



ORIGINAL RESEARCH ARTICLE / ÖZGÜN ARAŞTIRMA MAKALESİ



Copyright@Author(s) - Available online at dergipark.org.tr/en/pub/igusbd.
Content of this journal is Licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 (CC BY-NC-ND) International License.

Airline Mergers and Financial Performance: Evidence from the Delta–Northwest Case

Havayolu Şirketi Birleşmeleri ve Finansal Performans: Delta–Northwest Örneği

¹Nihat GÜMÜŞ

²Ahad Ghasemi FAROKHRAN

*This study has been derived from the graduation project titled “Grow or Die: The Role of M&As in the US Air Transportation Industry – The Case Study Delta Airlines”, which was accepted in 2024 at Ibn Haldun University, School of Graduate Studies for Non-Thesis Masters in Air Transportation Management Program and prepared by Ahad Ghasemi FAROKHRAN under the consultancy of Asst. Prof. Dr. Nihat GÜMÜŞ.

¹Asst. Prof., Ibn Haldun University, School of Business, Department of Management, İstanbul, Türkiye.

✉ nihat.gumus@ihu.edu.tr

²MA Student, Ibn Haldun University, School of Graduate Studies, Masters in Air Transportation Management, İstanbul, Türkiye.

✉ ahad.ghasemi@stu.ihu.edu.tr

Geliş/Received: 16.07.2025

Kabul/Accepted: 13.01.2026

Abstract

Aim: This study aims to examine the financial effects of mergers and acquisitions (M&As) within the air transportation sector with a specific emphasis on the merger between Delta Airlines and Northwest Airlines in 2008. Consequent to the deregulation and liberalization process, airlines have increasingly engaged in mergers and acquisitions to achieve economies of scale, broaden their route networks, and enhance their competitiveness. The paper evaluates whether the proposed advantages of mergers and acquisitions are substantiated by analyzing the financial performance of Delta Airlines prior to and following the merger.

Method: The research utilizes key performance indicators (KPIs) related to revenue, profitability, cost efficiency, and market share. Financial data was collected from company-released annual reports from 2000 until 2019, before the industry collapsed because of COVID-19. The study compares the KPIs for the periods before and after the merger decision using a descriptive analysis supported by parametric and non-parametric tests.

Results: The results clearly indicate that although Delta experienced a challenging transition year in 2008, the long-term effects of the merger were strongly positive. The analysis results show that the operational and financial performance of Delta improved after the merger.

Conclusion: The study's findings corroborate the theoretical foundations indicating that mergers and acquisitions may yield favorable results for the combined entities regarding operational efficiency, load factor, and profit margins when evaluated against various key performance indicators. This study contributes to the literature on mergers and acquisitions by offering empirical evidence on the positive post-merger operational and financial effect of one of the most significant mergers in U.S. aviation history.

Keywords

Financial performance, air transportation, airline liberalization, mergers and acquisitions, Delta-Northwest merger

JEL Code: G34, L93, G30

Öz

Amaç: Bu çalışma, özellikle 2008 yılında Delta Airlines ile Northwest Airlines arasındaki birleşmeye odaklanarak hava taşımacılığı sektöründeki birleşme ve satın almaların (M&As) finansal etkilerini incelemeyi amaçlamaktadır. Sektördeki liberalleşme ile paralel olarak havayolları, ölçek ekonomisi elde etmek, rota ağlarını genişletmek ve rekabet güçlerini artırmak için giderek daha fazla birleşme ve satın alma işlemine girmiştir. Makale, sektörde yer alan birleşme ve satın almaların olası sonuçları ile ilgili literatürde öngörülmüş kimi sonuçları Delta Airlines'ın örneği üzerinden değerlendirmektedir.

Yöntem: Araştırmada, gelir, karlılık, maliyet etkinliği ve pazar payı ile ilgili temel performans göstergeleri (KPI'lar) kullanılmaktadır. Analizde kullanılan finansal veriler 2000 yılı ile COVID-19 etkisiyle sektörde yaşanan çöküş öncesindeki son yıl olan 2019 yılları arasında yayınlanmış yıllık raporlardan derlenmiştir. Çalışmada birleşme kararı öncesindeki ve sonrasındaki temel performans göstergeleri parametrik ve parametrik olmayan testlerle desteklenmiş betimsel analiz yoluyla karşılaştırılmaktadır.

Bulgular: Çalışmanın bulgularına göre, 2008 yılında geçiş sürecinde yaşanan kimi sıkıntılara rağmen birleşmenin uzun dönemli etkileri olumlu yönde olmuştur. Analiz sonuçları birleşme sonrasında Delta'nın operasyonel ve finansal performansının geliştiğine işaret etmektedir.

Sonuç: Çalışmanın bulguları, birleşme ve satın almaların, çeşitli temel performans göstergelerine göre değerlendirildiğinde, birleşen şirketler için operasyonel verimlilik, yük faktörü ve kâr marjları açısından olumlu sonuçlar verebileceğini gösteren teorik çerçeveleri doğrulamaktadır. Bu çalışma, ABD havacılık tarihindeki en önemli birleşmelerden biri olan Delta – Northwest birleşmesinin, birleşme sonrası olumlu operasyonel ve finansal etkisine dair ampirik kanıtlar sunarak birleşme ve satın almalar literatürüne katkıda bulunmaktadır.

Anahtar Kelimeler

Finansal performans, hava taşımacılığı, havacılık sektöründe liberalleşme, birleşme ve satın almalar, Delta – Northwest Birleşmesi

JEL Kodu: G34, L93, G30

Introduction

Over the past four decades, the airline industry has undergone a profound transformation, driven by globalization, deregulation, technological advancement, and evolving consumer preferences. At the heart of this transformation lies the push towards market liberalization and the pursuit of greater efficiency, scale, and connectivity by the airline operators. The Airline Deregulation Act of 1978 in the United States marked a critical turning point, eliminating the federal government's control over fares, routes, and market entry. This legislative shift opened the market to new entrants, enabled price competition, and fundamentally reshaped the strategic landscape of commercial air transportation sector (Morrison & Winston, 1995, pp. 6-12; Borenstein & Rose, 2014, pp. 75-76).

Prior to deregulation, U.S. airlines operated in a highly regulated environment that limited route expansion and controlled pricing. The industry lacked meaningful price-based competition, and profitability was largely tied to reputation, brand image, and frequency of service rather than operational performance. The introduction of deregulation not only altered the U.S. market but also triggered similar reforms globally, particularly in Europe, where the European Union gradually introduced its liberalization measures throughout the 1990s, culminating in a single aviation market by 1997 (Button, 2004, pp. 23 -50). These changes catalyzed a global shift in market dynamics, prompting carriers to pursue aggressive expansion strategies, including international routes, strategic alliances, and, more notably, mergers and acquisitions (M&As).

