One reduced" means eliminating services in the business class that passengers are not concerned about, creating price and service differentiation compared to full-service airlines.

However, this definition differs significantly from the viewpoint presented by David and Alicja, as it provides a detailed breakdown and personalized adjustments based on different conditions (Peng Pai, 2020).

Overall, the specific definition of a hybrid business model differs among different airlines, regions, and countries. However, we can observe that they all share the common goal of trying to provide competitive ticket prices while maintaining a certain level of customer service to meet diverse market demands. The hybrid business model allows airlines to offer more service choices and flexibility while maintaining cost efficiency. Although this model is in a somewhat "awkward middle ground" (as hybrid airlines are usually positioned in the middle of the market, neither fully pursuing the lowest costs nor providing high-end services exclusively), it enables airlines to adapt more flexibly to market changes, attract a wider customer base, and enhance their market competitiveness.

## **2.5 Market Performance of Hybrid Business Models**

The performance of hybrid business model airlines in the market usually depends on how they balance cost efficiency and customer service, as well as how they adapt to market changes and competitive pressures. This paper will analyze the market performance of several typical hybrid business model carriers, such as ANA and Delta Air Lines, to further demonstrate the advantages of the hybrid business model.

### **2.5.1 Financial Indicators**

First, it is important to clarify that ANA adopts the approach of establishing subsidiaries within the company to embody the hybrid business model. Its main low-cost airline is Peach Aviation. Let's take a look at ANA's financial performance. According to ANA's annual report for 2022, we can conclude that:

For the overall company, in 2022, ANA HOLDINGS INC. had total assets of 1,020,324 billion yen.

Operating revenue was 1,707,484 billion yen, showing a significant increase compared to the previous year.

Cost of sales was 1,403,567 billion yen, resulting in a gross profit of 303,917 billion yen, which is higher than the previous year.

Regarding Peach Aviation, its revenue in 2022 amounted to 90,265 billion yen. Compared to ANA HOLDINGS INC.'s other businesses, Peach Aviation's revenue accounts for a relatively small proportion. However, Peach Aviation (Peach Aviation Limited) achieved good performance in 2022:

Peach Aviation showed significant growth in key indicators such as passenger numbers and flight distances, demonstrating excellent performance.

Passenger revenue of Peach Aviation saw a substantial increase, with unit revenue and unit prices also experiencing significant improvement.

	(FY) (Note 2)	2022	2021
<b>For the Year</b>			
Operating revenues (Note 4)		1,707,484	1,020,324
Operating expenses		1,587,454	1,193,451
Operating income (loss)		120,030	(173,127)
Income (loss) before income taxes		114,342	(175,374)
Net income (loss) attributable to owners of the parent		89,477	(143,628)
Cash flows from operating activities		449,822	(76,413)
Cash flows from investing activities		(204,026)	230,019
Cash flows from financing activities		(142,909)	93,646
Free cash flow		245,796	153,606
Substantial free cash flow (Note 5)		373,104	(111,948)
Depreciation and amortization		144,313	147,328
EBITDA (Note 6)		264,343	(25,799)
Capital expenditures		116,892	133,364
<b>At Year-End</b>			
Total assets		3,366,724	3,218,433
Interest-bearing debt		1,607,918	1,750,108
Shareholders' equity (Note 7)		862,419	797,249
<b>Per Share Data (Yen, U.S. dollars) (Note 8)</b>			
Earnings (loss) per share		190.24	(305.37)
Book value per share		1,833.64	1,695.06
Cash dividends		—	—
Average number of shares during the year (Thousand shares)		470,334	470,339

Figure 1 Annual report

In 2022, Peach Aviation expanded its domestic flight business and resumed previously suspended international flights to meet the demands for leisure and inbound tourism. Here are the specific data:

ASK (in millions): 12,232 (2022) vs. 7,863 (2021), representing a growth of 55.6%.

RPK (in millions): 8,991 (2022) vs. 4,846 (2021), showing a growth of 85.5%.

Number of passengers (in thousands): 7,775 (2022) vs. 4,267 (2021), indicating a growth of 82.2%.

Load factor (%): 73.5 (2022) vs. 61.6 (2021), increasing by 11.9%.

Passenger revenue (in ¥ billions): 90.2 (2022) vs. 37.8 (2021), experiencing a growth of 138.7%.

Unit revenue (in ¥): 7.4 (2022) vs. 4.8 (2021), showing a growth of 53.5%.

<b>Operating Data</b>		
<b>International Passenger Operations</b>		
Passenger revenues	<b>433,470</b>	70,151
Available seat-km (Millions)	<b>35,875</b>	20,524
Revenue passenger-km (Millions)	<b>26,408</b>	5,550
Number of passengers (Thousands)	<b>4,212</b>	825
Load factor (%)	<b>73.6</b>	27.0
Unit revenues (¥)	<b>12.1</b>	3.4
Yield (¥)	<b>16.4</b>	12.6
<b>Domestic Passenger Operations</b>		
Passenger revenues	<b>529,593</b>	279,877
Available seat-km (Millions)	<b>49,901</b>	34,288
Revenue passenger-km (Millions)	<b>32,201</b>	16,382
Number of passengers (Thousands)	<b>34,534</b>	17,959
Load factor (%)	<b>64.5</b>	47.8
Unit revenues (¥)	<b>10.6</b>	8.2
Yield (¥)	<b>16.4</b>	17.1
<b>LCC Passenger Operations (Note 13)</b>		
Revenues	<b>90,265</b>	37,813
Available seat-km (Millions)	<b>12,232</b>	7,863
Revenue passenger-km (Millions)	<b>8,991</b>	4,846
Number of passengers (Thousands)	<b>7,775</b>	4,267
Load factor (%)	<b>73.5</b>	61.6
Unit revenues (¥)	<b>7.4</b>	4.8
Yield (¥)	<b>10.0</b>	7.8
<b>International Cargo Operations</b>		
Cargo revenues	<b>308,088</b>	328,750
Cargo volume (Tons)	<b>805,799</b>	976,644
<b>Domestic Cargo Operations</b>		
Cargo revenues	<b>24,119</b>	24,932
Cargo volume (Tons)	<b>253,661</b>	251,332

Figure 2 LCC Performance

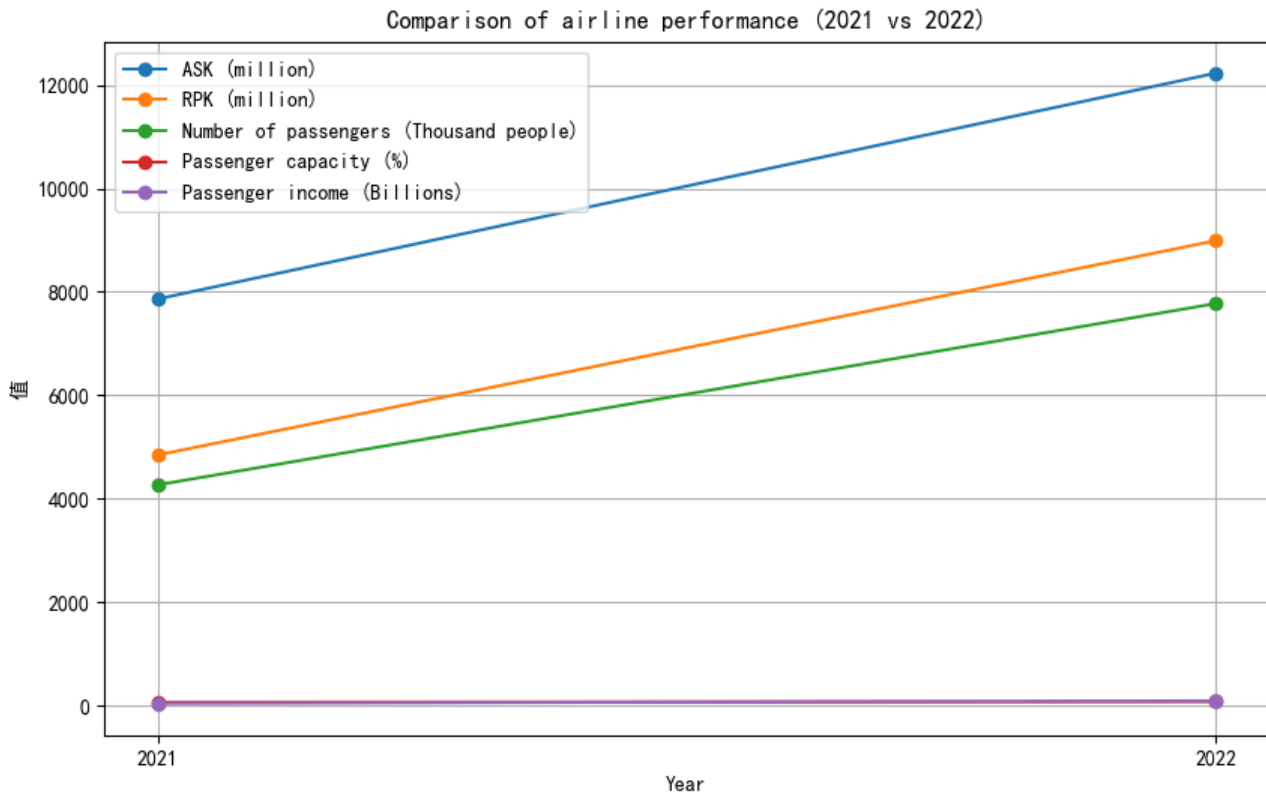


Figure 3 Change (2021-2022)

Overall, ANA HOLDINGS INC. has performed well in 2022, with a significant increase in revenue and gross profit, demonstrating the company's strong business operations. Peach Aviation also plays an important role within ANA HOLDINGS INC., expanding market share and meeting the needs of different customer segments by providing low-cost air travel services. Therefore, Peach Aviation holds a certain level of importance within the overall company operations. It is worth noting that the low-cost carrier sector has experienced overall growth post-pandemic, which is excellent news and has brought considerable revenue to ANA (primarily referring to passenger transportation, excluding non-passenger transportation factors such as cargo shipping and courier services).

Clearly, this financial performance evaluation is not sufficient, and we need to examine financial indicators in conjunction with net profit and asset-liability.

Firstly, let's look at the asset-liability: the report mentions the debt-to-equity ratio, which is 1.9, 2.2, 1.6, 0.8, 0.7, 0.8, 0.8, 0.9, 1.0, 1.1, 1.2.

Changes in the debt-to-equity ratio can reflect the proportion between a company's assets and liabilities. From the data, the debt-to-equity ratio shows an overall upward trend, which may indicate an increase in borrowing when expanding business scale or making investments.

Next is net profit: the report mentions the net income margin, which is 5.2%, 14.1%, 55.5%, 1.4%, 5.4%, 7.3%, 5.6%, 4.4%, 2.3%, 1.2%, 2.9%.

Net income margin is the ratio of a company's net profit to its operating income, reflecting the company's profitability. From the data, the net profit margin fluctuates, possibly influenced by market competition and cost control factors.

Based on the above, in fact, ANA's financial performance is not optimistic, and it still poses certain challenges. Only by continuing to focus on the results of asset-liability and profitability can ANA maintain a stable financial position and achieve sustained growth.

Let us now take a look at the analysis of Delta Airlines. As mentioned earlier, the definition of a hybrid business model is not clear-cut, and Delta Airlines' hybrid characteristics are not obvious either. However, it embodies a key point, which is differentiation. Through the distinction between main cabin ticket revenue and premium product ticket revenue, Delta Airlines can better understand its performance in different cabin classes, as well as its revenue sources and market strategies among different customer groups. Although Delta Airlines had already differentiated first class and economy class earlier, CEO Ed Bastian stated, "The airline industry has always adopted a one-size-fits-all model. But now we are trying to provide customized products that match what consumers are willing to pay for. All passengers enjoy the quality service provided by Delta Airlines, but some passengers may not be able to select seats or may have different seat space."

Later, Delta Airlines divided its cabins into the following five categories: Delta One, which offers lie-flat seats and is equivalent to a luxury first class; First class; Delta Comfort plus; Main cabin; and Restrictive basic economy, which mainly responds to the tiered pricing structure of budget airlines like Spirit Airlines in the United States. For the following analysis, I will mainly focus on the differentiation of cabin classes.

Based on Delta Air Lines' financial report data for the March quarter of 2024, it is not difficult for us to conclude that Delta Air Lines' revenue consists mainly of passenger revenue, other revenue, and total revenue, with passenger revenue and other revenue accounting for a significant proportion. Our focus is on the performance gap between revenue from main cabin tickets and revenue from premium product tickets.

**Main cabin ticket revenue:** In the March quarter of 2024, main cabin ticket revenue was \$5.425 billion, representing a 4% year-on-year increase.

**Premium product ticket revenue:** In the March quarter of 2024, premium product ticket revenue was \$4.408 billion, representing a 10% year-on-year increase.

Gap and proportion: The gap between main cabin ticket revenue and premium product ticket revenue was \$1.017 billion (premium product ticket revenue minus main cabin ticket revenue). Premium product ticket revenue accounted for 57% of Delta Air Lines' adjusted operating revenue for the March quarter of 2024.

(\$ in millions except per share and unit costs)	GAAP		\$ Change	% Change
	1Q24	1Q23		
Operating income/(loss)	614	(277)	891	NM
Operating margin	4.5 %	(2.2)%	6.7 pts	NM
Pre-tax income/(loss)	122	(506)	628	NM
Pre-tax margin	0.9 %	(4.0)%	4.9 pts	NM
Net income/(loss)	37	(363)	400	NM
Diluted earnings/(loss) per share	0.06	(0.57)	0.63	NM
Operating revenue	13,748	12,759	989	8 %
Total revenue per available seat mile (TRASM) (cents)	20.98	20.80	0.18	1 %
Operating expense	13,134	13,036	98	1 %
Cost per available seat mile (CASM) (cents)	20.04	21.25	(1.21)	(6)%
Fuel expense	2,598	2,676	(78)	(3)%
Average fuel price per gallon	2.79	3.01	(0.22)	(7)%
Operating cash flow	2,408	2,235	173	8 %
Capital expenditures	1,193	1,000	193	19 %
Total debt and finance lease obligations	19,364	21,958	(2,594)	(12)%

Figure 4 Delta report

In conclusion, it is not difficult to see that premium product ticket revenue accounts for a significant proportion in Delta Air Lines' revenue composition and has shown a more significant growth compared to main cabin ticket revenue. This indicates that the company has performed well in selling premium cabin seats and highlights the diversification of the company's revenue sources and the market demand for different cabin classes. This brings us to a crucial point about the feasibility of differentiation and its potential market value.

### 2.5.2 Customer Indicators

Post-pandemic aftermath has resulted in a rapid decline in user numbers. For example, according to ANA's report, we can conclude that the passenger count in 2022 was 34,534 thousand people, indicating a growth of 92.3% compared to 2021.

Peach Aviation Limited, with a customer count of 7,775 thousand people in 2022, accounts for approximately 23% of ANA's passenger base. This percentage is not insignificant. Peach Aviation generates approximately 13 billion yen in revenue, while ANA's passenger revenue is approximately 43.34 billion yen. Therefore, Peach Aviation's revenue accounts for around 30% of ANA's revenue.

It is evident that despite representing only 23% of the passenger count, Peach Aviation contributes significantly to ANA's overall revenue, highlighting its market potential.

Furthermore, looking at the trend in the number of customer feedback reports from 2018 to 2022, we observe the following figures: 105,723, 117,628, 59,862, 69,661, 91,632. Although there has been a noticeable improvement from 2021 to 2022, it has not yet reached pre-pandemic levels. Nevertheless, this success is to be celebrated. There are variations in the classification of customer feedback reports for different types of routes (domestic, international, others). The proportion of domestic route feedback decreased from 62.4% in 2018 to 58.65% in 2022, while the proportion of international route feedback increased from 34.8% in 2018 to 23.99% in 2022. Other route feedback proportions fluctuated. This to some extent reflects customer loyalty. When customers continue to provide feedback, it indicates a certain level of attraction that the airline still holds for these customers.

