



Cost-Efficient Operating Models in the Airline Industry: A Case Study of Southwest Airlines

Hanyu Zhang

Beijing Royal School, No. 11 Wangfu St. Beiqijia Town, Changping, Beijing 102209, China
Zhanghanyu@st.brs.edu.cn

Abstract. This paper examines the business model of low-cost carriers (LCCs), using Southwest Airlines as a case study. By analyzing Southwest Airlines' operational strategies, this paper identifies key factors that have enabled the airline to maintain profitability and market position in the competitive airline industry, especially during the post-COVID-19 recovery period. A SWOT analysis shows the internal and external competitive environment of Southwest Airlines. The strengths lie in its operational efficiency and cost-control strategies, customer loyalty, and company culture, while its weaknesses include limited revenue diversification, lack of premium services, and dependence on a single aircraft type. The analysis also reveals emerging opportunities in growing demand for affordable air travel and AI-driven operational improvements. However, Southwest Airlines faces potential challenges from rising competition among LLCs, fuel price volatility, and uncertainties due to environmental regulations. These findings provide valuable insights for airlines seeking to improve their business models and maintaining profitability in a competitive industry.

Keywords: Low-Cost Carriers, Airline Industry, Southwest Airlines, SWOT Analysis.

1 Introduction

At the end of 2019, the global outbreak of COVID-19 brought unprecedented disruption to the airline industry. International travel bans and lock down restrictions imposed by governments worldwide led to significant financial losses for airlines. It further resulted in reductions of flight schedules, employee layoffs, and drops in their stock market valuations. The pandemic constrained the cash flows of airlines and even threatened the survival of many airlines.

Now, COVID-19 already become history. The aviation industry has entered into a recovery stage. The full-service carriers continue to struggle with profitability, because consumers have become more price-sensitive and less willing to pay for premium services during economic downturns. In contrast, low-cost carriers (LLCs) are able to maintain profitability despite these industry-wide challenges. Southwest Airlines, as an example, has shown its resilience during this period.

This paper analyzes the business model and operating strategies of Southwest

Airlines. Its key success factors include the use of single type of airlines and other cost-controlling strategies, high employee satisfaction and customer loyalty. The SWOT analysis further reveals the opportunities and challenges it face. This paper aims to provide insights to Southwest Airlines and other companies in the airline industry to improve their financial stability and competitiveness in the post-pandemic period. In addition, these findings can assist investors decision making when evaluating airline firms and identifying investment opportunities.

2 Operating Model of Low-Cost Carriers

The low-cost carriers (LCCs) represent a distinct airline operating model designed to minimize operational costs while maximizing revenue. Although there is not universally accepted definition, LCCs share several distinguishing characteristics. First, LCCs usually operate a homogeneous fleet consisting of a single aircraft type. This reduces maintenance costs and streamlines crew training. Second, LLCs employ routing instead of the hub-and-spoke model used by traditional airlines, enabling more direct flights and higher aircraft utilization rates. Third, LCCs primarily serve secondary airports, which charge lower landing fees compared to major airports. Fourth, LLCs reduce distribution costs by selling tickets directly to passengers through their own websites or call centers. Fifth, LLC s configure their aircraft with a single class of seating to maximize capacity and simplify operations. This enables them to serve the most passengers with the least crew members. Sixth, LLCs unbundle services, offering a basic transportation product without complementary amenities at an attractive price. Passengers need to purchase extra services like additional luggage allowance separately [1].

3 Overview of Southwest Airlines

3.1 History

Southwest Airlines was established in 1967 by Herb Kelleher and Rollin King. At the outset, Herb Kelleher sketched the business plan of the airline on a napkin. He outlined a triangle route connecting three major Texas cities: Dallas, Houston, and San Antonio. This simple yet strategic plan laid the foundation for Southwest's business. The plan was able to go through thanks to a regulatory loophole in the Civil Aeronautics Board (CAB). At that time, CAB regulations applied primarily to interstate air travel and did not cover airlines that operate exclusively within a single state. Such exemption allowed Southwest to bypass some restrictions and implement a low-cost operating model from the start [2].

To maximize efficiency and reduce operating costs, Southwest adopted a single fleet operating model that consists of Boeing 737 aircraft solely, equipped with same series of engines. This help simplify maintenance and training, thus, reducing operational costs.

3.2 Current Operations

According to the statistics data by the end of 2024, Southwest Airlines has 803 Boeing 737 series aircraft in operating. Based on available data, all aircrafts are equipped with an all-economy cabin layout. There are not first or business classes on the board. As the choice of engine, the Boeing 737 Max 8 aircrafts are powered by CFM LEAP-1B engines. Other Boeing 737 aircrafts use CFM56-7 as the source of power.

A key performance metric in the airline industry is the passenger load factor (PLF). It describes the relationship between available seat miles and revenue passenger miles realized. Also, PLF is closely related to profitability. A higher PLF indicates better utilization of seating capacity, lower cost per passenger, and higher profit margin given the same ticket price [3]. The load factor of Southwest Airlines is 80.4% in the 2024 finance year [4]. Compared with other full-service carriers (FSCs), the load factor of United Airlines is 85.3% in the 2024 finance year [5]. These statistics suggest that there is still room of efficiency improvements for Southwest Airlines.