As international markets opened and competitive pressures intensified, airline M&As emerged as a critical strategy for achieving growth, optimizing route networks, gaining access to congested hubs, reducing unit costs, and responding to market saturation in domestic markets. Between 2005 and 2020, dozens of mergers reshaped the global airline map, including landmark consolidations such as Delta-Northwest (2008), United-Continental (2010), American – US Airways (2013), and British Airways – Iberia (2010), which later became part of International Airlines Group (IAG). In Europe, Lufthansa expanded through the acquisition of SWISS, Austrian Airlines, and Brussels Airlines, while Air France merged with KLM to form one of the largest transnational aviation groups.

This wave of consolidation has been accompanied by profound structural and financial implications. For instance, the U.S. airline industry, once home to more than 20 truck carriers in the late 1970s, is now dominated by four major

players - American, Delta, United, and Southwest – which collectively controlled over 80% of domestic capacity by 2020 (U.S. Department of Transportation, 2021). At the same time, global passenger numbers surged from 1.5 billion in 1990 to 4.5 billion in 2019, emphasizing the scale of demand that these consolidated entities must serve (IATA, 2020). However, such growth and concentration raise important questions about the financial outcomes of M&As: Do airline mergers actually lead to improved profitability, efficiency, and shareholder value? Or do international challenges, cultural mismatches, and regulatory constraints erode the anticipated gains?

While previous literature has extensively explored the strategic motives for M&As in aviation -including access to new markets, synergies, network optimization, and survival – there is relatively little empirical research examining the post-merger financial performance outcomes (Doganis, 2006, pp. 258-287; Merkert & Morrell, 2012, pp. 853-862). This constitutes a critical gap, especially given that M&As are not costless endeavors. The integration of two airlines involves complex tasks such as fleet harmonization, IT system alignment, labor union negotiation, and cultural integration – all of which can delay or even derail financial synergies.

Several case studies point to mixed outcomes. For example, while the Delta – Northwest merger was eventually heralded as a success, leading to an expanded global network and over \$500 million in annual synergies (Delta Airlines, 2010, pp- 6-35), some other mergers failed. Alitalia's repeated attempts at consolidation failed to yield sustainable financial performance, despite various equity injections and international partnerships. Similarly, cross-border M&As continue to face national regulatory hurdles; U.S. law, for instance, prohibits foreign ownership exceeding 25% of voting stocks in domestic carriers, limiting the scope of truly global airline consolidation (ICAO, 2019).

Another layer of complexity stems from the competitive pressure of low-cost carriers (LCCs), which have grown significantly in the post-deregulation era. LCCs account for over 35% of global airline capacity, up from just 15% in 2006 (Statista, 2021). In many regions, including Europe, Southeast Asia, and Latin America, these carriers have disrupted legacy business models and reduced fare levels, compelling full-service carriers to either adopt hybrid strategies or seek consolidation to preserve market share and profitability. In this environment, M&As are increasingly framed not just as growth strategies but as defensive tools for maintaining relevance.

Therefore, it is essential to rigorously analyze whether M&As deliver the improvement in financial performance as expected. Key metrics such as operating revenue, operating income, operating return on assets, operating margin, revenue passenger mile (RPM), and cost per available seat mile (CASM) provide insight into the effectiveness of post-merger integration. Moreover, performance should be evaluated over a multi-year period for transition effects and delayed synergy realization.

The main objective and contribution of this study is to investigate the financial impact of M&As in the airline industry by focusing on detailed case study of the Delta and Northwest Airlines merger, which is one of the largest and most influential mergers not just in the U.S. but also in World aviation history. The study aims to analyze the strategic rationale behind this merger and examine its relationship with selected financial performance indicators. Using a comparative framework, the pre- and post-merger trends in key performance indicators are assessed and it is found out that the merger served as a strategic inflection point that significantly improved Delta's overall financial performance. The findings aim to guide airline executives, regulators, and scholars in better understanding the strategic and financial implications of consolidation in increasingly competitive and global air transportation markets.

The study proceeds with a literature review related to strategic alliances and M&As in the transportation industry. Following the data and methodology of the study, the challenges and pre-and post-merger financial indicators of the Delta and Northwest Airlines merger have been analyzed. The study then concludes with limitations and implications for further research.

Literature Review: Strategic Alliances and M&As in the Air Transportation Industry

Commercial and Strategic Alliances in the Air Transportation Industry

The deregulation of the US aviation market in the 1980s and, subsequently, Europe in the 1990s facilitated significant growth opportunities for airline companies. In fact, increased competition in the airline industry led the firms to construct alliances with each other.