**DELTA AIR LINES, INC.**  
**Passenger Revenue**  
**(Unaudited)**

(in millions)	Three Months Ended			
	March 31,		\$ Change	% Change
	2024	2023		
Ticket - Main cabin	\$ 5,425	\$ 5,223	\$ 202	4 %
Ticket - Premium products	4,408	4,016	392	10 %
Loyalty travel awards	844	743	101	14 %
Travel-related services	454	429	25	6 %
<b>Passenger revenue</b>	<b>\$ 11,131</b>	<b>\$ 10,411</b>	<b>\$ 720</b>	<b>7 %</b>

Figure 5 Passenger Revenue

Turning to Delta Air Lines' customer indicators, there are two notable aspects. Firstly, the return of large corporate clients, specifically in the technology, consumer services, and financial services sectors. Recent surveys show that 90% of companies expect their business travel volume to increase or remain unchanged in the upcoming quarter and beyond. Secondly, strong domestic market demand, demonstrated by record-high unit revenue and load factors for domestic flights, which increased by 3% and 7% respectively. It is evident that Delta Air Lines' positive customer indicators have brought in more revenue and growth opportunities for the company. Additionally, Delta Air Lines' differentiated seat selection not only reflects customer profiles but also indicates potential mindset shifts that may occur in customers post-pandemic.

### 2.5.3 Market Share Variation

The changing market share is a key factor in determining the feasibility of a mixed business model. It mainly depends on how the company develops after adopting new operating models. What kind of successes have been achieved? Does it have long-term sustainability? Does it require adjustments based on current objectives? Does it align with the company's long-term goals?

Let's first look at the low-cost carrier Peach Aviation under ANA. Since the specific amounts for 2018-2020 are not mentioned in the annual report, we can only analyze the situation from 2021 to 2022. For the year 2021, the revenue was 2.78 billion yen, and for 2022, it was 9.02 billion yen. These account for 13% and 20% of ANA's total revenue, respectively, indicating a positive market trend for their low-cost strategy. Considering other domestic airlines in Japan, such as Japan Airlines and Skymark Airlines, All Nippon Airways (ANA) and Japan Airlines (JAL) are the two largest airlines in Japan and dominate the domestic and international route markets. According to past data, the combined market share of these two airlines exceeds 70%, with ANA accounting for about 50% and Japan Airlines around 40%. With changing consumer preferences, ANA, with its low-cost subsidiary, will further expand its market share. Additionally, ANA has made efforts to improve its market share through the following:

1. Marketing/sales cooperation: Strengthening marketing and sales cooperation by sharing data and knowledge with partners and improving booking interface conversions to increase market share.
2. Improvement of brand interconnectivity: Meeting the needs of different customers and covering various demands through interconnectivity between three different brands to increase market share.
3. Collaboration and integration of functions: Achieving profit expansion through collaboration and integration of functions such as aircraft procurement and maintenance to increase market share.

**DELTA AIR LINES, INC.**  
**Other Revenue**  
**(Unaudited)**

(in millions)	Three Months Ended March 31,			
	2024	2023	\$ Change	% Change
Refinery	\$ 1,185	\$ 916	\$ 269	29 %
Loyalty program	795	726	69	10 %
Ancillary businesses	180	231	(51)	(22)%
Miscellaneous	279	266	13	5 %
<b>Other revenue</b>	<b>\$ 2,439</b>	<b>\$ 2,139</b>	<b>\$ 300</b>	<b>14 %</b>

Figure 6 Other

Similarly, the trend for Delta Air Lines is similar. Compared to some domestic airlines in the United States, such as United Airlines, Delta Air Lines, Southwest Airlines, and American Airlines, Southwest Airlines has a higher market share due to its extensive domestic routes and low-cost operating model. Delta Air Lines, American Airlines, and United Airlines have significant positions in the market due to their extensive domestic and international networks and diversified services. Delta Air Lines' market share fluctuates between 15% and 20%, thanks to flexible pricing and diverse product options. This allows Delta Air Lines to achieve decent development in the highly competitive US market but still faces challenges in gaining further growth opportunities.

## **2.6 Common Characteristics of Current Hybrid Business Models**

Through the analysis above, it is not difficult for us to conclude some common characteristics of successful cases of hybrid business models. I will conduct a rational analysis from the perspectives of target market and competitive environment, target audience profiling and user preferences, as well as network planning and coordination.

### **2.6.1 Target Market and Competitive Environment**

According to the analysis of ANA and Delta Air Lines, although the two companies differ in terms of geography and cultural background, they demonstrate many similarities in their positioning in target markets, especially in serving business and international travelers. These similarities reflect their common strategic goals as global leading airlines. The key points are as follows:

1. Differentiated passenger programs: Both ANA and Delta Air Lines place a high emphasis on the business traveler market. These travelers typically seek high-quality service, flexible flight options, and superior in-flight comfort. Both airlines offer dedicated business class services and supporting premium ground services, such as business lounges and priority boarding. While both companies value business travelers, they also do not neglect the leisure tourism market. They attract leisure travelers by offering flights to popular tourist destinations, travel packages, and seasonal promotions. ANA diverts some of its leisure travelers through its low-cost subsidiary, Peach Aviation, while Delta Air Lines diverts them through differentiated cabin choices, such as restricted economy class.
2. Long-haul routes: Both companies place a strong emphasis on international long-haul routes, particularly transatlantic and transpacific routes. These routes connect major business centers and tourist destinations, attracting both business and leisure travelers.
3. Loyalty programs: ANA's ANA Mileage Club and Delta's SkyMiles are designed to enhance customer loyalty. These programs encourage repeated travel and long-term loyalty by offering points

accumulation, upgrades, and other benefits. This is crucial for retaining customers and developing potential customers among loyal customers.

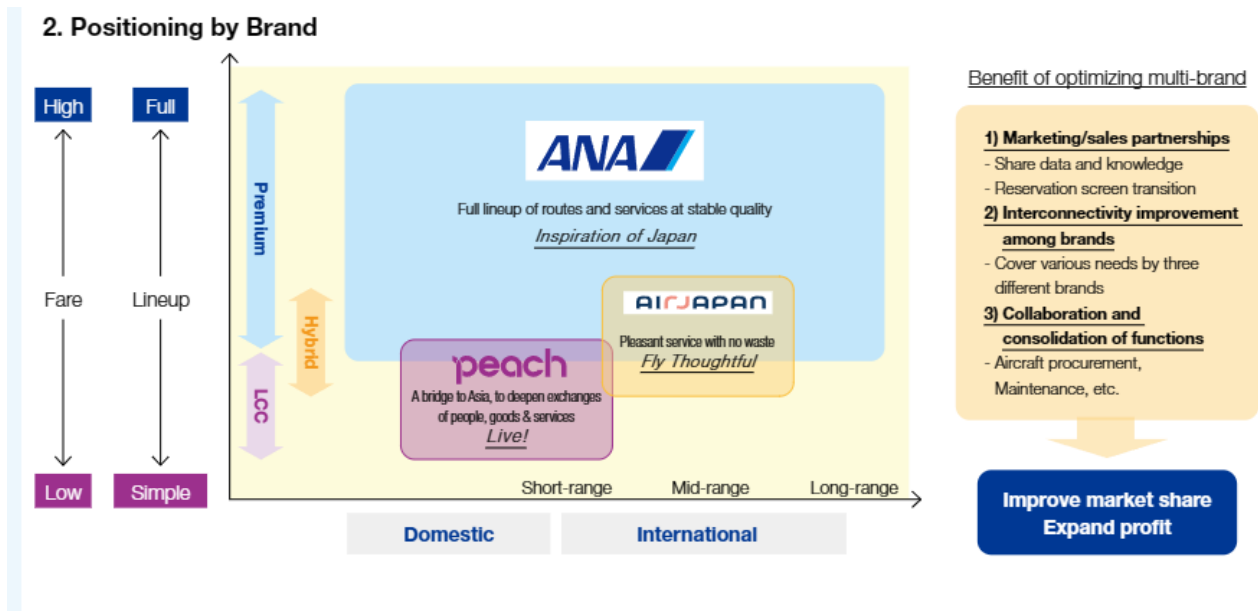


Figure 7 ANA Brand

At the same time, the competitive environment is also highly similar. In Japan, ANA and Japan Airlines dominate the domestic market, and the difference in market share between the two is not significant, leading to intense competition. Even more intense than ANA's competition is Delta Air Lines, primarily due to the excessively high market share of low-cost airlines in the United States. Delta Air Lines cannot expand its customer base of price-sensitive customers through the development of subsidiaries, but can only achieve limited expansion through flexible and differentiated services. Furthermore, the four major airlines (American Airlines, Delta Air Lines, United Airlines, Southwest Airlines) control a considerable share of the market, resulting in a tendency for homogeneity. As a result, both ANA and Delta Air Lines face the urgency of differentiating their services. The highly similar competitive environment and target market have contributed to the initial success of the hybrid business models of both companies.

### 2.6.2 Target Segment Profiles and User Preferences

The above analysis has examined the target market, which primarily consists of business travelers. However, it is evident that business travelers alone cannot meet the intense competition in the current market environment. Although they can generate more economic benefits with fewer customers, the leisure travel market still offers substantial profits. Moreover, when customer loyalty improves, the current leisure travel customers may develop into loyal business travelers (as students make up a significant portion of the leisure travel customers), which is an important aspect for the

long-term sustainable development of the company. The following is a survey report on the differences in customer considerations between LCC and FSC:

	College student group	Travel enthusiast group	Kochi community
<b>Low cost airline awareness</b>			
<b>Domestic</b>	0.6	0.63	0.48
<b>Abroad</b>	0.8	0.78	0.52
Low cost/full service aviation selective preference	0.21/0.79	0.07/0.93	0.13/0.87
<b>Reasons for low cost airline preference</b>			
<b>Cheap fares</b>	0.46	0.48	0.17
<b>No fee for unwanted services</b>	0.26	0.11	0.13
<b>Few flights, no options</b>	0.11	0.074	0
<b>Full Service Airline preference Rationale</b>			
The seats are comfortable and the service is good	0.73	0.82	0.61
<b>Airline members</b>	0.083	0.037	0.09
-- Price all inclusive	0.563	0.73	0.7
<b>Factors influencing the flight experience of low-cost airlines</b>			
Few free checked bags and high fees	0.41	0.48	0.3
Small seating space	0.35	0.48	0.3
No compensation for delay	0.14	0.37	0.26
Small fare difference and many fee items	0.13	0.11	0.17
<b>In-flight sales impact rest</b>	0.23	0.18	0.3
Meal/luggage/beverage snack selection weights	0.38/0.91/0.27	0.59/0.89/0.41	0.65/0.89/0.48
Meal alternative: sandwiches/bread/snacks	0.58/0.44/0.47	0.67/0.37/0.56	0.57/0.65/0.51
<b>Assignment of value</b>	0.56	0.18	0.47
<b>Baggage charge transfer</b>	0.61	0.47	0.22
<b>Audience impact</b>	0.66	0.59	0.65

Figure 8 Survey Report

From the above information, it is clear that different types of customers have different perspectives on the same issues.

Price sensitivity: College students are most sensitive to prices, with a score of 0.6, while travel enthusiasts and high-end travel groups have lower sensitivity, at 0.63 and 0.48 respectively. This indicates that price is the primary consideration for college students when choosing airline services.

Overall satisfaction with low-cost airlines' services: College students have lower overall satisfaction with low-cost airlines' services (0.46), compared to travel enthusiasts (0.48) and high-end travel groups (0.17), suggesting that college students' expectations for service quality may differ significantly from the actual services received.

Service quality: In terms of service quality, college students give a score of 0.26, while travel enthusiasts and high-end travel groups score 0.11 and 0.13 respectively, indicating that high-end travel groups may have the highest expectations for service quality.

Comfort and convenience: College students rate comfort and convenience at 0.73, while travel enthusiasts and high-end travel groups rate them at 0.82 and 0.61 respectively. This indicates that travel enthusiasts have higher demands for comfort and convenience.

Brand image: In evaluating brand image, college students score 0.41, travel enthusiasts score 0.48, and high-end travel groups score 0.3. This may reflect a relatively lower reliance on brand image among high-end travel groups.

Loyalty: In terms of loyalty, college students score 0.61, travel enthusiasts score 0.66, and high-end travel groups score 0.59. This indicates that college students and travel enthusiasts show higher loyalty to specific brands.

Trade-off between price and service: When considering the trade-off between price and service, college students tend to prioritize price (with a score of 2.10), while travel enthusiasts and high-end travel groups value service more (with scores of 0.79 and 0.87 respectively).

In general, different groups have distinct evaluations of low-cost airlines and full-service airlines. College students are more concerned about prices, while travel enthusiasts and high-end travel groups prioritize service quality and comfort. These differences reflect the diversity of travel needs and expectations.

Specific adjustments to the hybrid business model can be made based on the aforementioned factors, but the luggage issue is evidently a tricky one. Additional fees for checked baggage account for a significant portion of the revenue in low-cost carriers (LCCs), whereas full-service carriers (FSCs) already include this item. As a result, in the process of transitioning towards a hybrid business model, FSCs have a greater advantage.

### **2.6.3 Network Planning and Coordination**

At present, the main topic of discussion is the shift towards a mixed business model for FSC. Due to their versatility, they also have some similarities in network planning:

1. Both ANA and Delta Air Lines have extensive global route networks covering important international business and tourist destinations. This extensive network allows both airlines to serve passengers from all around the world, offering a diverse range of flight options from short-haul to long-haul. ANA's subsidiary, Peach Aviation, focuses its resources on high-profit routes, mainly between Kansai and Narita, and will flexibly adjust flight capacity as international operations recover.
2. Both have strategic alliances and partnerships. JAL is a member of Star Alliance, while Delta Air Lines is a member of SkyTeam. Through these alliances, both airlines can engage in extensive codeshare and coordinated operations with other airlines, expanding their market coverage and providing a seamless global travel experience.
3. Similar high market adaptability. High adaptability is mainly determined by their own brand effect and strong network. Faced with market changes, both can flexibly transform and adapt based on their market position. This is beneficial for the benign development of the mixed business model.

Network planning is key to maintaining competitiveness, and it is the strong resource integration ability of their own brand that allows ANA and Delta Air Lines to excel in the mixed business model market during the process of transformation and development.

## **2.7 Limitations of Current Hybrid Business Models**

Through the analysis above, we can easily identify some limitations of mixed business models.

From a market perspective:

1. Vague market positioning - Mixed models may result in unclear brand messaging. Consumers might find it difficult to understand the market positioning of an airline, unsure whether it emphasizes cost-efficiency or service quality. This could affect consumer loyalty and brand image.
2. Market volatility - Operating solely on a mixed business model cannot serve as a long-term premise for sustainable development. With the ever-changing market environment, frequent adjustments to business models and strategies may be required. Continuously relying on a single model may lead to organizational rigidity.
3. Market positioning risks - Attempting to meet the demands of different market segments simultaneously could result in the inability to achieve market leadership in any given area, thereby losing the competitive advantage against competitors who focus on a single model.

From a corporate perspective:

1. Increased difficulty in cost control - Combining low-cost and full-service operating models could complicate cost management. For instance, maintaining high levels of customer service while striving to reduce costs can create conflicts between resource allocation and cost effectiveness.
2. Internal cultural conflicts - Different business models often require distinct company cultures and employee mindsets. A full-service model emphasizes service quality and customer experience, while a low-cost model emphasizes efficiency and cost control. Blending these two cultures may lead to internal conflicts and execution challenges.
3. Profit margin pressures, especially for airlines transitioning from a low-cost carrier (LCC) model to a mixed business model. LCC operations may have already maximized profitability. Implementing a mixed business model may require LCC companies to relinquish some profit margins, posing difficulties and risks in aligning with the positioning of the mixed business model (e.g., abandoning baggage fees, providing full meals).