4 SWOT Analysis

SWOT analysis is a tool for analyzing the internal and external competitive environments. There are four components used to describe the competition in the market: strength, weakness, opportunity, and threat. This paper applies the SWOT analysis to study Southwest Airlines' business operation, identifying the advantages and limitations of its business. The analysis aims to understand how Southwest competes in the airline industry, offering insights that may support future research and strategic decision-making.

4.1 Strengths of Southwest Airlines

Single Type of Aircraft. In Southwest Airlines, all aircrafts are Boeing 737 series with the same type of engine. This strategic choice reduces its training and operating costs. There is no need for complex training program that would otherwise be required for a diverse combination of aircrafts. It also help reduce maintenance costs.

High Customer Loyalty. Southwest airlines provide cheaper tickets than other airlines in American thanks to its cost-controlling strategies. The competitive ticket pricing and consumer loyalty program foster strong customer relationships. Through the "Rapid Rewards" program, consumer can accumulate points from each purchase. These points can be used to redeem future flights. Besides, the service of Southwest Airlines makes passengers feel valued and appreciated, further strengthening customer loyalty.

Strong Company Culture. Company culture is a type of intangible assets for each company. Also, company culture can shape employees' attitudes and behavior within the company. Southwest Airlines has one of the greatest company cultures around the world. There are many case studies that analyzes how Southwest Airlines achieve this. Moberly (2014) finds that the strong company culture is a key for Southwest Airlines to keep its competitiveness in the LCCs market [6]. The great company culture

contributed to the airline being recognized as the best employers on Forbes' List in 2022 [7]. Within Southwest Airlines, employees are referred to as "warriors", fostering a team mentality that enhances operational efficiency [8].

4.2 Weaknesses of Southwest Airlines

Limited Revenue Streams. Southwest airlines only use Boeing 737 in its operation. It cannot explore the international or long-distance carrier market due to the limitation of Boeing 737. Besides, the public trust in Boeing 737 has decreased significantly following a series of safety incidents. The demand of travelers may fail correspondingly due to safety concerns [9].

4.3 Opportunities of Southwest Airlines

Ever-Increasing Demand of Low-Cost Air Transport. Prior to the COVID-19 pandemic, the demand for both leisure and business travel was robust. All airlines experienced sharp drops during the pandemic. The demand is now rapidly recovering. According to IATA data, North American carriers reported a 28.3% annual traffic rise in 2023 compared to 2022. Capacity increased by 22.4%, and load factor climbed 3.9 percentage points to 84.6%. The December 2023 traffic rose 13.5% compared to the previous year, indicating great potential of air transport market [10]. Southwest Airlines can benefit from this recovery phase, further enhancing its market share.

Technology Integration. The advancements in artificial intelligence (AI) offers significant opportunities for the airline industry through its powerful computational capabilities. Airlines can integrate AI systems into their business operations to improve efficiency and reduce operational costs. For example, AI can help customer service to answer common questions or provide suggested responses to reduce customer waiting time and improve customer satisfaction. Alexander et al. (2024) shows that the passenger will be satisfied with the service from the AI model. Using machine learning in the AI model to redesign the price of each route [11]. However, AI models have not yet been widely used in the operation. There is a chance for Southwest Airlines to increase market share and decrease operation cost by embracing new technologies.

4.4 Threats of Southwest Airlines

Intensified industry competition. Southwest Airlines is achieved from the American air transport market. The other CEO also wants to build another low-cost carrier company to get some market share to gain profit. The market share of Southwest Airlines could decrease due to other low-cost carriers joining the market.

Sensitivity to Oil Price. The low-cost carriers are more sensitive to the fuel price fluctuations because fuel expenses accounts for a greater proportion of its operating cost. Increase in oil price will result in higher cost that either reduces the profit margin or requires a more expensive ticket to cover the increasing cost [12].

Climate Change Concerns. Airlines face growing pressure to reduce carbon emissions due to climate change concerns. As public awareness and investor scrutiny intensify, both passengers and investors demand more sustainable practices. At the same time, governments worldwide are considering or implementing environmental regulations such as carbon cap-and-trade market and carbon taxes, which can further increase the

operating costs. These uncertainties pose challenges especially for carriers with less fuel-efficient aircrafts or limited access to alternative technologies.

5 Conclusion

This paper studies the business model of low-cost carriers using Southwest Airlines as a case study. Low-cost carriers use single aircraft type to lower maintenance and training costs, operate direct point-to-point routes to achieve high aircraft utilization rates, serve secondary airports with lower landing fees, save distribution costs by selling tickets directly to consumers, and maximize capacity with single-class seating. These advantages ensure Southwest Airlines survive the fierce competition nowadays. Beyond the common characteristics of low-cost carriers, the strong corporate culture and customer loyalty of Southwest Airlines help it maintain its market share and benefit from the recovering phase post-pandemic. However, it still faces potential challenges, such as fuel price fluctuations and uncertainties of environmental regulations. Overall, this paper provides practical implications for airlines to make strategic decisions and improve business operations.

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