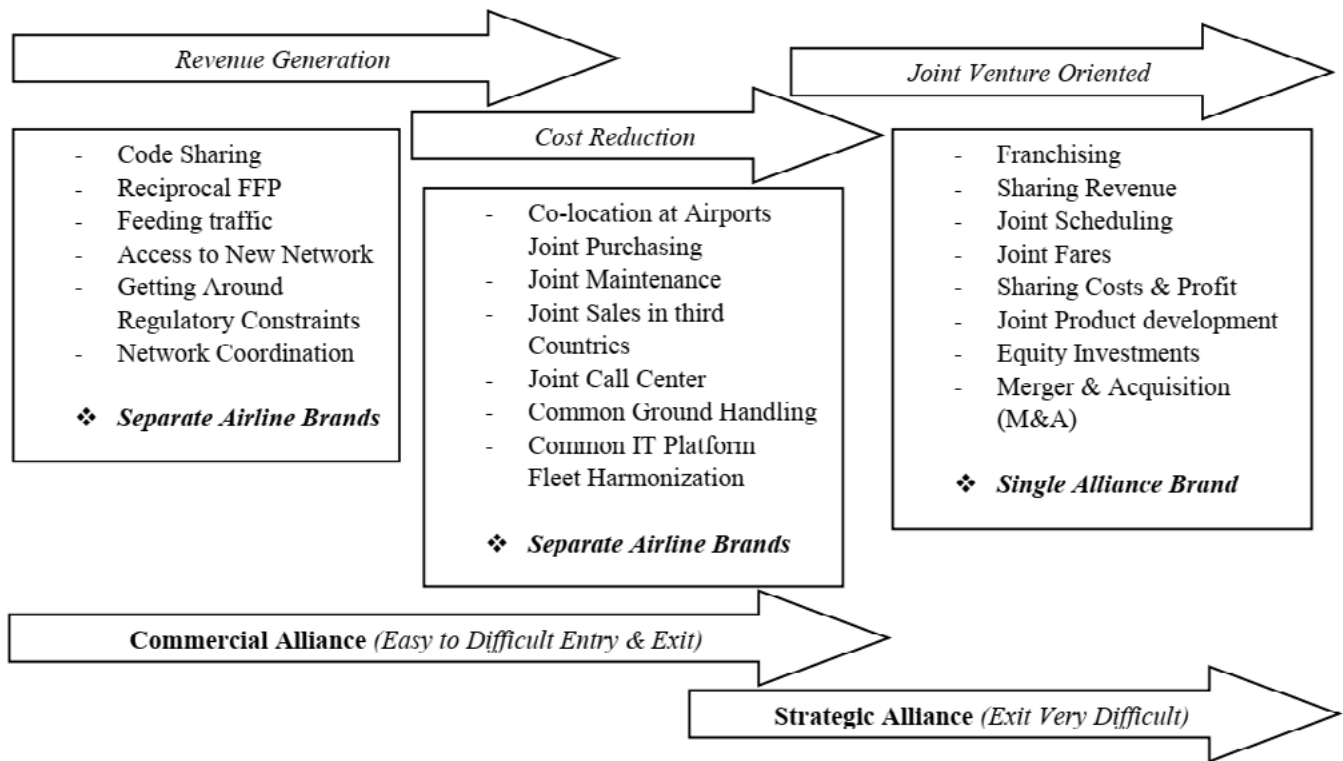


Figure 1. Modes of alliances among airline companies

Source: Authors' adaption from Doganis (2006)

Figure 1 above describes different forms of alliances that can take place within the air transportation industry. Airline collaboration can be classified as either commercial or strategic. Commercial alliances, also known as marketing or tactical agreements, typically involve bilateral agreements between airlines for either revenue generation or cost reduction purposes. Alliances such as code sharing, reciprocal FFP, and feeding traffic are commercial alliances for revenue generation, whereas co-location at airports, jointly operated purchasing, maintenance, sales operations in third countries, and call center activities are conducted for cost reduction purposes.

As the level of collaboration between airlines intensifies, the alliances become more strategic and more joint venture- oriented. Strategic alliances between airlines start with initiatives such as revenue sharing, joint scheduling, and joint fares and extend to equity investment among different carriers. The cooperation may eventually lead to either the merger of two airlines or to the acquisition of one by the other.

Theoretical explanations for alliances mainly root in economic theories. The reasons why the firms are building alliances can be explained via theoretical perspectives such as resource-based view, transaction cost economics, competency-based view, institutional-based view, knowledge-based view, and game theory (Haghighi & Ghasemi, 2012, pp. 27-50). Brueckner et al. (2013) propose that alliances can be conceptualized based on market power theory and transaction cost economics. In addition to these, Dyer and Singh (1998) argue for the inclusion of the resource-based view, the industry structure view, and the relational view as supporting perspectives in understanding and analyzing alliances.

M&As as a Form of Strategic Alliance

Airline mergers and acquisitions (M&A) involve the consolidation or combination of two or more airline companies. A merger occurs when two airlines agree to combine their operations and assets, forming a new, unified entity. This often involves pooling resources, staff, and services to create a larger, more comprehensive airline. For instance, United Airlines and Continental Airlines merged in 2010, creating one of the world's largest airlines in the US. On the other hand, an acquisition takes place when one airline company purchases another, acquiring its assets, routes, and customer base, and often integrating its brand into the acquiring company's operations. Southwest Airlines' acquisition of AirTran Airways in 2011 expanded Southwest's route network, particularly in the eastern United States and internationally. Similarly, Lufthansa's acquisition of Swiss International Airlines in 2005 bolstered Lufthansa's position in Europe and expanded its network, especially in the premium segment.

Table 1. List of major M&As in the air transportation industry

Merging Airlines	Merged Entity	Year
North America		
Frontier / Central Airlines	Frontier Airlines	1967
Delta / Northeast Airlines	Delta Airlines	1972
Pan Am / National Airlines	Pan Am	1980
Continental / Texas Air Corporation	Continental	1982
Delta / Western Airlines	Delta Airlines	1986
Delta / Pan Am Airlines (Shuttle and Atlantic Routes)	Delta Shuttle	1991
United / Pan Am: Latin & Caribbean Routes	United Airlines	1992
Southwest /Morris Airlines	Southwest Airlines	1993
AirTran Airways/ ValuJet	AirTran Airways	1997
American Airlines/Reno Air	American Airlines	1999
Delta Airlines/Atlantic Southeast	Delta Airlines	1999
Delta Airlines/Comair	Delta Airlines	1999
American Airlines/TWA	American Airlines	2001
Republic Airways/Shuttle America	Republic Airways	2005
US Airways/America West Airlines	US Airway	2005
SkyWest/Atlantic Southeast Airlines	SkyWest/ASA	2005
Southwest / ATA Airlines	Southwest Airlines	2008
Delta / Northwest Airlines	Delta Airlines	2008
Republic Airways/Midwest Airlines	Republic Airways	2009
Republic Airways/Frontier Airlines	Republic Airways	2009
United / Continental Airlines	United Airlines	2010
Southwest Airlines/AirTran Airways	Southwest Airlines	2011
American Airlines/ US Airway	American Airlines	2013
Atlas Air / Southern Air	Atlas Air	2016
FedEx / TNT Express	FedEx	2016
Alaska Airlines/Virgin America	Alaska Airlines	2018
Alaska / Hawaiian Airlines	Alaska Airlines	2023
Europe		
British Airways/Delta Air	Deutsche BA	1997
EasyJet/GoFly	EasyJet	2003
Ryanair/Buzz	Ryanair	2003
Air France/KLM	Separate brands	2004
Lufthansa / Swiss Airlines	Separate brands	2005
Lufthansa /45% of Brussels Airlines	Separate brands	2006
Air Berlin / LTU	Air Berlin	2007
Lufthansa / BMI	Separate brands	2009
Lufthansa/Austrian Airlines	Separate brands	2009
Vueling / Clickair	Vueling	2009
British Airways / Iberia	International Airlines Group (IAG)	2011
Skyways/City Airlines	Skyways	2011
IAG / Vueling	IAG / Vueling	2012
Austrian Airlines/ Lauda	Separate brands	2013

Table 1. Continue

Merging Airlines	Merged Entity	Year
<i>Europe</i>		
IAG / Aer Lingus	IAG / Aer Lingus	2015
Lufthansa/remaining 55% of Brussels Airlines	Separate brands	2016
Lufthansa/Air Berlin	Lufthansa	2017
IAG / 20 % of Air Europa	IAG / Air Europa	2022
Lufthansa / 41% of ITA Airways (successor of Alitalia)	Lufthansa / ITA Airways	2023
<i>Asia/Pacific</i>		
Cathay Pacific/ Dragonair	Separate brands	2006
Air India/Indian Airlines	National Aviation Co. of India	2007
Kingfisher/Air Deccan	Kingfisher	2008
China Eastern/Shanghai Airlines	Separate brands	2009
Air Jamaica/Caribbean Airlines	Air Jamaica	2010
<i>South America</i>		
Copa/AeroRepublica	Separate brands	2005
Avianca/TACA (in 2010 + AeroGal)	Avianca-TACA	2009
Lan Airlines (+Aires in 2010)/TAM	LATAM Airlines	2010
GOL/WebJet	GOL	2011
Delta/ Aero Mexico	Delta's 49 % stake in Aero Mexico	2017