Although mixed business models offer opportunities for diversified markets, airlines must carefully design and execute strategies to overcome these challenges and make the most of their potential. Correct strategies, clear brand positioning, and efficient operational management are key to successfully implementing mixed business models.

## **2.8 Necessary Conditions for Hybrid Business Models**

Considering the above analysis, in order to achieve successful and sustainable transformation of the hybrid business model, the following conditions should be met:

1. Clear strategic planning is crucial. It is important to define the goals and expected outcomes of the transformation. Airlines need to develop detailed strategic plans, including market positioning, target customer groups, service delivery methods, and financial objectives. For example, All Nippon Airways (ANA) Group has a vision to achieve their new management vision by 2030. Prior to 2030, they plan to return to a stage of comprehensive growth, aiming to become a global leader in terms of profit and financial strength. ANA Group will continue to progress towards regaining growth, adapting flexibly to changes in the business environment. They have set a series of value creation objectives, including reaching the level of global top companies in terms of profit and financial strength, expanding profit areas through profit accumulation and appropriate resource allocation, achieving sustainable group growth beyond the pre-COVID-19 profit level.
2. Timely organizational transformation is needed. The intense competition in the aviation industry constantly squeezes the profit margins of each airline. Both ANA and Delta Air Lines face fierce competition pressures in their domestic aviation markets, not to mention the threats posed by foreign

airline companies entering their markets. Intense competition forces enterprises to continuously improve and optimize, making business process reengineering crucial.

3. The market still has room for accommodation. When analyzing ANA and Delta Air Lines, we can see that the market competition for low-cost carriers is relatively mild in Japan and the United States. In Japan, apart from the wholly-owned Peach Aviation, the rest are joint venture or foreign-owned companies, which naturally possess cultural advantages in localization. Therefore, ANA still has room for accommodation in the low-cost segment. Similarly, the low-cost market in the United States is almost monopolized by Southwest Airlines, which occupies a significant portion of the US airline market share. When Delta Air Lines faces challenges in expanding low-cost subsidiaries, it still maintains some room for accommodation by offering more competitive ticket price options. Moreover, as a full-service carrier, Delta Air Lines continues to provide unparalleled services compared to other low-cost carriers, making it one of the representatives of the hybrid business model.

4. A brand possesses certain strengths, which encompass various aspects:

(1) The brand enjoys a certain reputation. This is crucial, as a good reputation can leave customers with a positive first impression, providing them with a certain level of assurance regardless of the chosen service.

(2) The company itself possesses strong capabilities. This is not hard to understand, as a company with strong capabilities often offers a wider range of network planning options, a larger customer base, and more potential users. It also allows the company to have more room for trial and error and flexibility.

(3) Diverse market strategies. As mentioned earlier, a single business model can lead to organizational rigidity, while diverse and differentiated choices provide customers with more options and increase the leeway for interaction between customers and the company.

5. It meets the development background of the post-pandemic era. The harm caused by the pandemic extends far beyond the aviation industry; it also includes the economic depression. This has turned more people into price-sensitive customers, and diversified choices better align with individual travel habits.

By meeting these conditions, airlines can effectively transition to a hybrid business model, maximizing their market potential and financial returns. Although this transformation is complex and comes with significant challenges, it also provides airlines with an opportunity to stand out in a fiercely competitive market.

## 2.9 Risk Assessment

From the perspective of ANA and Delta Air Lines, the risk assessment of ANA primarily focuses on the most significant risks within the ANA Group, which are security and operational risks. Safety issues have the potential to significantly impact the company. Risk management related to investments is considered crucial, and the company strives to manage risks through various mechanisms such as board meetings and management meetings. Human rights risks are directly managed with external parties, and employee education and regular monitoring are conducted within the group. The risk of natural disasters is increasing, especially for the aviation industry, as they may affect the company's operations. Furthermore, in response to the impact of the COVID-19 pandemic on business performance, they have reassessed the effects of the epidemic and recognized the need to establish a greater risk buffer to ensure business continuity. ANA Group has set a target capital adequacy ratio of about 45% and plans to reduce the total asset size in terms of asset efficiency to establish a financial foundation capable of withstanding future pandemics.

ANA Group plans to pursue profit growth through improved profitability, capital, and asset efficiency to achieve sustainable and stable shareholder returns, supporting a strong balance sheet.

Similarly, Delta Air Lines faces similar risks, including natural climate, environmental regulations, political and economic conditions, technology, and security risks.

Therefore, for the hybrid business model, a more comprehensive evaluation mechanism should be established to ensure smooth operation, taking into account market feedback, shareholder return rates, and management and regulatory risks after the transformation.

### **3 Research Methodology**

In the preceding section, we investigated certain issues of this paper through appropriate theoretical frameworks, including what constitutes a hybrid business model. We conducted a thorough analysis employing models such as the market performance model and strategic group theory, providing relevant data support and case studies to enhance the credibility of the article. The upcoming sections will delve into the research methods utilized in this study. This will include the literature review method and its conclusions, case analysis and its findings, as well as a questionnaire survey (specific conclusions can be found in Results 4). These components will offer a more comprehensive and objective evidence base for this paper. Finally, I will compare some of the conclusions mentioned earlier with previous studies, identifying differences and similarities to facilitate your understanding.

#### **3.1 Case Analysis**

The main focus of this paper is to analyze two airlines, ANA and Delta Air Lines, using case study methodology. It is worth noting that although both airlines have a hybrid business model, their operational strategies differ. ANA achieves its hybrid business model through its low-cost subsidiary, while Delta Air Lines implements a hybrid business model through differentiated services. Despite these differences, they still share certain similarities. For example, both airlines operate in a market with capacity, possess strong brand effects, and face intense local competition in the aviation industry. However, as these aspects have already been described in the previous text, they will not be reiterated here.

Let's further clarify their backgrounds. Firstly, the case study takes place during a period of global economic downturn following a major pandemic outbreak. The aviation industry is undergoing significant restructuring, and based on current developments, the aftermath of the pandemic is expected to persist for a long time. Secondly, the motivation for conducting this research lies in the need for airline companies to proactively transform and seek greater profit margins in the face of industry restructuring and fierce competition. This paper aims to identify commonalities and feasibility conditions of the hybrid business model through these two case studies, providing more options for other airlines. Therefore, case analysis plays a crucial role.

#### **3.2 Questionnaire Survey**

The purpose of the survey is to gather opinions from customers, who are an important group, as well as industry insiders, in order to obtain more objective data to support my conclusions. In comparison to the methods mentioned above, surveys can provide more flexible and

comprehensive data. Additionally, surveys focus on everyone's initial opinions. There is a large part of the population that does not fully understand the hybrid business model, which may lead to a lower level of support. This could also be due to the vague boundaries of the hybrid business model among different airlines. In conclusion, I predict that people's views on the hybrid business model may not be very optimistic.

### **3.2.1 Questionnaire Design**

Conducting surveys is a common data collection tool in the aviation industry, which helps airlines gather information about passengers' behaviors, preferences, satisfaction levels, and feedback on services. Surveys can be designed flexibly to cater to various research purposes and needs. It is important because surveys can help us in the following ways:

1. Through surveys, airlines can understand passengers' satisfaction levels regarding their services, including boarding procedures, seat comfort, in-flight services, meal quality, entertainment systems, etc. This information is crucial for airlines to improve their services and enhance customer loyalty.
2. Surveys can reveal passengers' specific opinions on the existing products and services provided by airlines, highlighting areas that are done well and areas that need improvement. For example, if most passengers express that the boarding process at a certain airport is cumbersome, the airline may collaborate with the airport to seek process optimization.
3. Surveys can assist airlines in grasping market trends and understanding changing consumer demands. For instance, understanding passengers' attitudes towards eco-friendly flying or their demand for higher internet bandwidth can help airlines stay ahead in the market competition.
4. By analyzing survey data, airlines can perform more refined customer segmentation, such as based on travel frequency, travel purpose (business or leisure), budget, etc. This helps airlines design services that meet the specific needs of different groups and implement market segmentation strategies.
5. Surveys can help airlines timely identify and respond to potential risks and issues. For example, through regular safety satisfaction surveys, airlines can promptly uncover vulnerabilities in safety management and take measures to prevent accidents.
6. Airlines often launch various promotional activities to attract passengers. Through surveys, companies can evaluate the effectiveness of these activities and understand which promotional methods are most welcomed, thereby making corresponding adjustments in future marketing strategies.

7. Surveys themselves serve as a way to involve passengers in the process of improving aviation services. Through surveys, passengers can feel that their opinions are valued, which potentially increases their loyalty and satisfaction towards the airline brand.

The application of surveys in the aviation industry has significant importance. It not only improves service quality and customer satisfaction but also strengthens competitiveness and promotes business growth. Surveys provide airlines with a low-cost, efficient way to collect and analyze data, thus maintaining competitiveness in the challenging global market.

In summary, the application of surveys in the aviation industry is diverse, as it helps airlines understand and improve their services from various perspectives, ensuring they can meet the ever-changing market demands and customer expectations.

Therefore, the method of setting up survey questionnaires will also be diversified and comprehensive, strictly following the description mentioned above. However, we need to emphasize the word "concise" to avoid having too many questions and causing participants to become impatient.

### **3.2.2 Target Respondents**

The participants of the survey mainly involve four groups:

Firstly, consumers, because customers are an indispensable and important group in the aviation industry, serving as a key basis for businesses to improve and an essential factor in reflecting the value of the company. This includes business travelers, students, and leisure travelers. Secondly, aviation industry employees. The opinions of this group tend to be more practical, as they can rely on their own experiences from the aviation industry and their own companies. This includes crew members, ground staff, maintenance and technical personnel, etc. The third group is partners and suppliers. The opinions of this group tend to focus more on passenger experiences (such as aviation catering, cleanliness, customs, and border checks, etc.). The fourth group is industry analysts and experts. The opinions of this group are often more authoritative, as they typically approach issues more thoroughly and are more likely to uncover internal problems within the company.

By conducting questionnaire surveys among these different groups, airlines can obtain feedback from multiple perspectives, which helps to comprehensively understand and improve their services and operational efficiency. This multi-perspective feedback mechanism is crucial for airlines to optimize their services, enhance customer satisfaction, and improve performance.

The specific questionnaire settings will be shown in the appendix.

### 3.3 In comparison with previous studies

Based on the results of literature research, I found that opinions vary among experts as well as the majority when it comes to hybrid business models. Just like most people, professionals within the industry have mixed views on hybrid business models. Looking at the research specifically on hybrid business models, previous studies mainly analyzed why airlines would attempt to adopt a hybrid business strategy using past cases of failure. They primarily discussed the reasons behind the adoption of hybrid strategies by airlines and whether they share common characteristics or are unique. Their conclusions mainly include:

(1) Competition response. Many traditional airlines choose to establish a low-cost carrier (LCC) subsidiary to counter competitive pressures when facing competition from low-cost airlines. This strategy can help traditional airlines better withstand competition from LCCs while maintaining their market share.

(2) Business model diversification. By operating different business models (such as low-cost and full-service bundles) within the same group or holding company, airlines can diversify their business models to meet the needs of different types of passengers.

Cost control: Some airlines attempt an internal company strategy to better control costs, increase efficiency, and profitability through this approach.

(3) Seizing market opportunities. In some cases, airlines may identify market opportunities and believe that creating a new LCC subsidiary can better capitalize on these opportunities, thereby achieving business growth and development.

There are certain discrepancies between these findings and the conclusions of this study. For instance, this study emphasizes the competitive market background of the airline industry and the potential for market growth (which is similar to seizing market opportunities as in previous studies),

Furthermore, the descriptions of customers in previous research differ from those in this study. Previous research only categorized customers into two groups, such as ordinary passengers and business passengers, focusing more on their preferences. In contrast, this study provides a more refined categorization of customers based on age, identity, occupation, and emphasizes customer preferences while also highlighting customer perspectives. This diversity adds depth to the conclusions drawn in this study.

In addition, in terms of economic benefits, previous studies have utilized European datasets, which differ from previous studies predominantly based on American data, contributing to exploring the

economic performance of airlines in a European context. A more comprehensive and multidimensional approach has been adopted to assess the economic performance of airlines. In addition to traditional cost indicators, other performance variables such as scale and revenue are also considered to comprehensively evaluate the economic performance of airlines. The study concludes that there are differences in economic performance between hybrid business models and traditional airlines, with the former demonstrating stronger profitability. This paper primarily utilizes data from ANA and Delta Air Lines, one from Asia and the other from North America, resulting in broader data coverage. Despite the minor disparities with previous research conclusions, more restrictive conditions have been identified in this study.

In summary, previous studies have laid the groundwork for my research direction, while this paper serves as a more comprehensive complement to existing research. Moreover, earlier studies have professionally elaborated on the advantages of LCC and FSC, rectifying the focus of this paper on hybrid business models with relatively less emphasis on the other two commercial models.

## 4 Results

In the preceding section, we have provided a detailed exposition of our research methodology. However, to obtain sound results, further synthesis and expansion are required. The following section primarily delves into a comprehensive analysis of the questionnaire survey results, covering aspects such as customer profiles, preferences, and perceptions. The aim is to lay the groundwork for subsequent SWOT and PESTLE analyses of United Airlines (UAL), thereby offering enhanced support for the feasibility analysis of UAL.

### 4.1 Research result

Through various analyses and studies mentioned above, we have a clear explanation for the five questions raised in this paper. Next, I will summarize and explain the issues in this paper to explore our findings.

#### 4.1.1 Q1: What is the definition and characteristics of a hybrid business model? Define what constitutes a hybrid model, and its main differences with traditional full-service and low-cost airlines.

From sections 2.1 to 2.4, we find that the hybrid business model does not have a specific definition. However, drawing from prior scholarly research and the conclusions of this paper, we can define the hybrid business model as an integration of the advantages of both the full-service and low-cost business models. It is characterized by balancing cost-efficiency and service quality while offering flexible fares and products. Compared to full-service airlines, it provides more superior fare options; in relation to low-cost carriers, it significantly enhances service quality with only a slight increase in fares.

#### 4.1.2 Q2: Which airlines have adopted a hybrid model and what are their strategies? How does the hybrid model perform in the market? Analyze the achievements of hybrid airline companies in financial performance, market share, customer satisfaction, etc.

From the analysis above, we now know that the majority of airlines are adopting a hybrid business model, albeit in different ways. This paper mainly examines ANA and Delta Airlines. ANA manifests its hybrid business model through operating a low-cost subsidiary. In contrast, Delta Airlines implements its hybrid model by offering flexible products (including air tickets, products, services, value-added items, etc.). Of course, due to their highly purposeful operating strategies and well-targeted customer base, most customers are satisfied with such services (particularly the price-sensitive customers among full-service carriers (FSC) and those demanding high levels of service within low-cost carriers (LCC)).

Through analyzing the hybrid business model, it is clear that its market performance is superior. Financially, the hybrid business model has captured the middle market share (the customers between FSC and LCC), which resulted in a significant increase in ANA's revenue in 2023.