Source: Adapted and updated from Merkert & Morrell, 2012

Traditionally, airline mergers were prominent in the US air market, but since the deregulation of Europe, particularly post-2003, there has been a surge in European M&As, as depicted in Table 1. Since the start of deregulation, many air transportation companies have either merged or been acquired by another company in the U.S. As an example, just between 2013 and 2016, the U.S. aviation industry experienced a notable increase in M&A activity. In 2013, there were 97 reported M&As. This number rose to 132 in 2015 and further to 162 in 2016. As a result of those mergers, four major carriers now dominate the U.S. airline industry – American Airlines, Delta Air Lines, Southwest Airlines, and United Airlines – which collectively control about 78% of the domestic market.

Moreover, since 2007, intriguing developments in M&A activities have emerged in Latin America and the Asia-Pacific regions. Alongside acquisitions, there have been share swap contracts (e.g., Air Asia and Malaysia in 2011) and companies acquiring or increasing their share in others (e.g., ANZ in Virgin Australia). Interestingly, there is not any notable merger or acquisition in Middle Eastern and African markets yet, primarily due to most being government-owned. Consequently, growth through M&A has garnered global attention, especially in markets approaching maturity like North America and Europe.

Table 2. Major theories explaining M&As in the air transportation industry

Theory	Explanation	Example	Reference
Market Power Theory	Airlines merge to increase market share, reduce competition, and enhance pricing power.	The America Airlines – US Airways (2005) merger led to fewer competitors and optimized pricing.	Kim & Singal (1993)
Synergy Theory	M&As create value through cost efficiencies, revenue enhancements, and financial synergies.	The Delta – Northwest Airlines merger (2008) optimized fleet operations and expanded international routes.	Gaughan (2017)
Transaction Cost Economics/Efficiency Theory	Airlines merge to reduce redundant costs, optimize routes, and improve service efficiency	The Southwest – AirTran merger (2011) expanded presence in major hubs while streamlining the costs.	Brueckner et al. (2013)

Table 2. Continue

Theory	Explanation	Example	Reference
Financial Distress Theory	M&As serve as a strategy to rescue financially struggling airlines by acquiring them at a discount.	The US Airways- America West merger (2005) helped both airlines regain financial stability.	Andrade et al. (2001)
Hub-and-Spoke Theory	Airlines merge to strengthen their hub networks, optimizing passenger flow and reducing costs.	The United-Continental Airlines merger (2010) reinforced its hub system, creating a global network.	Borenstein (1992)
Globalization Theory	Airlines merge to expand their global presence and strengthen international alliance.	The LATAM Airline (LAN-TAM merger, 2012) expanded operations into new markets.	Iatrou & Oretti (2007)

Source: Authors' own work

There are several theories that might account for why the firms are merging with or acquiring one another in the air transportation sector. Table 2 above provides a list of those theories together with their basic notions about M&As, an example from the sector, and an academic reference.

First and foremost, the market power theory (MPT) posits that organizations merge with and acquire one another to boost their market power by increasing their market shares, reducing competition, and enhancing pricing power (Kim & Singal, 1993, pp. 549-569). Another explanation for the motivation to engage in M&As is to create financial synergies to reduce redundant costs and enhance revenue synergies (Gaughan, 2017, pp. 138-147). The merger between Delta and Northwest Airlines in 2008 has resulted in optimized fleet operations with stronger competitive positions to improve their overall success. Theoretical frameworks such as transaction cost and/or efficiency theory argue that airlines merge alliances to simplify transactions between markets, leading to reduced redundant costs, optimized routes, and improved service efficiency (Brueckner et al., 2013, pp. 660-679). The Southwest – AirTran merger in 2011 provides empirical evidence for this framework since the merger expanded the presence of the merged companies in major hubs while streamlining the costs. There are examples of mergers in the airline industry that served to rescue financially struggling airlines (Andrade *et al.*, 2001, pp. 103-120). For example, the US Airways – America West merger in 2005 helped both airlines regain financial stability. Borenstein (1992, pp. 49-71) asserts that airlines merge to strengthen their hub networks, optimizing passenger flow and reducing costs. The United-Continental Airlines merger in 2010 reinforced its hub system, creating a global network. Finally, airline mergers and acquisitions can be explained by referring to the theory of globalization. Accordingly, the airlines join their forces to expand their global presence (Iatrou & Oretti, 2007, pp. 1-23). An example of this theoretical explanation is the LATAM Airline (LAN-TAM merger, 2012) that expanded its operations into new markets after the merger.

Advantages and Disadvantages of M&As at Firm and Industry Level

Recent research provides supporting evidence for both the advantages and disadvantages of M&As in the aviation industry (Iatrou and Oretti, 2007). While insightful, the literature employing econometric techniques remains limited, particularly in examining how airline size influences operational efficiency and competitiveness. Studies by Barros and Peypoch (2009), Hong and Zhang (2010), and Assaf (2011) contribute to this discourse by analyzing the effects of airline size and market integration on efficiency, though these works primarily center on small- and medium-sized carriers.

A critical gap in the literature is the limited attention to potential diseconomies of scale – the idea that airlines may become too large to maintain operational efficiency due to the cubic cost curve inherent in the industry (Vasigh *et al.*, 2018). While Merkert and Hensher (2011) briefly touched upon this issue, their focus leaned toward analyzing the impact of fleet planning, and particularly its diversity, on airline efficiency.

Despite these concerns, many recent M&A activities in the airline industry are driven by a strategic pursuit of various synergies and competitive advantages. The benefits of airline M&As can be grouped into the following categories:

- Cost reductions through operational efficiency
- Increased market share and revenue potential
- Network expansion and route optimization
- Reduction in competition
- Access to constrained airport slots and facilities

- Improved customer appeal through service integration
- Acquisition of aircraft and related assets

Cost synergies often emerge from rationalizing fleets and streamlining networks, as observed in the North American context, where post-merger restructuring led to rapid fleet optimization. By reducing redundant routes and optimizing load factors, airlines improve overall asset utilization. In addition, merged airlines can reduce labor costs through increased productivity and harmonization of staff expenses – though labor unions may resist these changes, especially when there is a need to align disparate pay scales (Roller *et al.*, 2006, pp. 24-30).