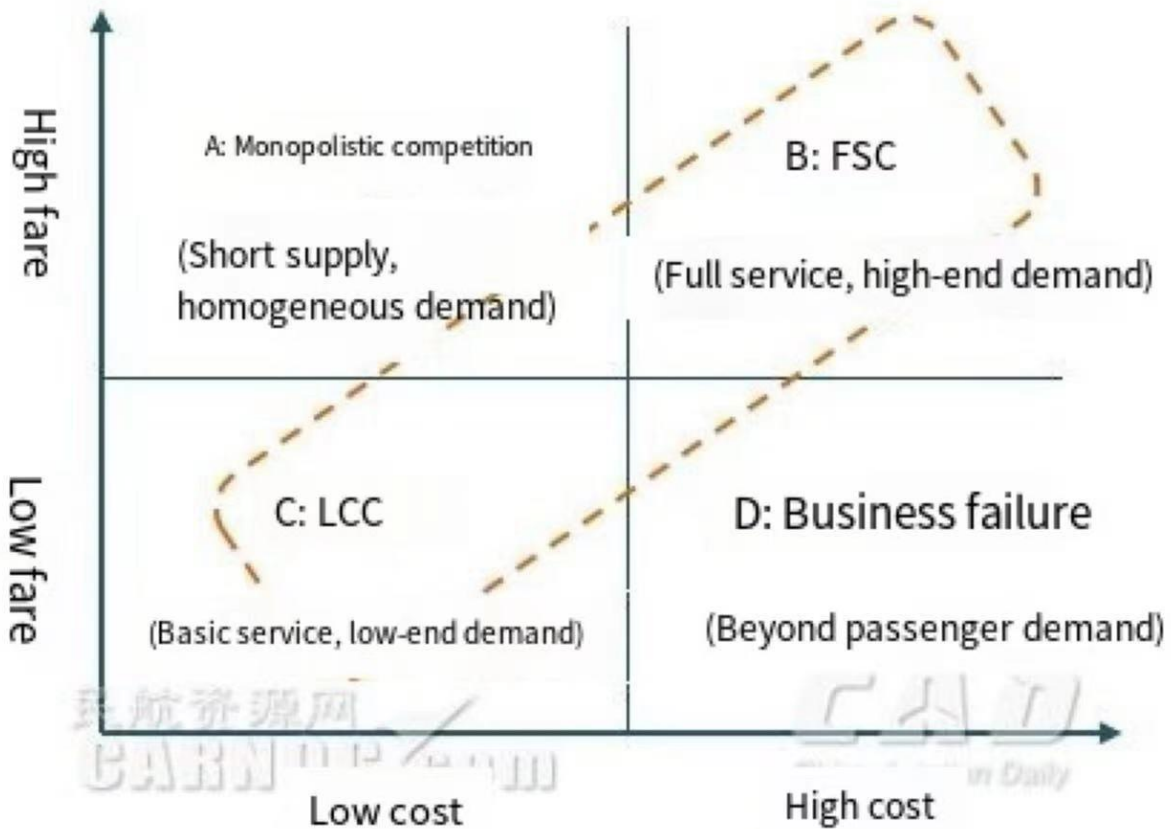


Figure 9 The relationship between ticket prices and costs in the aviation industry.

#### 4.1.3 Q3: What are the main challenges and limitations faced by hybrid models? How can hybrid business models be operated more effectively?

Clearly, from the analysis mentioned above, we have identified the main challenges of a hybrid business model and the limitations associated with it.

From a market perspective:

1. Ambiguous market positioning. The hybrid model might lead to unclear brand messaging. Consumers may struggle to understand the airline's market positioning, uncertain if it emphasizes cost efficiency or service quality, potentially affecting consumer loyalty and brand image.

2. Market variability. Operating solely with a hybrid business model cannot be a precondition for long-term sustainable development. The variability of the market environment forces businesses to frequently adjust their business models and strategies. Continual reliance on a single model can lead to organizational rigidity.

3. Risks in market positioning. Trying to meet the needs of different market segments simultaneously may prevent achieving a leading position in any area, thus losing competitive advantage over rivals focused on a single model.

From a business perspective:

1. Increased difficulty in cost control. Combining low-cost and full-service operational models can lead to complex cost management. For example, maintaining a high level of customer service while striving to reduce costs might cause conflicts between resource allocation and cost-effectiveness.

2. Internal cultural conflicts. Different business models often require different corporate cultures and employee mindsets. A full-service model emphasizes service quality and customer experience, whereas a low-cost model focuses on efficiency and cost control. Merging these two cultures could lead to internal conflicts and challenges in implementation.

3. Excessive pressure on profit margins (especially for LCCs transitioning to a hybrid model). LCC operations might have maximized profits already. Adopting a hybrid model might require LCC companies to sacrifice some profit margins, making it difficult and risky to meet the positioning of a hybrid model (for example, giving up charged baggage and offering meals).

Similarly, if airlines can provide reasonable solutions for the above issues, operating a hybrid business model could become much easier.

**4.1.4 Q4: What is the level of consumer acceptance towards hybrid models? Evaluate passengers' perceptions and satisfaction towards hybrid models through surveys and consumer feedback.**

From Figure 8, it is not difficult to see that consumer acceptance of the hybrid business model varies significantly. On one hand, customers lack understanding of the hybrid business model, while on the other, conservative customers are not willing to engage with such new aviation business models (especially loyal customers of FSC or LCC).

#### **4.1.5 Q5: What are the future prospects for hybrid business models?**

The hybrid business model is the necessary path for future development. Compared to traditional airline business models, it offers superior advantages. However, the focus should not be limited to just the corporate self-sustainability. More attention should be placed on the use and integration of new technologies. This is because the goal of different business models is to cater to different groups in order to seek greater profits. It is important to explore how upcoming technologies might change the aviation industry, such as through automation, artificial intelligence, and sustainable aviation fuels to improve operational efficiency and environmental sustainability. Additionally, as consumers are a critical part of the aviation industry, it is essential to pay close attention to changes in consumer behavior. Analyzing the long-term changes in consumer behavior post-pandemic, such as increased attention to health safety, and how the demand for price and service flexibility will affect the service models of airlines is crucial.

#### **4.2 Result Analysis**

Distribution of the crowd: 18-24 years old (27.63%): occupying a larger proportion, reflecting the higher activity and demand for aviation services among young people.

25-34 years old (31.20%): the largest age group, often travel frequently for work and personal reasons.

35-44 years old (23.31%): working adults, with stable income and travel needs.

45-54 years old (15.41%): may lean towards comfort and high-quality services.

55 years and above (2.44%): the smallest age group, may have lower travel frequency.

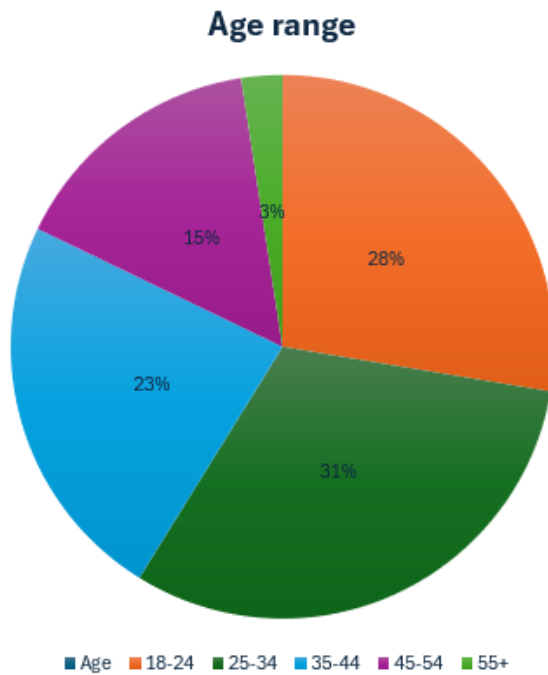


Figure 10 Questionnaire Survey Age

Travel purposes: Business travel accounts for almost half, indicating the importance of business travel in the aviation market. Leisure/tourism also accounts for a significant proportion, showing a strong demand for leisure travel. Visiting friends and relatives is relatively small, but still an important reason for travel. Other purposes may include education, medical care, etc.

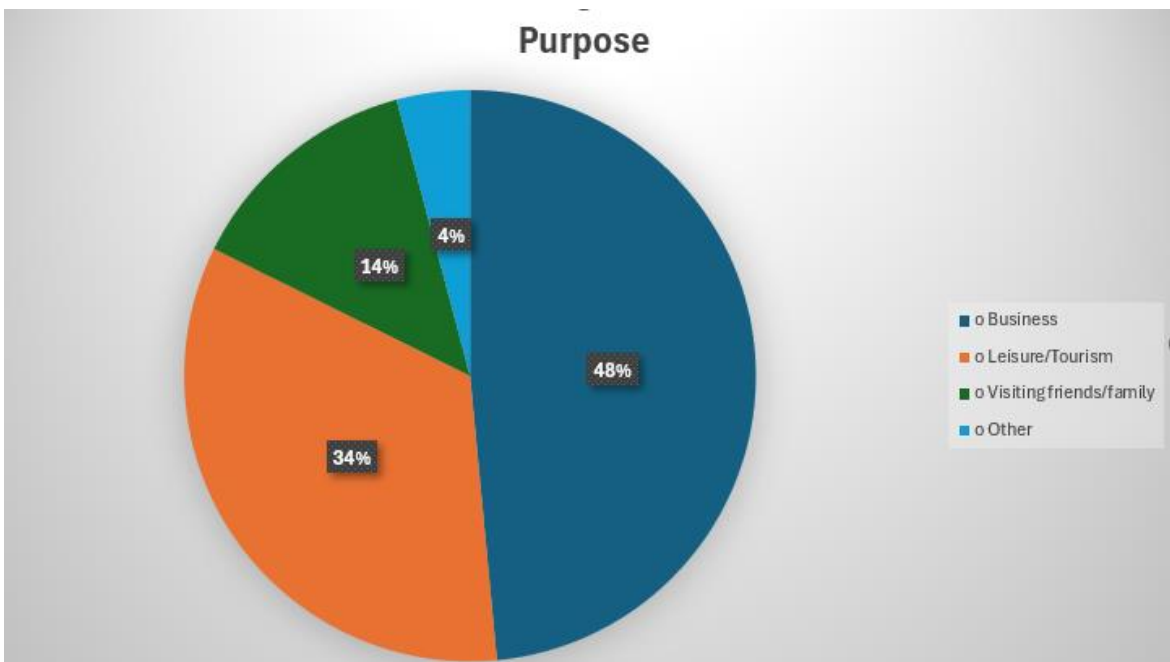


Figure 11 Questionnaire Survey Purpose

Airline selection: Full-service airlines (FSC) are the majority choice, showing the advantage of full-service airlines in providing comprehensive services. Budget airlines are less chosen, possibly due to limited services and comfort. Others (mixed or no fixed preference) a minority of passengers choose different types of airline services based on specific circumstances.

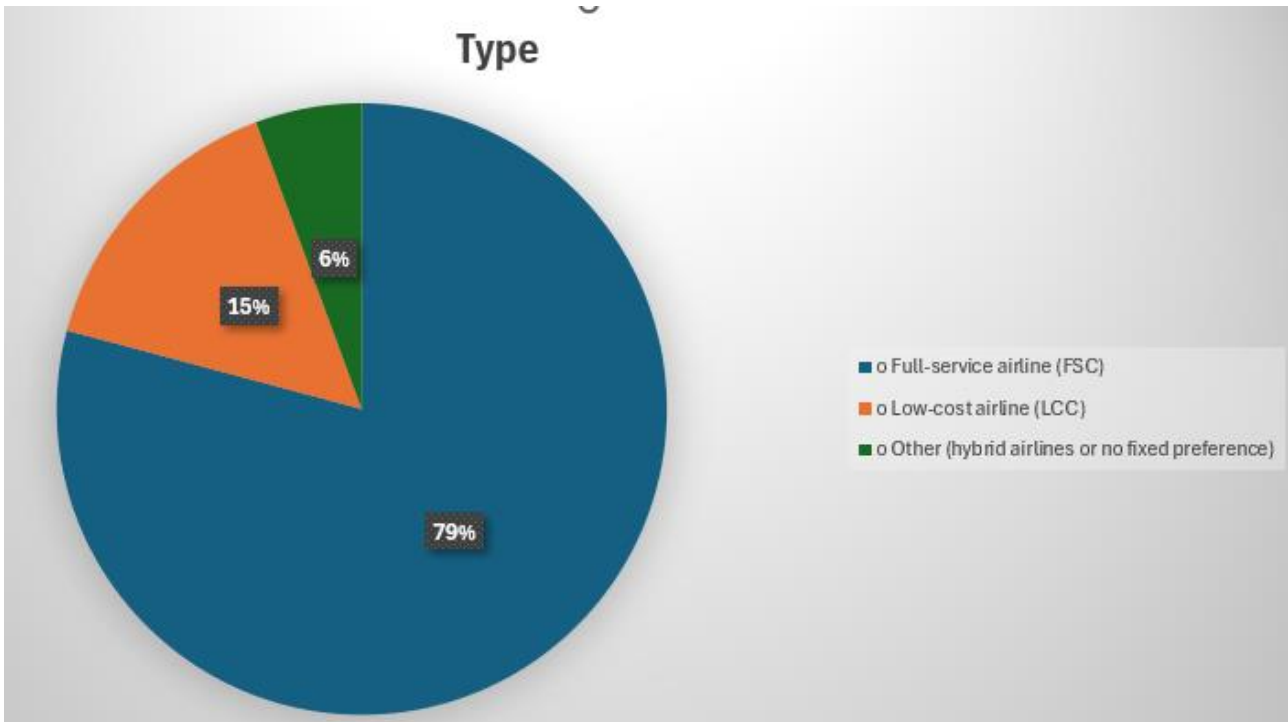


Figure 12 Questionnaire Survey Type

Reasons for selection: Service quality is the main reason for choosing airlines, especially for passengers choosing FSC. Although price is important, it is not the most crucial factor when choosing full-service airlines. Flight frequency, loyalty programs, and others are relatively less important but still significant for certain customer groups.

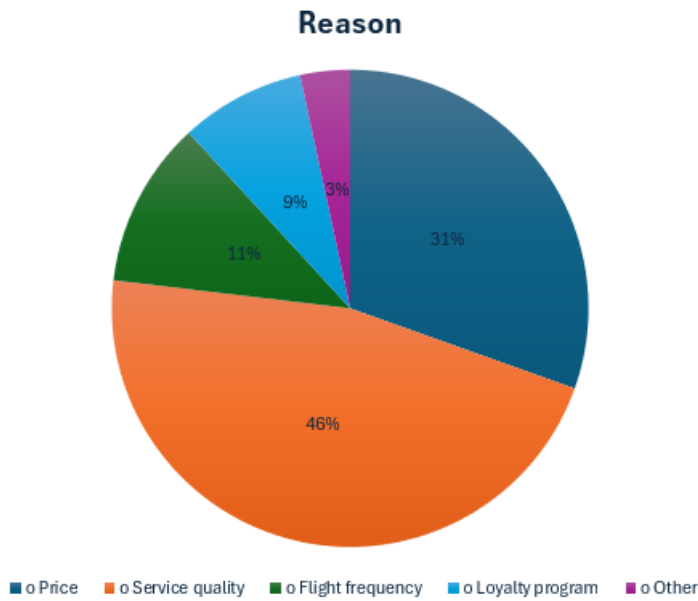


Figure 13 Questionnaire Survey Reason

Services valued most by customers: Baggage handling is the most focused service, indicating passengers' high attention to baggage handling. Customer service reflects the significant impact of service attitude and efficiency on passenger satisfaction. Seat comfort, food quality, boarding efficiency, and entertainment options: although slightly less important, they are still key factors affecting the passenger experience.