Further savings can be realized by consolidating overhead functions such as sales offices, call centers, and general distribution system (GDS) agreements, leading to stronger negotiating positions. Shared procurement, fuel hedging, and maintenance operations also offer considerable scale economies (Merkert & Morrel, 2012, pp. 853-862). Nonetheless, integration challenges -particularly IT systems – can impose short-term disruptions, as exemplified by the operational failure during the US Airways and America West merger.

From a revenue perspective, M&As enable schedule and fare coordination, boosting revenue via improved network connectivity, aligned pricing, and increased market dominance. However, such consolidation also raises antitrust concerns, especially in overlapping markets, as seen in the European Commission's Scrutiny of the Air France – KLM merger (Gudmundsson & Lechner, 2006, pp. 153 - 156). When approved, these mergers can also replicate the benefits of strategic alliances, but with greater structural control.

Strategic airport assets, including slots at capacity-constrained airports such as London Heathrow, are another key incentive behind M&A activity. Access to such hubs can significantly increase profitability, as demonstrated by Lufthansa's acquisition of BMI and Southwest's takeover of Morris Air. These transactions enhance frequent flyer programs, allow more frequent departures, and support a seamless travel experience – factors that directly enhance passenger loyalty and market reach (Iatrou and Oretti, 2007, pp. 1-59).

Moreover, M&As facilitate hub consolidation and network optimization, allowing carriers to restructure overlapping operations and improve connection efficiency. In some cases, the motivation extends beyond commercial gains to strategic deterrence, preventing potential competitors from acquiring key assets or entering core markets. While rescuing a distressed carrier through a merger may preserve capacity and jobs, market dynamism may sometimes be better served through organic entry or restructuring.

Finally, mergers provide quick access to aircraft and related infrastructure – essential when expanding into new markets or scaling operations. The favorable valuation of target airlines' fleets and assets may make such acquisitions cost-effective, as illustrated by Southwest's acquisition of AirTran's aircraft portfolio (Button, 2024, pp. 67-89).

Aside from the potential benefits, previous discussions have outlined some of the risks or potential disadvantages linked to mergers. One major theoretical problem is the potential for experiencing diseconomies of scale and hidden costs (Roller *et al.*, 2006, pp. 50-51). Implementing a merger might entail risks, such as hidden costs, so that the expected synergies can be offset by integration costs, internal resistance, and organizational complexity, especially in cross-border and labor-sensitive sectors. Merkert and Morrell (2012) discuss both the motivations and challenges of airline M&As, questioning whether anticipated synergies offset drawbacks like diseconomies of scale or integration friction.

Another challenge might be related to integration and cultural conflicts (Gudmundsson and Lechner, 2006, pp. 153-156). Mergers often involve difficulties in integrating corporate cultures and employee systems, as observed during the Air France-KLM merger. Furthermore, the anticipated gains from the M&As might be difficult to assess and may take years to materialize. The meta-analysis conducted by King *et al.* (2004) displays that many M&As fail to achieve their predicted financial benefits, particularly when cultural or operational integration proves more difficult than expected.

Finally, there are some legal risks and barriers associated with airline mergers and acquisitions. M&As can increase market concentration and reduce competition, leading to antitrust scrutiny (Bilotkach, 2015, pp. 1-9). In addition, in some countries there are restrictions on foreign ownership in the airline industry that are hindering international airline mergers and acquisitions (Button, 2004, pp. 59-91).

In general, merger and acquisition activities involve inconsistencies that may only become certain long after the transaction is completed. This complexity makes it difficult to assess the ultimate gains of M&A. However, one immediate consequence is increased market concentration and decreased market transparency. M&A activities tend to result in anticompetitive market structures, posing challenges in obtaining approval from antitrust authorities,

as exemplified by the failed 2006 Delta/US Airways merger. National ownership rules, prevalent in many countries, further complicate airline market M&A, with restrictions on foreign ownership such as the 25% limit in the US and even lower limits in some countries to safeguard international air service agreements.

Merkert & Morrel (2012) argued that due to the rise in M&A activity in aviation markets since 2003, airlines are operating in a highly competitive and consolidating environment where the benefits of M&A transactions surpass the drawbacks. It is worth examining the feasibility of growth due to the possible existence of diseconomies of scale. Put simply, airlines, like other sectors, may eventually become too large to operate efficiently.

In summary, while integration risks and regulatory hurdles remain significant, the potential strategic, operational, and financial gains from M&As continue to make them an attractive growth avenue for airlines operating in highly competitive and capacity-constrained global environment. In fact, the following analysis on Delta Airlines is a case-wise attempt to test whether those advantages hold from a financial perspective.

Methodology and Data of the Study

The study uses a longitudinal case study approach to assess the impact of M&As on airline performance, focusing on Delta Airlines. The case study method is widely recognized for its ability to provide deep insights into complex organizational processes and strategic transformations over time (Yin, 2018). Given the intricate and context-dependent nature of M&A outcomes in the airline industry, this method is especially appropriate for examining both qualitative and quantitative dimensions of firm behavior within a real-world setting (Eisenhardt, 1989; Gerring, 2004).

There are several reasons why the study focuses on Delta Airlines as an exemplary case for analyzing the effects of M&As. First of all, as one of the most prominent players in global airline industry, Delta reported \$47 billion in operating revenue, making it the largest airline in the world by revenue at that time (Delta Annual Report, 2019). It carried over 200 million passengers annually, maintained a global workforce exceeding 100,000 employees, and served more than 900 destinations in 140 countries through its own operations and strategic alliances. Consequently, Delta held an estimated 17% share of the U.S. domestic market in 2019 highlighting its influence in the industry.

A second reason to select the Delta airlines as a case is its deliberate and long-term strategy of mergers, acquisitions, and equity investments that reshaped the company's size, scope, and efficiency. Over the more than two decades, Delta Airlines has engaged in both horizontal (e.g., airline mergers) and vertical (e.g., alliances with regional carriers, IT systems, and foreign equity investments) integration activities. Table 3 below summarizes some of those activities in two main categories, namely commercial and strategic decisions. While the commercial decisions target cost reductions and revenue-generating activities, strategic decisions focus on growth through mergers, joint ventures, and equity investments. In this respect, some important examples of strategic growth decisions include the acquisition of Atlantic Southeast Airlines (ASA) and Comair in the late 1990s and early 2000s to empower regional operations, the merger with Northwest Airlines in 2009, and equity in global carriers such as 49% of Virgin Atlantic, 51% of Grupo Aerom xico, 20% of LATAM Airlines, and 9% of Air France – KLM.