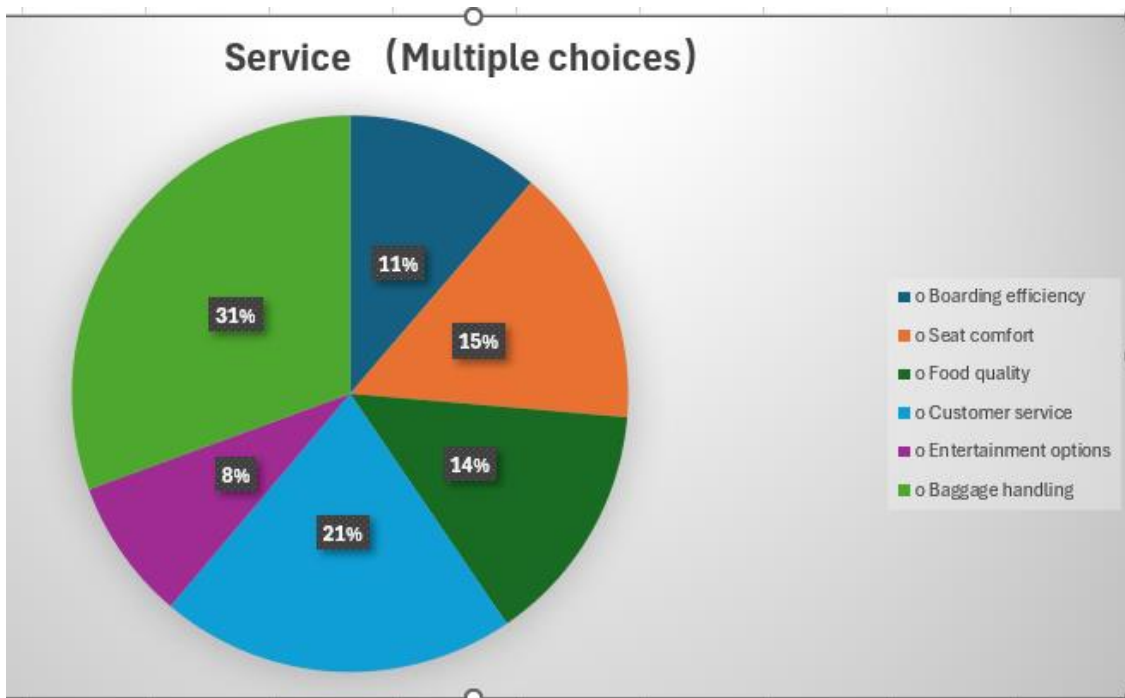


Figure 14 Questionnaire Survey Service

Opinions on the outlook of hybrid business models: Neutral. Most people hold a neutral attitude towards hybrid business models, possibly due to a lack of understanding of this model. Optimistic and very optimistic views indicate that a certain proportion of passengers are optimistic about the development of hybrid business models. Pessimistic and very pessimistic views are held by a minority of passengers who are reserved about this.

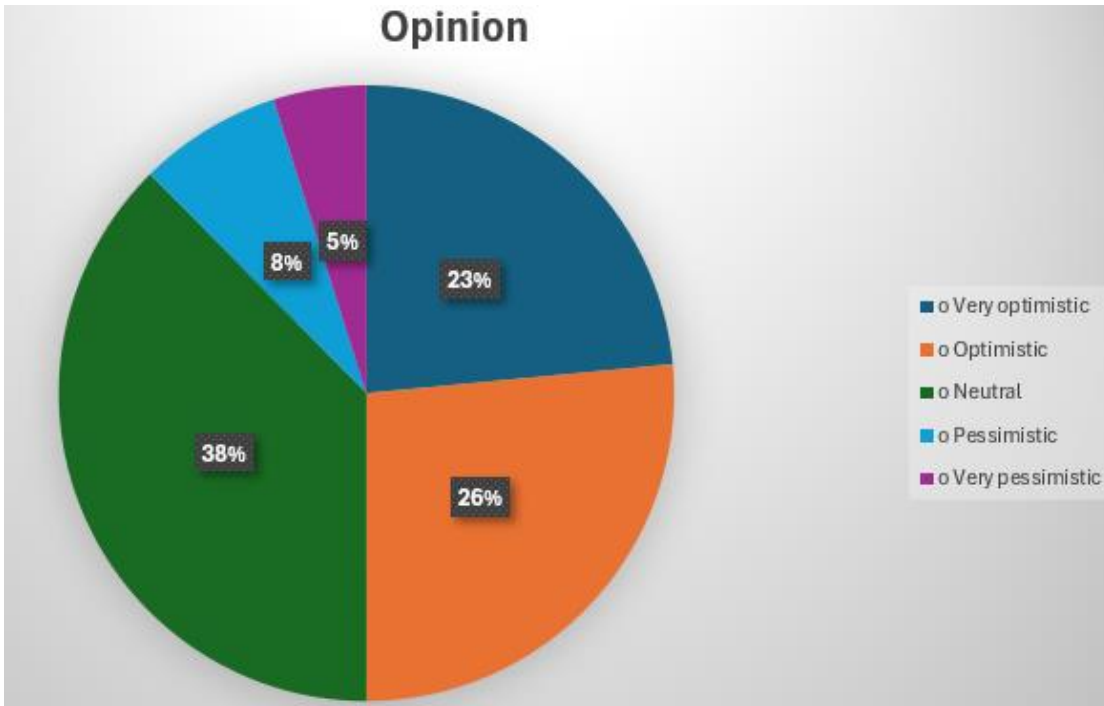


Figure 15 Questionnaire Survey Opinion

Status prediction: Important players believe that the hybrid model will become a significant player in the market. Uncertain. A considerable number of people hold an uncertain attitude towards the future market position. Ordinary participants, marginalized, and dominators: show divergent expectations of the market regarding the hybrid model.

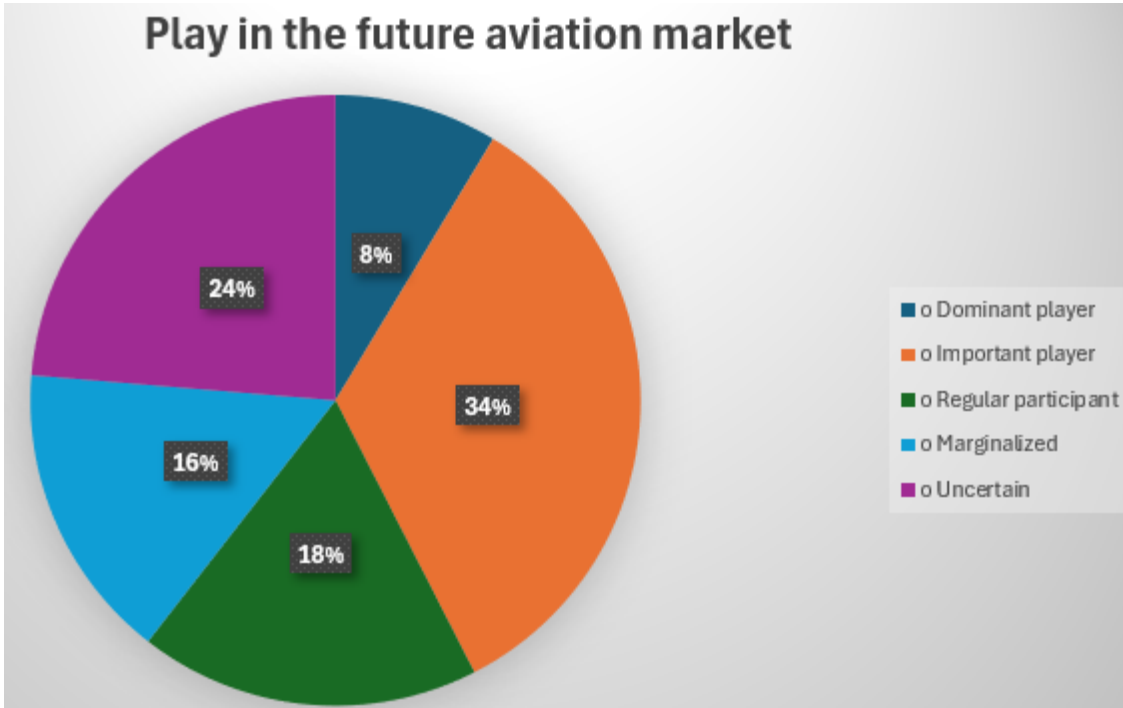


Figure 16 Questionnaire Survey Future

Areas most hoped for innovation: Enhanced personalized services are the most anticipated improvement, indicating passengers' high demand for personalized and customized services. Faster security check processes and more environmentally friendly flight options are also key concerns for passengers, reflecting the demand for efficiency and sustainability. Improved digital experience and expanded loyalty program benefits are also areas where passengers expect improvement.

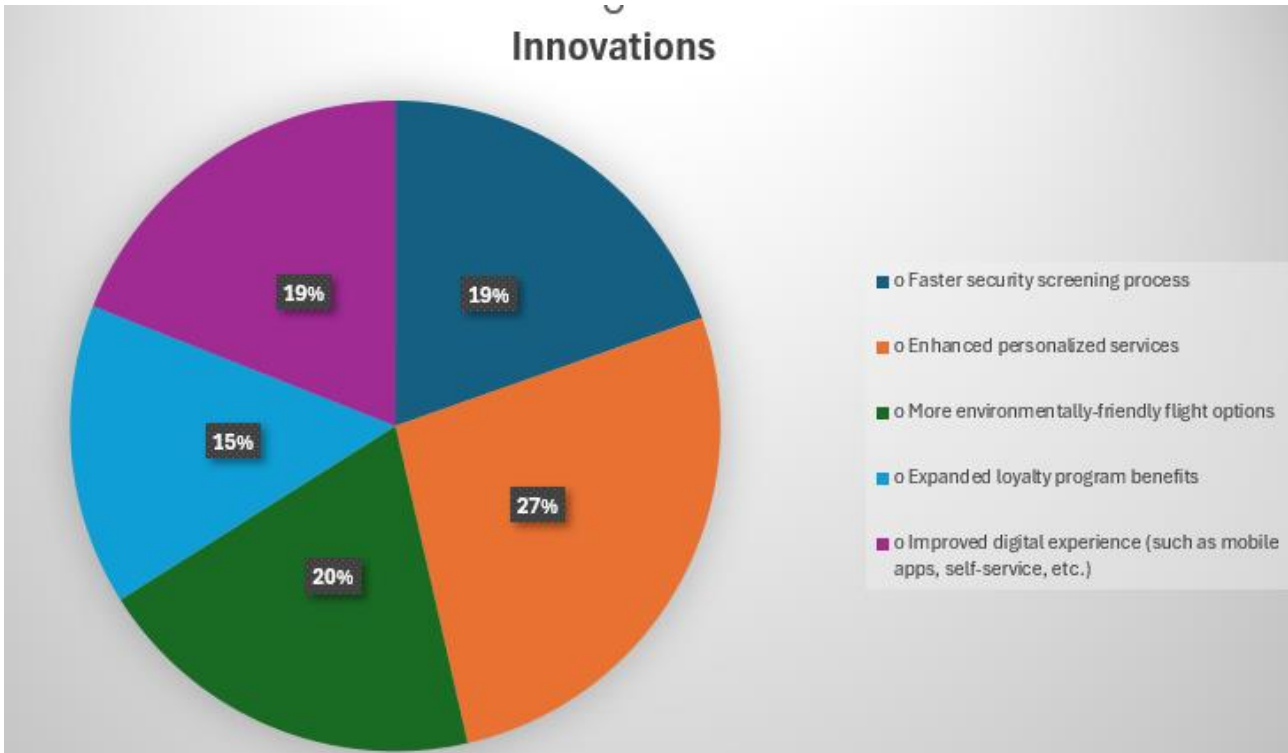


Figure 17 Questionnaire Survey Innovations

Obviously, different customer groups have different perspectives on the same issue. This survey questionnaire was fortunate enough to collect 532 pieces of valuable feedback, which has provided us with specific directions for further consideration.

#### 4.2.1 United Airlines SWOT Analysis

To be, or not to be, that is the question. United Airlines is one of the largest airlines in the world, providing extensive domestic and international flight services. Here is an evaluation of United Airlines based on the SWOT analysis method (Strengths, Weaknesses, Opportunities, and Threats):

##### Strengths:

**Extensive route network:** United Airlines has a wide-ranging route network covering important international and domestic destinations, ensuring its competitiveness in the global aviation market.

**Strong hub airport layout:** They have hubs at multiple important international airports such as Chicago O'Hare, Denver, and Newark, which helps optimize flight connections and enhance the customer experience.

**Member of Star Alliance:** Being an important member of the Star Alliance, United Airlines can expand its service offerings through code-sharing and partnerships, providing more flight options and customer benefits.

**Enhanced services and products:** They offer diverse cabin service options, including luxurious Polaris Business Class and Economy Class, catering to the needs of different travelers.

#### Weaknesses:

**Cost structure and efficiency issues:** Compared to some major competitors, United Airlines has higher operating costs, which may affect its price competitiveness and profit margins.

**Varied customer service ratings:** Despite efforts to improve customer service, United Airlines still faces inconsistent customer service quality in certain cases, which may impact its brand image and customer loyalty.

**Labor relations:** In the past, there have been some labor tensions between United Airlines and its employees, which may affect the company's internal stability and operational efficiency.

#### Opportunities:

**Market expansion and new route development:** With the recovery and development of the global aviation market, United Airlines has opportunities to develop new domestic and international routes, especially in rapidly growing markets such as Asia and Africa.

**Technological and innovation investments:** Investing in new technologies, such as more efficient aircraft, improved reservation systems, and enhanced in-flight entertainment systems, can enhance efficiency and passenger experience.

**Sustainable aviation development:** Investing in sustainable aviation fuels and environmentally friendly operational measures can help improve the brand image and address potential future environmental regulations.

#### Threats:

**Intense industry competition:** United Airlines faces fierce competition from other global and regional airlines, especially low-cost airlines with strong price competitiveness.

**Economic fluctuations and external shocks:** Global economic uncertainties and external events such as pandemics and political instability may impact aviation demand and operating costs.

Regulatory changes and security issues: Facing constantly changing international regulations and security standards, constant adjustments and upgrades are needed to ensure compliance and passenger safety.

Through this SWOT analysis, we can identify many similarities with ANA and Delta Airlines. Later, I will conduct a detailed feasibility analysis.

#### **4.2.2 United Airlines PESTLE Analysis**

United Airlines is one of the major global airlines, whose business is influenced by various external factors.

Political:

International political relations, such as trade policies and diplomatic relationships, directly impact United Airlines' international routes and market access. For example, trade tensions with China may affect the operation of the China-US routes.

Government policies and subsidies: Government subsidies and support policies for the aviation industry, such as financial assistance during the pandemic, have significant effects on the financial condition and operational stability of airlines.

Economic:

Global economic conditions: Global economic growth and consumer confidence directly influence the demand for air travel. Economic recessions, such as the 2008 global financial crisis and the COVID-19 pandemic, typically result in a decline in air travel demand.

Fluctuations in fuel prices: Fuel costs are one of the largest expenses for airlines. Fluctuations in fuel prices can significantly impact United Airlines' operational costs and profits.

Social:

Changes in consumer behavior: Consumer demand and preferences for air travel change over time, such as increased environmental awareness and demand for sustainable travel.

Demographic changes: Changes in the age structure, income levels, and travel habits of passengers can affect the design and marketing strategies of airline services.

Technological:

Innovations in aviation technology: Improvements in aircraft design, fuel efficiency, and the development of digital services, such as online bookings and automated check-in, contribute to improving operational efficiency and customer experience.

Information security: As a global airline operator, United Airlines needs to ensure the security of its information systems to prevent data breaches and cyber attacks.

Legal:

Aviation regulations: Compliance with various domestic and international aviation regulations, including safety standards and consumer protection regulations, is required.

Labor laws: The aviation industry has complex labor relations, and compliance with relevant labor regulations is necessary to manage relationships with pilots, flight attendants, and ground service staff.

Environmental:

Carbon emissions and environmental regulations: With increasing global concerns about climate change, the aviation industry faces increasingly strict environmental regulations, such as carbon emissions trading and environmental taxes.

Sustainable development strategies: United Airlines needs to develop and implement sustainable development strategies to reduce environmental impact, such as using biofuels and improving fuel efficiency.

Through a PESTLE analysis, United Airlines can gain a more comprehensive understanding of the external factors that impact its business and develop corresponding strategies to address potential challenges and seize new opportunities. This analysis helps the company maintain competitiveness and sustainable growth in the highly competitive global aviation market, providing critical insights for its subsequent hybrid business model transformation.

## 5 UAL Feasibility Analysis

In the preceding section, we have provided a detailed exposition of our research methodology. However, to obtain sound results, further synthesis and expansion are required. The following section primarily delves into a comprehensive analysis of the questionnaire survey results, covering aspects such as customer profiles, preferences, and perceptions. The aim is to lay the groundwork for subsequent SWOT and PESTLE analyses of United Airlines (UAL), thereby offering enhanced support for the feasibility analysis of UAL.

### 5.1 Market Demand

First of all, we need to clarify that as a domestic company competing with Delta Air Lines, United Airlines' market demand should be roughly consistent with that of Delta Air Lines. The similarities in their market are as follows:

**Business and leisure travel demand:** Both airlines cater to both business and leisure travelers, who form the primary customer base. Business travelers typically seek frequent, reliable, and efficient services, while leisure travelers may prioritize cost-effectiveness and comfort.

**Domestic and international market:** Delta Air Lines and United Airlines both operate in domestic and international markets, offering extensive route networks. This includes extensive domestic routes within the United States and routes to Europe, Asia, South America, and other international destinations.

**Seasonal demand:** The airline industry is often affected by seasonal fluctuations, such as peak holiday travel and summer vacation seasons. This presents similar challenges for both companies in terms of operational scheduling, fare strategies, and revenue management.

**Demand for efficient operations:** Efficient flight operations are crucial for both Delta Air Lines and United Airlines, impacting cost control and customer satisfaction. This includes on-time flight performance, efficient baggage handling, and prompt customer service.

**Demand for innovative technology:** Both companies need to invest in cutting-edge technology to enhance operational efficiency and customer experience. This includes online booking systems, mobile applications, self-service technologies, and in-flight entertainment systems.

**Pressure for environmental sustainability:** As global attention to environmental issues increases, both Delta Air Lines and United Airlines face market and regulatory pressures to reduce carbon emissions and implement more environmentally-friendly operational practices.

Importance of safety and compliance: Aviation safety is the top priority for any airline. Delta Air Lines and United Airlines must strictly adhere to domestic and international aviation safety regulations and standards to ensure the safety of passengers and crew members.

Furthermore, we can make relevant predictions based on United Airlines' market performance last year:

### 1. Revenue:

Total revenue for 2023 reached \$53,717 million, marking a 19.5% increase from \$44,955 million in 2022.

Passenger revenue per available seat mile (PRASM) rose from \$0.032 in 2022 to \$0.046, reflecting a 72.5% increase.

Cargo revenue also displayed strong growth, increasing from 731.1% in 2022 to 2023.

	Year Ended December 31,		
	2023	2022	2021
<b>Operating revenue:</b>			
Passenger revenue	\$ 49,046	\$ 40,032	\$ 20,197
Cargo	1,495	2,171	2,349
Other operating revenue	3,176	2,752	2,088
Total operating revenue	53,717	44,955	24,634
<b>Operating expense:</b>			
Salaries and related costs	14,787	11,466	9,566
Aircraft fuel	12,651	13,113	5,755
Landing fees and other rent	3,076	2,576	2,416
Aircraft maintenance materials and outside repairs	2,736	2,153	1,316
Depreciation and amortization	2,671	2,456	2,485
Regional capacity purchase	2,400	2,299	2,147
Distribution expenses	1,977	1,535	677
Aircraft rent	197	252	228
Special charges	949	140	(3,367)
Other operating expenses	8,062	6,628	4,433
Total operating expense	49,506	42,618	25,656
Operating income (loss)	4,211	2,337	(1,022)
<b>Nonoperating income (expense):</b>			
Interest expense	(1,956)	(1,778)	(1,657)
Interest income	827	298	36
Interest capitalized	182	105	80
Unrealized gains (losses) on investments, net	27	20	(34)
Miscellaneous, net	96	8	40
Total nonoperating expense, net	(824)	(1,347)	(1,535)
Income (loss) before income taxes	3,387	990	(2,557)
Income tax expense (benefit)	769	253	(593)
Net income (loss)	\$ 2,618	\$ 737	\$ (1,964)
Earnings (loss) per share, basic	\$ 7.98	\$ 2.26	\$ (6.10)
Earnings (loss) per share, diluted	\$ 7.89	\$ 2.23	\$ (6.10)

Figure 18 UAL Annual-report

### 2. Expenses:

Operating expenses for 2023 amounted to \$49,506 million, a 16.2% increase from \$42,618 million in 2022.

Fuel costs significantly rose to \$14,787 million in 2023 from \$11,466 million in 2022, reflecting a 29.0% increase.

Interest expenses during operations also increased from \$8,113 million in 2022 to \$12,651 million in 2023, showing a 73.5% growth.

	Year Ended December 31,		
	2023	2022	2021
Net income (loss)	\$ 2,618	\$ 737	\$ (1,964)
Other comprehensive income (loss), net of tax:			
Employee benefit plans	(261)	1,145	199
Investments and other	24	(28)	(2)
Total other comprehensive income (loss), net of tax	(237)	1,117	197
Total comprehensive income (loss), net	\$ 2,381	\$ 1,854	\$ (1,767)

Figure 19 UAL Annual-report income

### 3. Operating profit:

United Airlines achieved an operating profit of \$4,211 million in 2023, a substantial increase from \$2,337 million in 2022, indicating improved operational efficiency.

### 4. Net profit:

Net profit for 2023 amounted to \$2,618 million, a significant increase from \$737 million in 2022.

### 5. Liabilities:

Total liabilities in 2023 reached \$76,106 million, an increase from \$66,066 million in 2022.

Long-term debt increased from \$67,358 million in 2022 to \$71,104 million in 2023.

ASSETS	At December 31,	
	2023	2022
Current assets:		
Cash and cash equivalents	\$ 6,058	\$ 7,166
Short-term investments	8,330	9,248
Restricted cash	31	45
Receivables, less allowance for credit losses (2023—\$18; 2022—\$11)	1,898	1,801
Aircraft fuel, spare parts and supplies, less obsolescence allowance (2023—\$689; 2022—\$610)	1,561	1,109
Prepaid expenses and other	609	689
Total current assets	18,487	20,058
Operating property and equipment:		
Flight equipment	48,448	42,775
Other property and equipment	10,527	9,334
Purchase deposits for flight equipment	3,550	2,820
Total operating property and equipment	62,525	54,929
Less—Accumulated depreciation and amortization	(22,710)	(20,481)
Total operating property and equipment, net	39,815	34,448
Operating lease right-of-use assets	3,914	3,889
Other assets:		
Goodwill	4,527	4,527
Intangibles, less accumulated amortization (2023—\$1,495; 2022—\$1,472)	2,725	2,762
Restricted cash	245	210
Deferred income taxes	—	91
Investments in affiliates and other, less allowance for credit losses (2023—\$38; 2022—\$21)	1,391	1,373
Total other assets	8,888	8,963
Total assets	\$ 71,104	\$ 67,358

Figure 20 UAL Annual-report Assets

## 6. Shareholders' equity:

At the end of 2023, shareholders' equity rose to \$9,324 million, showing growth from \$6,896 million in 2022.

## 7. Return on investment:

Both the return on equity (ROE) and return on assets (ROA) improved in 2023, indicating enhanced asset utilization efficiency.

LIABILITIES AND STOCKHOLDERS' EQUITY	At December 31,	
	2023	2022
Current liabilities:		
Accounts payable	\$ 3,835	\$ 3,395
Accrued salaries and benefits	2,940	1,971
Advance ticket sales	6,704	7,555
Frequent flyer deferred revenue	3,095	2,693
Current maturities of long-term debt	4,018	2,911
Current maturities of other financial liabilities	57	23
Current maturities of operating leases	576	561
Current maturities of finance leases	172	104
Other	806	779
Total current liabilities	22,203	19,992
Long-term debt	25,057	28,283
Long-term obligations under operating leases	4,503	4,459
Long-term obligations under finance leases	91	115
Other liabilities and deferred credits:		
Frequent flyer deferred revenue	4,048	3,982
Pension liability	968	747
Postretirement benefit liability	637	671
Deferred income taxes	594	0
Other financial liabilities	2,265	844
Other	1,414	1,369
Total other liabilities and deferred credits	9,926	7,613
Commitments and contingencies		
Stockholders' equity:		
Preferred stock	—	—
Common stock at par, \$0.01 par value; authorized 1,000,000,000 shares; outstanding 328,018,739 and 326,930,321 shares at December 31, 2023 and 2022, respectively	4	4
Additional capital invested	8,992	8,986
Stock held in treasury, at cost	(3,441)	(3,534)
Retained earnings	3,831	1,265
Accumulated other comprehensive income	(62)	175
Total stockholders' equity	9,324	6,896
Total liabilities and stockholders' equity	\$ 71,104	\$ 67,358

Figure 21 UAL Annual-report Liabilities

In conclusion, United Airlines demonstrated strong financial growth in 2023, with significant increases in revenue and net profit. Despite the pressure from rising fuel costs and interest expenses on operating expenses, the company successfully improved its operating profit and net profit. Additionally, the increase in total liabilities and long-term debt were counterbalanced by the growth in shareholders' equity and improved return on investment, indicating a sound overall financial position for the company. Looking ahead, United Airlines will need to continue optimizing its cost structure and enhancing revenue-generating capabilities to address potential market fluctuations and competition.

It is worth noting that United Airlines lacks diversity in its income sources, such as low fares and differentiated services, which could be a promising indicator for a successful transition to a hybrid business model.

## 5.2 Competitive Environment

As mentioned earlier, United Airlines, as a domestic airline in the United States, faces intense competition and a challenging environment. It competes with major low-cost carriers like Southwest Airlines, as well as Delta Air Lines and American Airlines, all of which have extensive domestic route networks and similar service offerings. In terms of international routes, United Airlines also faces competition from other large international airlines such as British Airways, Lufthansa, and Emirates. The competition on transatlantic routes is particularly fierce. Although United Airlines is one of the largest airlines in the world with a strong market share, especially at its hub airports like Chicago, Denver, San Francisco, and Newark, its market share maintenance and growth are still challenged by the aforementioned competitors. Therefore, United Airlines' situation is not optimistic.

In addition to the above, I have also noted the competition from other factors in the annual report, including both domestic and international routes. The competition involves not only ticket prices, flight schedules, services, and products, but also customer service and loyalty programs.

The company participates in multiple passenger joint business ventures (JBAs) and cargo joint business ventures (JBAs), which help enhance its competitiveness in specific markets. Additionally, the company's revenue is affected by seasonal factors in the aviation industry, with travel demand in the second and third quarters (spring and summer) usually higher than the first and fourth quarters (winter).

At the same time, the company's diversified revenue consolidates its position. The MileagePlus frequent flyer program enhances customer loyalty by providing rewards, benefits, and services. The program includes collaborations with United and other Star Alliance member airlines, as well as relationships with non-airline partners such as credit card issuers, retailers, hotels, and car rental companies.

The company generates additional income by selling MileagePlus miles through a co-branded credit card agreement with Chase.

Overall, the company holds a strong position in its market with an extensive route network and a customer loyalty program. However, it needs to continuously adapt to a highly competitive market environment and constantly changing economic conditions. Through ongoing innovation and strategic investments, the company is seeking to further enhance its market position and achieve long-term sustainable growth.

### 5.3 Technological Optimization and Integration

United Airlines' innovation and integration efforts in technology primarily focus on improving operational efficiency, enhancing customer experience, and supporting sustainable development goals. However, it remains crucial for the airline industry's future market presence.

Firstly, digitalization and automation play a significant role. United Airlines promotes self-check-in, self-baggage drop-off, and self-boarding services to reduce passengers' waiting time at airports and improve processing efficiency. Additionally, the airline's mobile application offers features such as flight status updates, electronic boarding passes, airport navigation, and travel management, allowing passengers to conveniently manage their journeys.

Secondly, there is a focus on introducing new aircraft. United Airlines invests in acquiring fuel-efficient aircraft such as the Boeing 787 and Airbus A350 series, which not only reduce fuel consumption but also lower carbon emissions. Furthermore, to enhance the passenger experience, United Airlines has modernized its cabins, including more comfortable seating, improved in-flight entertainment systems, and Wi-Fi services.

Thirdly, data analysis and AI come into play. Through advanced data analysis techniques and machine learning, United Airlines optimizes ticket pricing and seat inventory management to maximize revenue. Leveraging big data and predictive analysis tools, United Airlines can more effectively manage flight scheduling, maintenance plans, and crew assignments.

Lastly, United Airlines invests in researching and utilizing sustainable aviation fuels to reduce the environmental impact of air travel. They also offer carbon offset programs, giving passengers the option to participate by investing in environmental projects to offset their flight emissions.

We need to understand that while the integration and development of new technologies bring convenience and progress to airlines, they also come with higher operational costs and technology development expenses. Will the cost of developing new technologies generate a 1:1 or even greater return on investment? This requires further exploration by the company's relevant teams.

## 6 Conclusion and Prospect

Through the research, analysis, and investigation of multiple modules mentioned above, this thesis has reached a relatively comprehensive conclusion. The following sections will summarize the conclusions of this paper, while also addressing its limitations and shortcomings, and looking ahead to the future. It aims to provide a feasible solution or direction for UAL and even other airlines. However, due to the deviation between theory and practice, further empirical validation is still required to ascertain the feasibility of the conclusions.

### 6.1 Conclusion

In the above-mentioned paper, we first clarified the concept of different aviation business models and introduced a new concept of a hybrid business model through ANA and Delta Airlines. Following that, I summarized the commonalities in operating a hybrid business model by analyzing the relevant market indicators of ANA and Delta Airlines, including financial indicators, customer performance, and growth potential. Through reasonable inference, I concluded the necessary conditions for forming a hybrid business model. Afterward, I conducted a series of analyses on United Airlines to explore the feasibility of operating a hybrid business model. The following conclusions were drawn: United Airlines is capable of operating a hybrid business model due to the following reasons:

1. United Airlines has a clear strategic plan. The United Next initiative is the company's key strategic plan aimed at driving future growth and bringing transformative impacts on customer experience and business profitability. The plan includes the purchase of new aircraft, such as Boeing 787-9 and A321neo, to update and expand the fleet. It is expected to receive over 700 new narrow-body and wide-body aircraft by the end of 2033. By increasing seat density and improving fuel efficiency, the company expects to reduce carbon emissions per seat while maintaining price competitiveness with low-cost carriers. This enables United Airlines to continuously clarify organizational goals, improve efficiency, and focus on operational enhancements throughout the transformation process.

Overall, the company's strategic plan aims to drive long-term growth and market leadership through technological innovation, operational efficiency improvement, enhanced customer experience and environmental sustainability, as well as strategic investments and partnerships. The company also emphasizes risk management and financial stability to address uncertainties and potential challenges in the aviation industry.

2. United Airlines meets the timely need for organizational transformation. Firstly, the recovery of the aviation industry in the post-pandemic era is still ongoing, and although the company's revenues have improved compared to 2021, there is fierce competition in the market, making it imperative to

adjust the organization's operating model. Additionally, competition from domestic carriers like Delta Airlines necessitates United Airlines to have a more distinct identity. Not to mention the threat of foreign airlines entering the market, the pressure from domestic competition alone has forced United Airlines to expand into non-aviation areas, as mentioned earlier, such as credit cards and vehicle services.

3. United Airlines still has room for growth in the domestic market. On one hand, Southwest Airlines holds around 20% of the overall market share in the United States, but it is just a low-cost carrier. United Airlines can offer products with more competitive services rather than competitive prices to gain more market potential. However, United Airlines and Delta Air Lines face similar challenges as they both struggle to expand low-cost subsidiaries within the United States. This doesn't mean it is impossible though. With the support of their own brand, there is still room for maneuvering if they can provide more cost-effective products.