Among those strategic decisions, the merger with Northwest Airlines stands out as a transformative event not just for Delta Airlines but also for the global airline industry. It was the largest merger in the recorded history of the industry that resulted in the world's largest carrier both in terms of traffic and revenue. The merger enabled Delta to expand its trans-Pacific network and gain access to Northwest's strong presence in Japan and China, integrate Northwest's frequent flyer base and improve its operations and IT systems. The merger of Delta with Northwest has been frequently cited in the academic literature as a model of post-merger integration and value creation (Iatrou and Oretti, 2007, pp. 23-59) and this is why this study pays special emphasis on this merger as a case study.

Table 3. Commercial and Strategic Alliances of Delta Airlines

	Commercial Decisions		Strategic Decisions
Year	Revenue Generation	Cost Reduction	Mergers & Acquisitions
1994	- Delta Connection program¹ - Codeshare & Marketing agreement - Airport Access - Delta Shuttle		- 23.3% ASA (Atlantic Southeast Airlines) - 20.6% Comair - 13.6% SkyWest - 38% Worldspan

Table 3. Continue

	Commercial Decisions		Strategic Decisions
Year	Revenue Generation	Cost Reduction	Mergers & Acquisitions
1999			- 100% ASA - 22% Comair
2004	- Domestic Alliance ² - SkyTeam Alliance ³ - Song (Delta LCC)		- 100% ASA - 100% Comair
2009			- 100% Northwest Airlines - 100% Mesaba Aviation - Air France KLM transatlantic Joint Venture
2014			- 100% Compass Airlines - Virgin Atlantic Transatlantic Joint Venture - Virgin Australia Airlines Transatlantic Joint Venture - Enhanced Commercial Agreement with Latin American Carriers
2019	- SkyMiles Program		- 49% Virgin Atlantic Airlines - 51% Grupo Aeromexico - 20% Latam Airlines - 10% Hanjin-KAL (Korean Airlines) - 9% Air France-KLM - 9% GOL - 3% China Eastern Share - Korean Air Joint Venture - China Eastern Joint Venture

900 domestic & international destinations in 140 countries via strategic relationships and M&A

The Delta Connection program is a regional carrier service that contracts with regional air carriers to operate flights in small- and medium-sized cities, feeding traffic into our route system. The program allows us to expand the number of flights in specific places, optimize capacity to meet demand, and maintain our presence in smaller markets (Delta, 2006).

2 Establishing marketing partnerships with local airlines, involving shared codes, reciprocal frequent flyer programs, and access to airport lounges. The marketing connections allow carriers to maintain their distinct identities and route networks while expanding the pool of local and international connecting passengers utilizing their route networks (Delta, 2006).

3 Delta, Aero Mexico, Air France, and Korean Air established the SkyTeam global alliance on June 22, 2000. This partnership encompasses code sharing agreements, mutual frequent flyer programs, and synchronized freight operations (Delta, 2000).

Source: Delta Airlines Annual Reports, 1994-2019

The study utilizes longitudinal data from Delta's annual reports between 2000 and 2019, allowing for an analysis of financial and operational performance before and after major strategic milestones, especially the impact. The period deliberately selected until the end of 2019 to avoid any distortion due to the exogenous shocks of COVID-19 pandemic. A series of key performance indicators (KPIs), including operating revenue, available seat miles (ASM), cost per ASM (CASM), load factor, and operating return on assets are used to assess the effectiveness of Delta's commercial and strategic actions. Table 4 below is listing the variables together with their acronyms and definitions. In the dynamic and competitive landscape of the airline industry, KPIs serve as vital benchmarks that allow carriers to assess and measure their operational, financial, and customer-related performance. Airlines rely on a diverse set of KPIs to gain insights into various facets of their business, enabling them to make informed decisions, optimize efficiency, and

enhance the overall passenger experience. From on-time performance and financial health to customer satisfaction and environmental sustainability, the strategic analysis of KPIs provides a comprehensive understanding of an airline's strengths, weaknesses, and areas for improvement (Gittell, 2003).

Table 4. Key performance indicators used in the analysis

Name of Variable	Acronym	Unit	Explanation
Operating Revenue	OR	USD Billion	The revenue generated through main operations
Operating Income	OI	USD Billion	The income generated through main operations
Available Seat Miles	ASM	Million Seats-Miles	Available Seats x Miles Flown
Revenue Passenger Miles	RPM	Million Passenger-Miles	Revenue Passengers x Miles Flown
Load Factor	LF	Percentage	$(RPM/ASM) \times 100$
Operating Cost per Available Seat Mile	CASM	Cents per ASM	Total Operating Costs / ASM
Yield	Yield	Cents per RPM	Passenger Revenue / RPM
Operating Return on Assets	Operating ROA	Percentage	Operating Income / Total Assets
Operating Margin	OM	Percentage	Operating Income / Operating Revenue

This study combines the qualitative analysis of strategic decisions that are listed on the Table 3 with quantitative performance metrics defined on the Table 4. In this way, a comprehensive evaluation of the how M&As have shaped Delta's trajectory with a particular emphasis on the effects of the merger with Northwest Airlines. To evaluate the impact of the Delta – Northwest merger on key operational and financial performance indicators, the study employs both parametric and non-parametric statistical techniques using SPSS Statistics 25. First, the dataset was divided into two periods based on the merger date of April 2008: pre-merger period (2000 – 2007) and a post-merger period (2009 – 2019). The year of 2008 is excluded from the analysis because it represents a transitional period and does not reflect normal operations (Healy, et al., 1992; Ghosh, 2021). Independent-samples t-tests were applied to compare mean differences in performance indicators across the periods, given the test's suitability for assessing whether two independent groups differ significantly on a continuous variable under the assumption of approximate normality (Field, 2018). However, because airline performance data can violate parametric assumptions due to small sample sizes and potential non-normality, the analysis is complemented with Wilcoxon Signed Rank Test (WSRT). The WSRT is a non-parametric alternative appropriate for comparing paired observations and does not require the assumption of normally distributed differences (Pallant, 2020). For the WSRT, performance indicators were paired between 2000 – 2007 and 2009 – 2016 periods to maintain equal sample sizes across matched years, ensuring valid within-entity comparisons. Using both tests strengthens the robustness of the analysis by providing convergent statistical evidence under different distributional assumptions. The usage of both parametric and non-parametric analysis is in line with the literature on M&A performance evaluation. While there are studies using just t-test (Healy, et al., 1992; Ghosh, 2021) or just WSRT (Cornett & Tehranian, 1992; Beena, 2006), studies such as Campa & Hernando (2004) and Kruse, et al., (2007) employs both parametric and non-parametric methods to evaluate M& performance.

Analysis of the Delta Airlines' Post-Northwest Merger Performance

Delta Airlines' performance indicators between 2000 and 2019 reveal a clear structural transformation following its 2008 merger with Northwest Airlines. Table 5 includes the descriptive statistics, independent-samples t-test and Wilcoxon Signed Ranks Tests (WSRT) results considering the data set. Together with the graphical trends presented in Figures 1-5, these results demonstrate that the merger served as a strategic inflection point that significantly reshaped Delta's revenue generation, capacity utilization, cost structure, and overall financial performance.