4. United Airlines has excellent strength. As one of the world's largest airlines, United Airlines has a dense network plan for both international and domestic routes, covering six continents. Its hub airports are located in major U.S. cities such as Chicago, Denver, Houston, Los Angeles, Newark, and San Francisco, which provides strong market coverage. Additionally, United Airlines has a large and modern fleet, including Boeing and Airbus aircraft, enabling it to provide various types of air services. This fleet not only supports its extensive route network but also ensures operational flexibility and efficiency. Furthermore, United Airlines usually demonstrates strong financial performance with stable income and profits. Despite the volatility of the aviation industry, affected by economic cycles and external events, United Airlines typically maintains good financial health. Moreover, United Airlines also enjoys an excellent reputation. As a long-established brand, it has high market awareness and brand trust. It is one of the most recognized airline brands globally.

Overall, United Airlines is a financially strong airline with extensive global influence. Despite facing fierce competition and various challenges within the industry, United Airlines maintains its leadership position in the global aviation industry through continuous service improvement, technological innovation, and commitment to sustainable development.

5. The impact of the pandemic has not yet disappeared. While it has dealt a heavy blow to the aviation industry, it has also brought opportunities for timely transformation and restructuring. United Airlines is also in this situation.

The above analysis explains the success factors of United Airlines. It has met all the necessary conditions for transformation and the transition from full-service carrier to a mid-tier carrier is

smoother, with fewer concerns about cost changes compared to the worries of low-cost carriers transitioning to a hybrid business model.

Previous studies have hardly touched on the discussion regarding whether United Airlines should adopt a hybrid business model. The results of this paper are based on the theoretical framework mentioned herein. Compared to earlier frameworks, this paper does not only focus on traditional industry competitors, potential new entrants, threats of substitutes, bargaining power of suppliers, and buyers, but it places greater emphasis on the level of market competition and the market's capacity to accommodate new changes. This is precisely why this paper is more persuasive. In comparison to previous findings, this paper fills the research gap on whether United Airlines should adapt to new business models and also extends further research into the market's accommodating capacity for United Airlines.

## **6.2 Limitations and Shortcomings of the Study**

I apologize for the limitations of my abilities. This paper still has some shortcomings and limitations:

1. Possible incomplete or outdated data: Airlines may be unwilling to disclose detailed financial data or operational details, especially sensitive information regarding their cost structures and profit margins. Additionally, market dynamics change rapidly, and old data may not accurately reflect the current situation. There may also be issues with data consistency: different airlines may adopt different accounting and reporting standards, which makes cross-company or cross-border comparisons difficult.
2. Limitations of methods: There is an imbalance between quantitative and qualitative analysis. When evaluating airline performance, there may be excessive reliance on financial indicators while overlooking qualitative factors such as service quality, customer satisfaction, and brand influence. Market analysis often relies on economic models and forecasts, which are based on assumptions and may not fully align with actual market conditions.
3. Market diversity and geographic differences: The uniqueness of different markets, variations in market structures, consumer behavior, and regulatory environments across different regions globally significantly impact conclusions drawn from one region or market and may not be applicable to others. Cultural differences and consumer preferences are also crucial, as cultural variations can influence consumer expectations and preferences for airline services, especially when analyzing global or diverse markets.

4. Gap between theory and implementation: While theories may hold true in principle, they may face challenges in real operational environments. Reality often presents more variables while theoretical frameworks tend to lean towards the most rational and optimal solutions.

5. Lack of comprehensive financial knowledge: Inadequate understanding of airline financial indicators may prevent me from uncovering deeper underlying factors, consequently rendering the conclusions ineffective.

For future prospects:

The focus can be placed on the application and integration of new technologies. The purpose of different business models is to adapt to different groups in order to seek greater profits. Exploring how upcoming technologies could potentially change the aviation industry, such as using automation, artificial intelligence, and sustainable aviation fuels to improve operational efficiency and environmental sustainability. Additionally, it is equally important to constantly monitor changes in consumer behavior as consumers are an integral part of the aviation industry. Analyzing the long-term changes in consumer behavior after the pandemic, such as increased attention to health and safety, as well as how the demand for price and service flexibility affects the service models of airlines. Lastly, government support and assistance are also essential. Many small and medium-sized airlines have been able to persevere through the pandemic with the help of government aid. Therefore, discussing potential support measures that the government may provide, such as financial subsidies or tax incentives, and how these measures will impact the competitive environment of the aviation industry.

Therefore, in conclusion, this paper ensures the feasibility of the hybrid business model by analyzing various factors including financial indicators, target customer groups, and market performance. This research contributes to United Airlines' active transition to a hybrid business model, promoting the company's healthy development, and also provides reference for the business model transformation of other airlines.

## Sources

UAL-annual report. URL: <https://ir.united.com/news-and-events/events-and-presentations> .  
 Assessed 29 March 2024.

Travel Daily-Delta Airlines achieves customized services through cabin segmentation. URL:  
<https://www.traveldaily.cn/article/110243> Assessed 2 April 2024.

CAAC- Low-cost and full-service airlines should be treated differently. URL:  
[http://www.caacnews.com.cn/zk/zj/dengyuncheng/201701/t20170111\\_1208170.html](http://www.caacnews.com.cn/zk/zj/dengyuncheng/201701/t20170111_1208170.html) Accessed: 4  
 April 2024.

International Air Transport Association (IATA) - Annual Review 2023. URL: [annual-review-2023.pdf \(iata.org\)](#) Accessed: 12 April 2024.

Peng Pai- In the face of the unprecedented test posed by the epidemic, there has been an innovative low-cost aviation hybrid operation model that is based on multi-factor decision-making. URL: [https://www.thepaper.cn/newsDetail\\_forward\\_7622140](https://www.thepaper.cn/newsDetail_forward_7622140) Accessed: 11 April 2024.

David Gillen & Alicja Gados (2008). Airlines within airlines: Assessing the vulnerabilities of mixing business models. *Research in Transportation Economics*. 24(2008) , 25-35.

Zhihu. Analysis and Insights into the Typical Business Model of Airlines. URL:  
<https://zhuanlan.zhihu.com/p/73997121> Accessed: 12 April 2024.

ANA-annual report. URL: <https://www.ana.co.jp/group/en/investors/irdata/annual/> Assessed: 14  
 April 2024.

Zhuo Chen & Yanhua Li & Xiaoting Shi (2022). 4 - Low-cost aviation in China: its history and its changing context. Elsevier (2022), Pages 51-68.

Clement Kong Wing Chow & Wai Hong Kan Tsui (2017). Organizational learning, operating costs and airline consolidation policy in the Chinese airline industry, *Journal of Air Transport Management*. 63(2017), Pages 108-118.

Mrázová(2016). Low-cost carriers-operational and economic model development[D].University of Žilina, (2016), Pages 11-12.

Paul Chiambaretto & Emmanuel Combe(2023). Business model hybridization but heterogeneous economic performance: Insights from low-cost and legacy carriers in Europe. *Transport Policy*. 136(2023), Pages 83-97.

Fageda X & Flores-Fillol R & Theilen B(2019). Hybrid cooperation agreements in networks: The case of the airline industry[J].International Journal of Industrial Organization,(2019), Pages 14-17.

Mária MRÁZOVÁ & Antonín KAZDA\*(2021). The direction of airlines business models – up or down?(Post Covid-19 crisis – case study). Published by INCAS(2021), Pages 4-5.

Linus Benjamin Bauer & Daniel Bloch b & Rico Merkert(2020). Ultra Long-Haul: An emerging business model accelerated by COVID-19. Journal of Air Transport Management 89 (2020), Pages 7-8.

Minwoo LEE & Larry K.B. LI & Wenbin SONG(2019). Analysis of direct operating cost of wide-body passenger aircraft: A parametric study based on Hong Kong. Chinese Journal of Aeronautics, (2019), Pages 11-12.

Anna Tomová & Matúš Maternaa(2017). The directions of on-going air carriers´ hybridization: Towards peerless business models? Procedia Engineering 192 ( 2017 ), Pages 1-2.

Antonín Kazda & Mária Mrázová(2015). Low-Cost Carriers – Business Model Development. Transport and Communications (2015), Pages 2-3.

Radovan Baláž(2021). THE CONCEPT OF A BUSINESS MODEL FOR AN AIR CARRIER IN SLOVAKIA. INTERNATIONAL JOURNAL OF ENTREPRENEURIAL KNOWLEDGE(2021), Pages 7-8.

Leyla Adiloglu-Yalçinkaya & Senem Besler(2021). Institutional factors influencing business models: The case of Turkish Airlines. Journal of Air Transport Management(2021), Pages 6-7.

Leonardo Corbo(2017). In search of business model configurations that work: Lessons from the hybridization of Air Berlin and JetBlue. Journal of Air Transport Management(2017), Pages 5-6.

Jost Daft a & Sascha Albers(2015). An empirical analysis of airline business model convergence. Journal of Air Transport Management(2015), Pages 1-2.

Carlos M.& DaSilva, Peter Trkman(2014). Business Model: What It Is and What It Is Not. Long Range Planning(2014), Pages 1-5.

## **Appendices**

### **Appendix 1. Questionnaire**

Dear participant,

Hello! I am a graduating senior student currently conducting research for my thesis. The topic of my study is the feasibility of hybrid business models in the aviation industry. This questionnaire aims to collect feedback on the service evaluation of Full-Service Carriers (FSC) and Low-Cost Carriers (LCC), as well as opinions on hybrid business models. Your input will provide valuable insights and support for potential future business transformation at United Airlines.

Thank you for your precious time and sincere feedback. Please rest assured that all data will be used strictly for academic research purposes, ensuring the security and anonymity of your information.

#### **Basic Information**

##### **1. Your age range:**

- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55 years old and above

##### **2. Your main purpose of travel is:**

- Business
- Leisure/Tourism
- Visiting friends/family
- Other

#### **Service Evaluation**

##### **3. The type of airline you usually choose is:**

- o Full-service airline (FSC)
- o Low-cost airline (LCC)
- o Other (hybrid airlines or no fixed preference)

**4. What is the main reason for choosing this type of airline?**

- o Price
- o Service quality
- o Flight frequency
- o Loyalty program
- o Other

**5. How satisfied are you with your most recent flight overall?**

- o Very satisfied
- o Satisfied
- o Neutral
- o Dissatisfied
- o Very dissatisfied (Why?)

**6. In the following areas of service, which do you think needs the most improvement?  
(Multiple choices allowed)**

- o Boarding efficiency
- o Seat comfort
- o Food quality
- o Customer service
- o Entertainment options
- o Baggage handling

Mixed Business Model

**7. What is your opinion of the mixed business model (airline services combining the advantages of FSC and LCC)?**

- Very optimistic
- Optimistic
- Neutral
- Pessimistic
- Very pessimistic

**8. What role do you think the mixed business model will play in the future aviation market?**

- Dominant player
- Important player
- Regular participant
- Marginalized
- Uncertain

### **Improvements and Suggestions**

**9. What innovations or improvements would you most like to see in air travel? (Multiple choices allowed)**

- Faster security screening process
- Enhanced personalized services
- More environmentally-friendly flight options
- Expanded loyalty program benefits
- Improved digital experience (such as mobile apps, self-service, etc.)

### **Open-Ended Question**

**10. Please provide any other feedback or suggestions you believe can help improve airline services. If willing, you may also include your profession:**