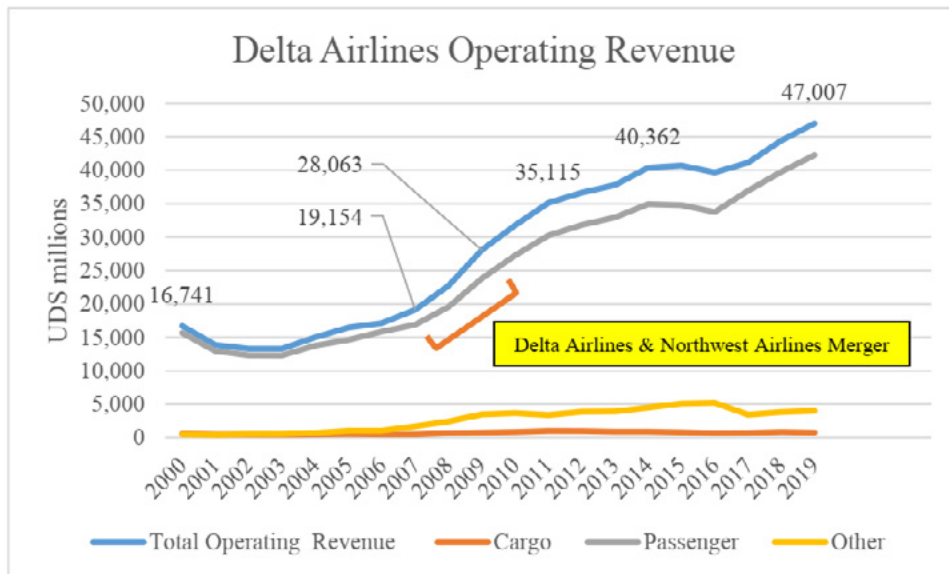


Figure 1. Delta Airlines Operating Revenue

Source: Delta Airlines Annual Reports

Figure 1 shows that Delta's operating revenue experienced stable but moderate growth during the early 2000s. However, a clear and substantial upward shift occurred after the Northwest merger. The trend line after the merger in 2008 onward indicates rapid revenue expansion. The t-test on Table 5 confirms this visual pattern: average operating revenue increased from \$15.84 billion (2000 – 2007) to \$38.41 billion (2009 - 2019), a highly significant difference ($t = -11.19$, $p < .001$). The WSRT result ($Z = -2.52$, $p = .01$) corroborates this finding.

This revenue surge is consistent with prior studies demonstrating post-merger improvements in operating revenues when strong route complementarities and scale efficiencies exist (Healy et al., 1992; Kim & Singal, 1993). Healy et al. (1992) found substantial gains in post-merger operating cash flows among merged firms with complementary assets, which is also a pattern closely mirrored in Delta's expanded international reach and enlarged domestic hub presence after the merger. Similarly, Cilberto, et al., (2019) documented enhanced network efficiency in airline mergers, explaining the type of hub-spoke synergies observed in Delta's post-2009 growth.

Table 5. Descriptive statistics and comparisons of key performance indicators before and after the Delta – Northwest Merger in 2008*

Group Statistics					t-test for Equality of Means							Wilcoxon Signed Ranks Test				
Before and After M&A		N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)	Mean Difference (Before-After)	Std. Error Difference	N	Positive Ranks	Mean Rank	Sum of Ranks	Z (Test Statistic)	Asymp. Sig. (2-tailed)
Operations Revenue (USD Billion)	Before	8	15.84	1.95	0.69	-11.19	17.00	0.00	-22.56	2.02	8	8.00	4.50	36.00	-2.52	0.01
	After	11	38.41	5.42	1.63						8					
Operating Income (USD Billion)	Before	8	-0.81	1.60	0.57	-4.99	16.63	0.00	-4.85	0.97	8	7.00	5.00	35.00	-2.38	0.02
	After	11	4.03	2.62	0.79						8					
ASM (Billion Seats -Miles)	Before	8	149.47	5.56	1.97	-19.28	13.43	0.00	-95.28	4.94	8	8.00	4.50	36.00	-2.52	0.01
	After	11	244.75	15.04	4.53						8					
RPM (Billion Seats Passenger)	Before	8	111.61	7.93	2.80	-17.21	15.51	0.00	-94.76	5.51	8	8.00	4.50	36.00	-2.52	0.01
	After	11	206.37	15.72	4.74						8					
CASM (Cents per ASM)	Before	8	11.01	0.82	0.29	-6.43	17.00	0.00	-3.02	0.47	8	8.00	4.50	36.00	-2.52	0.01
	After	11	14.03	1.13	0.34						8					
Yield (Cents per RPM)	Before	8	12.89	0.72	0.25	-5.59	17.00	0.00	-3.36	0.60	8	7.00	5.00	35.00	-2.38	0.02
	After	11	16.25	1.58	0.48						8					
LF (%)	Before	8	74.56	3.61	1.28	-7.08	8.81	0.00	-9.60	1.36	8	8.00	4.50	36.00	-2.52	0.01
	After	11	84.15	1.51	0.46						8					
Operating ROA (%)	Before	8	-3.77	7.20	2.55	-6.85	11.09	0.00	-11.30	1.65	8	7.00	4.86	34.00	-2.24	0.03
	After	11	7.53	4.60	1.39						8					
Operating Margin (%)	Before	8	-5.81	10.22	3.61	-3.88	10.62	0.00	-15.75	4.06	8	7.00	5.00	35.00	-2.38	0.02
	After	11	9.94	6.12	1.85						8					

* Performance indicators are compared on pre- and post-merger basis. For t-test comparisons, pre-merger period covers 8 years between 2000 and 2007, while post-merger period is defined as 11 years between 2009 and 2019. For the WSRT, performance indicators were paired between 2000 – 2007 and 2009 – 2016 periods to maintain equal sample sizes across matched years, ensuring valid within-entity comparisons.

However, other empirical studies contradict this pattern. For example, Moeller et al. (2005) and Ravenscraft and Scherer (1987) demonstrate that many mergers destroy value or show no significant improvements in operating performance. These findings typically arise in mergers lacking operational synergies or in overvalued transactions. Delta-Northwest merger is in contrast with these results given that it has been a strategically complementary rather than purely financial one. Thus, Delta case provides supporting evidence to the literature on efficiency-enhancing horizontal mergers.