**Appendix 2. Annual Report (Part)**

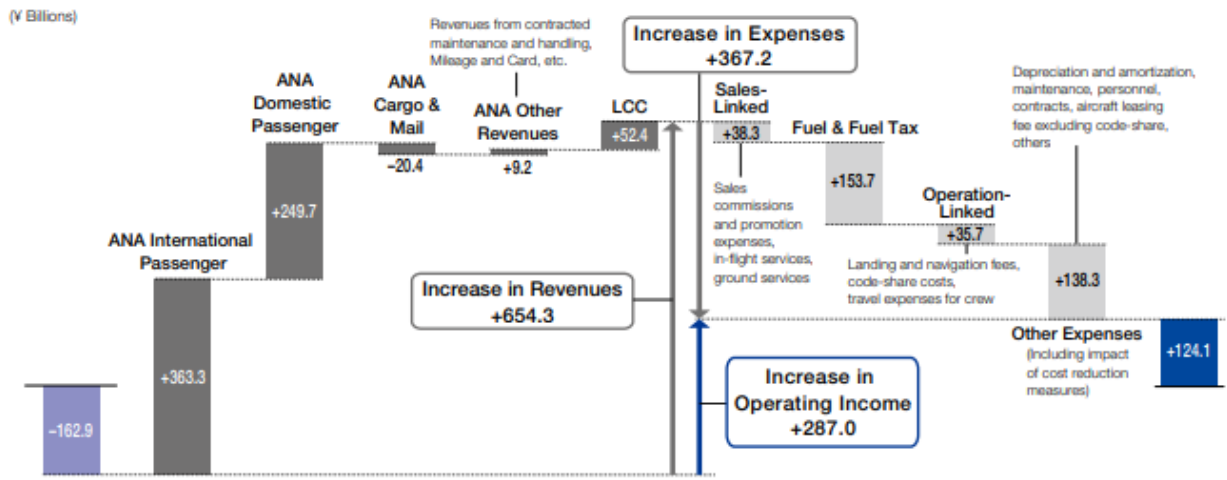
**ANA-report**

FY (New 2)	Yen (Millions)										U.S. dollars (Thousands) (Note 3)	
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013		2012
<b>For the Year</b>	<b>1,707,484</b>	<b>1,020,324</b>	<b>728,683</b>	<b>1,974,216</b>	<b>2,058,312</b>	<b>1,971,799</b>	<b>1,765,259</b>	<b>1,791,187</b>	<b>1,713,457</b>	<b>1,601,013</b>	<b>1,483,581</b>	<b>12,787,268</b>
Operating revenues (Note 4)	1,707,484	1,020,324	728,683	1,974,216	2,058,312	1,971,799	1,765,259	1,791,187	1,713,457	1,601,013	1,483,581	12,787,268
Operating expenses	1,587,454	1,193,451	1,193,457	1,913,410	1,893,293	1,807,283	1,619,720	1,654,724	1,621,916	1,535,027	1,379,754	11,888,369
Operating income (loss)	120,030	(173,127)	(64,774)	60,806	165,019	164,516	145,539	136,463	91,541	65,986	103,827	898,899
Income (loss) before income taxes	114,342	(175,374)	(543,373)	51,921	154,023	196,641	139,462	131,894	77,983	36,391	73,876	856,301
Net income (loss) attributable to owners of the parent	89,477	(143,628)	(404,624)	27,555	110,777	143,887	86,827	78,169	39,239	18,886	43,140	670,089
Cash flows from operating activities	449,822	(76,413)	(270,441)	130,169	296,145	316,014	237,084	263,876	206,979	200,124	173,196	3,366,696
Cash flows from investing activities	(204,028)	230,019	(595,759)	(230,218)	(338,671)	(254,454)	(104,651)	(74,442)	(610,749)	(84,915)	(333,744)	(1,527,541)
Cash flows from financing activities	(142,909)	93,646	1,098,172	23,869	(48,483)	(29,959)	3,349	(133,257)	(30,424)	(85,569)	(84,549)	(1,070,238)
Free cash flow	245,796	153,606	(895,203)	(103,049)	(8,483)	(8,483)	42,423	189,436	(3,870)	(135,209)	(160,548)	1,840,754
Substantial free cash flow (Note 5)	373,104	111,945	(373,456)	(73,149)	(18,028)	61,410	39,655	88,026	(22,320)	(39,029)	(54,225)	2,734,168
Depreciation and amortization	144,313	147,328	176,352	175,739	159,541	150,408	140,354	138,830	131,329	136,180	123,916	1,040,793
EBITDA (Note 6)	264,543	(25,798)	(208,422)	235,545	324,583	314,934	255,993	275,293	222,870	202,165	227,743	1,979,662
Capital expenditures	116,892	133,364	156,710	331,381	375,864	304,707	254,425	281,416	274,702	183,739	162,752	875,388
<b>At Year-End</b>	<b>3,366,724</b>	<b>3,218,433</b>	<b>3,207,883</b>	<b>2,580,153</b>	<b>2,687,122</b>	<b>2,562,462</b>	<b>2,314,410</b>	<b>2,228,896</b>	<b>2,302,437</b>	<b>2,173,607</b>	<b>2,137,242</b>	<b>25,513,240</b>
Total assets	3,366,724	3,218,433	3,207,883	2,580,153	2,687,122	2,562,462	2,314,410	2,228,896	2,302,437	2,173,607	2,137,242	25,513,240
Interest-bearing debt	1,607,918	1,750,108	1,655,452	842,982	788,649	798,303	729,877	703,886	819,831	834,768	897,134	12,041,623
Shareholders' equity (Note 7)	862,419	797,249	1,007,233	1,061,288	1,099,413	968,661	919,157	789,966	789,280	746,070	766,737	6,458,616
<b>Per Share Data (Yen, U.S. dollars) (Note 8)</b>	<b>190.24</b>	<b>(305.37)</b>	<b>(1,082.04)</b>	<b>82.66</b>	<b>331.04</b>	<b>417.82</b>	<b>28.23</b>	<b>22.36</b>	<b>11.24</b>	<b>5.41</b>	<b>13.51</b>	<b>1.42</b>
Earnings (loss) per share	190.24	(305.37)	(1,082.04)	82.66	331.04	417.82	28.23	22.36	11.24	5.41	13.51	1.42
Book value per share	1,833.64	1,695.06	2,141.49	3,171.80	3,285.46	2,954.47	262.44	225.87	228.45	213.82	218.41	13.73
Cash dividends	—	—	—	—	75.00	80.00	6.00	6.00	4.00	3.00	4.00	—
Average number of shares during the year (thousand shares)	470,334	470,339	373,945	334,559	334,632	344,372	3,500,205	3,496,561	3,492,380	3,493,860	3,192,482	—
<b>Management Indicators</b>	<b>7.0</b>	<b>(17.0)</b>	<b>83.8</b>	<b>3.1</b>	<b>8.0</b>	<b>8.3</b>	<b>8.2</b>	<b>7.6</b>	<b>5.3</b>	<b>4.1</b>	<b>7.0</b>	<b>—</b>
Operating income margin (%)	7.0	(17.0)	83.8	3.1	8.0	8.3	8.2	7.6	5.3	4.1	7.0	—
Net income margin (%)	5.2	(14.1)	(55.9)	1.4	5.4	7.3	5.6	4.4	2.3	1.2	2.9	—
ROA (%) (Note 9)	3.7	(6.3)	(16.3)	2.4	6.4	8.9	6.5	6.1	4.2	3.2	5.1	—
ROE (%) (Note 10)	10.8	(15.9)	(90.1)	2.6	10.8	15.1	11.6	9.8	6.1	2.5	6.8	—
Shareholders' equity ratio (%)	25.6	24.8	31.4	41.4	40.9	38.6	39.7	36.4	34.7	34.3	35.9	—
Debt-to-equity ratio (Times) (Note 11)	1.9	2.2	1.6	0.8	0.7	0.8	0.8	0.9	1.0	1.1	1.2	—
Asset turnover (Times) (Note 12)	0.3	0.3	0.3	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	—
Payout ratio (%)	40.57	—	—	—	22.7	14.4	21.3	22.4	35.8	55.5	29.8	—
Number of employees	40,507	42,196	45,580	45,849	43,486	41,930	39,243	38,273	34,919	33,719	32,634	—
<b>Operating Data</b>	<b>433,470</b>	<b>70,151</b>	<b>44,736</b>	<b>613,908</b>	<b>651,587</b>	<b>597,448</b>	<b>516,789</b>	<b>515,696</b>	<b>468,321</b>	<b>395,240</b>	<b>348,219</b>	<b>3,246,238</b>
International Passenger Operations	433,470	70,151	44,736	613,908	651,587	597,448	516,789	515,696	468,321	395,240	348,219	3,246,238
Passenger revenues	35,875	20,524	14,465	68,885	65,078	64,378	60,148	54,710	49,487	41,451	37,947	—
Available seat-km (Millions)	36,408	5,550	2,840	50,219	50,776	49,132	45,602	40,635	35,839	30,613	28,545	—
Revenue passenger-km (Millions)	4,212	825	427	9,416	10,003	9,740	9,119	8,167	7,208	6,336	5,276	—
Number of passengers (Thousands)	73.6	27.0	19.6	72.9	77.0	75.3	75.8	74.3	72.0	73.9	75.2	—
Load factor (%)	12.1	3.4	3.1	8.9	9.9	9.3	8.6	9.4	8.5	9.5	9.2	—
Unit revenues (Y)	16.4	12.6	15.7	12.2	12.8	12.2	11.3	12.7	13.1	12.8	12.3	—
Yield (Y)	—	—	—	—	—	—	—	—	—	—	—	—
Domestic Passenger Operations	533,593	279,877	203,119	679,362	686,617	680,740	678,305	685,638	683,369	676,133	655,265	3,966,007
Passenger revenues	49,991	34,285	26,896	58,592	58,475	58,456	59,080	59,421	60,213	61,046	60,026	—
Available seat-km (Millions)	32,201	16,382	11,567	39,502	40,704	40,271	38,990	38,470	38,582	37,861	36,333	—
Revenue passenger-km (Millions)	34,534	17,859	12,860	42,916	44,325	44,150	42,867	42,684	43,033	42,688	41,089	—
Number of passengers (Thousands)	64.5	47.8	43.0	67.5	69.6	68.9	66.0	64.7	64.1	62.0	62.1	—
Load factor (%)	10.6	8.2	7.6	11.6	11.9	11.8	11.5	11.5	11.3	11.1	11.4	—
Unit revenues (Y)	16.4	17.1	17.6	17.2	17.1	17.1	17.4	17.8	17.7	17.8	18.3	—
Yield (Y)	—	—	—	—	—	—	—	—	—	—	—	—
LCC Passenger Operations (Note 13)	90,285	37,813	22,071	81,953	93,611	87,555	—	—	—	—	—	675,900
Passenger revenues	12,232	7,883	4,932	11,076	12,952	11,852	—	—	—	—	—	—
Available seat-km (Millions)	8,991	4,845	2,403	9,202	10,394	10,212	—	—	—	—	—	—
Revenue passenger-km (Millions)	7,775	4,267	2,080	7,288	8,153	7,797	—	—	—	—	—	—
Number of passengers (Thousands)	73.5	61.6	45.7	83.1	86.2	86.3	—	—	—	—	—	—
Load factor (%)	7.4	4.8	4.5	7.4	7.8	7.4	—	—	—	—	—	—
Unit revenues (Y)	10.0	7.8	9.2	8.9	9.0	8.6	—	—	—	—	—	—
Yield (Y)	—	—	—	—	—	—	—	—	—	—	—	—
International Cargo Operations	308,688	328,750	160,503	102,697	125,015	118,002	80,301	113,309	124,772	104,736	86,589	2,307,256
Cargo revenues	805,799	976,644	655,019	866,821	913,915	994,593	954,027	910,628	841,765	710,610	621,487	—
Cargo volume (Tons)	24,119	24,932	20,881	25,533	27,454	30,710	30,860	31,740	32,584	32,116	32,231	180,626
Domestic Cargo Operations	263,661	251,332	218,032	373,176	360,773	436,790	451,266	456,079	475,482	477,381	463,473	—
Cargo revenues	—	—	—	—	—	—	—	—	—	—	—	—
Cargo volume (Tons)	—	—	—	—	—	—	—	—	—	—	—	—

**Segment Information**

(Fiscal Year)	Operating Revenues			Operating Income (Loss)			EBITDA		
	2022	2021	Change	2022	2021	Change	2022	2021	Change
<b>Air Transportation</b>	<b>¥1,539,443</b>	<b>¥ 885,096</b>	<b>¥654,347</b>	<b>¥124,158</b>	<b>¥(162,932)</b>	<b>¥287,090</b>	<b>¥262,611</b>	<b>¥(22,379)</b>	<b>¥284,990</b>
<b>Airline Related</b>	<b>247,129</b>	<b>206,806</b>	<b>40,323</b>	<b>2,332</b>	<b>(660)</b>	<b>2,992</b>	<b>6,685</b>	<b>4,390</b>	<b>2,295</b>
<b>Travel Services</b>	<b>73,815</b>	<b>46,282</b>	<b>27,533</b>	<b>(277)</b>	<b>(2,105)</b>	<b>1,828</b>	<b>(89)</b>	<b>(1,971)</b>	<b>1,882</b>
<b>Trade and Retail</b>	<b>103,252</b>	<b>81,694</b>	<b>21,558</b>	<b>3,511</b>	<b>549</b>	<b>2,962</b>	<b>4,442</b>	<b>1,642</b>	<b>2,800</b>
<b>Subtotal</b>	<b>1,963,639</b>	<b>1,219,878</b>	<b>743,761</b>	<b>129,724</b>	<b>(165,148)</b>	<b>294,872</b>	<b>273,649</b>	<b>(18,318)</b>	<b>291,967</b>
<b>Others</b>	<b>38,066</b>	<b>38,130</b>	<b>(64)</b>	<b>599</b>	<b>1,388</b>	<b>(789)</b>	<b>987</b>	<b>1,886</b>	<b>(899)</b>
<b>Adjustments</b>	<b>(294,221)</b>	<b>(237,684)</b>	<b>(56,537)</b>	<b>(10,293)</b>	<b>(9,367)</b>	<b>(926)</b>	<b>(10,293)</b>	<b>(9,367)</b>	<b>(926)</b>
<b>Total (Consolidated)</b>	<b>¥1,707,484</b>	<b>¥1,020,324</b>	<b>¥687,160</b>	<b>¥120,030</b>	<b>¥(173,127)</b>	<b>¥293,157</b>	<b>¥264,343</b>	<b>¥(25,799)</b>	<b>¥290,142</b>

**Changes in Operating Income (Loss) (FY2022 vs FY2021)**

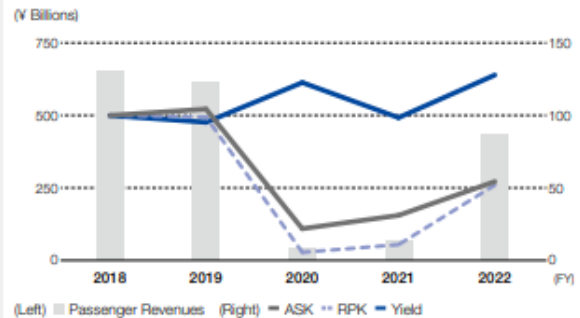


FY2021 Operating Income (Loss)	FY2022 Operating Income				
	(¥ Billions)	2022	2021	Change	YoY (%)
	Operating revenues	1,539.4	885.0	+654.3	+73.9
	Operating expenses	1,415.2	1,048.0	+367.2	+35.0
	Operating income (loss)	124.1	(162.9)	+287.0	—

**ANA International Passenger Business Results**

(Fiscal Year)	2022	2021	YoY (%)
ASK (Millions)	35,875	20,524	+74.8
RPK (Millions)	26,408	5,550	+375.8
Number of passengers (Thousands)	4,212	825	+410.3
Load factor (%)	73.6	27.0	+46.6*
Passenger revenues (¥ Billions)	433.4	70.1	+517.9
Unit revenues (¥)	12.1	3.4	+253.5
Yield (¥)	16.4	12.6	+29.9
Unit price (¥)	102,899	84,978	+21.1

\* Difference



\* Figures for ASK, RPK, and Yield are indexed using the figures for fiscal 2018 as 100.

(\$ in millions except per share and unit costs)	GAAP		\$ Change	% Change
	1Q24	1Q23		
Operating income/(loss)	614	(277)	891	NM
Operating margin	4.5 %	(2.2)%	6.7 pts	NM
Pre-tax income/(loss)	122	(506)	628	NM
Pre-tax margin	0.9 %	(4.0)%	4.9 pts	NM
Net income/(loss)	37	(363)	400	NM
Diluted earnings/(loss) per share	0.06	(0.57)	0.63	NM
Operating revenue	13,748	12,759	989	8 %
Total revenue per available seat mile (TRASM) (cents)	20.98	20.80	0.18	1 %
Operating expense	13,134	13,036	98	1 %
Cost per available seat mile (CASM) (cents)	20.04	21.25	(1.21)	(6)%
Fuel expense	2,598	2,676	(78)	(3)%
Average fuel price per gallon	2.79	3.01	(0.22)	(7)%
Operating cash flow	2,408	2,235	173	8 %
Capital expenditures	1,193	1,000	193	19 %
Total debt and finance lease obligations	19,364	21,958	(2,594)	(12)%

(\$ in millions except per share and unit costs)	Adjusted		\$ Change	% Change
	1Q24	1Q23		
Operating income	640	546	94	17 %
Operating margin	5.1 %	4.6 %	0.5 pts	11 %
Pre-tax income	380	217	163	75 %
Pre-tax margin	3.0 %	1.8 %	1.2 pts	67 %
Net income	288	163	125	77 %
Diluted earnings per share	0.45	0.25	0.20	80 %
Operating revenue	12,563	11,842	721	6 %
TRASM (cents)	19.17	19.30	(0.13)	(0.7)%
Operating expense	11,923	11,296	627	6 %
Non-fuel cost	9,227	8,506	721	8 %
Non-fuel unit cost (CASM-Ex) (cents)	14.08	13.86	0.22	1.5 %
Fuel expense	2,571	2,718	(147)	(5)%
Average fuel price per gallon	2.76	3.06	(0.30)	(10)%
Operating cash flow	2,478	2,942	(464)	(16)%
Free cash flow	1,378	1,853	(475)	(26)%
Gross capital expenditures	1,110	1,090	20	2 %
Adjusted net debt	20,219	20,964	(745)	(4)%

(in millions, except per share data)	Three Months Ended			
	March 31,		\$ Change	% Change
	2024	2023		
<b>Operating Revenue:</b>				
Passenger	\$ 11,131	\$ 10,411	\$ 720	7 %
Cargo	178	209	(31)	(15)%
Other	2,439	2,139	300	14 %
Total operating revenue	13,748	12,759	989	8 %
<b>Operating Expense:</b>				
Salaries and related costs	3,791	3,386	405	12 %
Aircraft fuel and related taxes	2,598	2,676	(78)	(3)%
Ancillary businesses and refinery	1,370	1,125	245	22 %
Contracted services	1,024	1,010	14	1 %
Landing fees and other rents	748	584	164	28 %
Aircraft maintenance materials and outside repairs	679	585	94	16 %
Depreciation and amortization	615	564	51	9 %
Regional carrier expense	550	559	(9)	(2)%
Passenger commissions and other selling expenses	550	500	50	10 %
Passenger service	413	416	(3)	(1)%
Aircraft rent	136	132	4	3 %
Profit sharing	125	72	53	74 %
Pilot agreement and related expenses	—	864	(864)	NM
Other	535	563	(28)	(5)%
Total operating expense	13,134	13,036	98	1 %
<b>Operating Income/(Loss)</b>	614	(277)	891	NM
<b>Non-Operating Expense:</b>				
Interest expense, net	(205)	(227)	22	(10)%
Gain/(loss) on investments, net	(227)	122	(349)	NM
Loss on extinguishment of debt	(4)	(22)	18	(82)%
Miscellaneous, net	(56)	(102)	46	(45)%
Total non-operating expense, net	(492)	(229)	(263)	NM
<b>Income/(Loss) Before Income Taxes</b>	122	(506)	628	NM
<b>Income Tax (Provision)/Benefit</b>	(85)	143	(228)	NM
<b>Net Income/(Loss)</b>	\$ 37	\$ (363)	\$ 400	NM
<b>Basic Earnings/(Loss) Per Share</b>	\$ 0.06	\$ (0.57)		
<b>Diluted Earnings/(Loss) Per Share</b>	\$ 0.06	\$ (0.57)		
<b>Basic Weighted Average Shares Outstanding</b>	640	639		
<b>Diluted Weighted Average Shares Outstanding</b>	645	639		