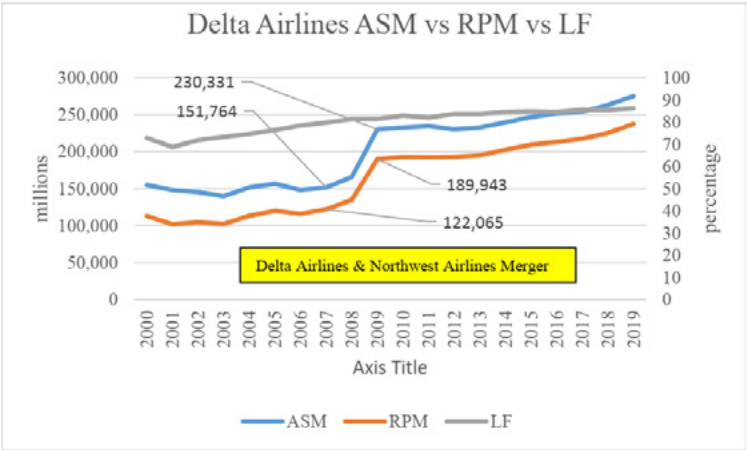


Figure 2. Delta Airlines ASM vs. RPM vs. LF

Source: Delta Airlines Annual Reports

Figure 2 illustrates that Available Seat Miles (ASM) and Revenue Passenger Miles (RPM) increased sharply during the merger integration window (2007 – 2009), reflecting the almost doubling of Delta’s fleet from 578 to 1,023 aircraft. From 2009 to 2019 the average ASM and RPM have increased by 64% and by 84% respectively as compared to the pre-merger period of 2000-2007. The *t*-test results show significant differences for both ASM (*t*=-19.28, *p*<.001) and RPM (*t*=-17.21, *p*<.001), while WSRT confirms the robustness (both *Z*=-2.52, *p*=.01). Similarly, the load factor (LF) has Those improvements align with the findings of Borenstein (1990) and Kim & Singal (1993), which show that mergers can increase capacity and enhance network efficiency, especially in hub-dominated airlines. The increase in Delta’s load factor (LF), shown in Figure 2, also corresponds to the literature that identifies LF improvements as a typical post-merger outcome when networks are consolidated and optimized (Hüschelrath & Müller, 2014). Yet not all studies agree. Focarelli and Panetta (2003), examining bank mergers, and Andrade et al. (2001), reviewing broader M&A outcomes, argue that efficiency gains are often modest or insignificant. Delta’s performance therefore stands in contrast to these cases, suggesting that the synergy potential in Delta – Northwest merger was strong.

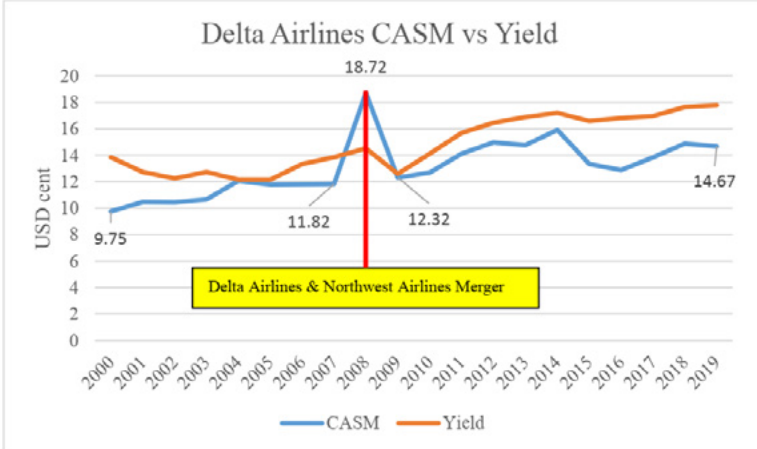


Figure 3. Delta Airlines CASM vs. Yield

Source: Delta Airlines Annual Reports

Figure 3 captured a major jump in Delta’s CASM (Cost per Available Seat Mile) in 2008, rising from 11.82 to 18.72 cents, a 64% increase. This reflects both industry-wide fuel price increase and recession-driven demand shocks. Although CASM declines after 2008, the *t*-test displays a significant increase in average CASM across pre- and post-merger periods (*t*=-6.43, *p*<.001). At the same time, yield increases significantly (*t*= -5.59, *p* < .001), consistent with a shift toward higher-value network opportunities and improved pricing power.

These results align with the literature arguing that mergers generate cost efficiencies despite short-term integration disruptions (Healy et al., 1992; Ramaswamy & Waagelein, 2003). In airline-related research, Ito and Lee (2007) observed that consolidation often strengthens yield performance through reduced competitive pressure and improved route dominance – both relevant to Delta’s post-merger experience. However, the post-merger increase in CASM contradicts studies that predict immediate cost reductions. For instance, Peter (2006) shows that integration difficulties can raise transitional costs. Thus, although Delta eventually achieved improved cost positioning, its CASM spike exemplifies the transitional inefficiencies highlighted by this contrary literature.

Figure 4 displays that Delta’s operating income ratios hit a record low of -36.63% in 2008, reflecting recessionary pressures and integration costs. However, profitability recovered rapidly post-merger, turning strongly positive by 2011 and reaching 19.17% in 2015. The *t*-test confirms a significant improvement ($t = -4.99, p < .001$), and WSRT also supports statistical significance ($Z = -2.38, p = .02$).

This performance is in line with studies emphasizing long-term profitability gains following mergers with strong strategic logic. Healy et al. (1992) and Ghosh (2001) find consistent post-merger improvements in profitability measures when firms exploit operational synergies and cost complementarity. Delta’s post-2010 profitability fits with this framework. profitability,

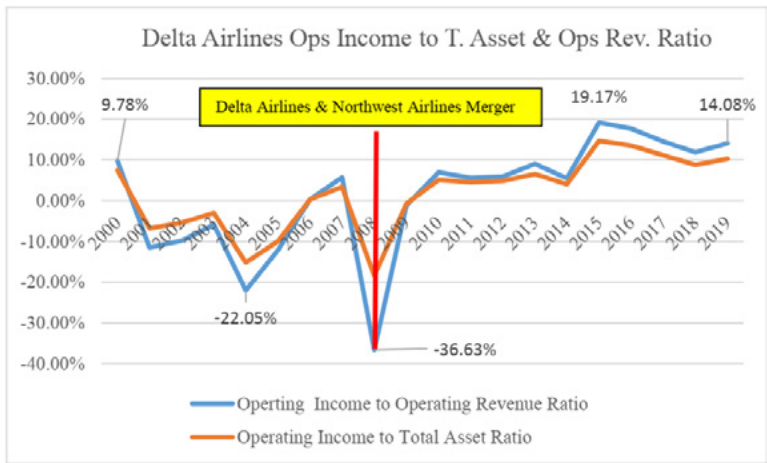


Figure 4. Delta Airlines’ Operating Income to Total Asset and to Operational Revenue Ratio

Source: Delta Airlines Annual Reports

Conversely, research by Moeller et al. (2005) holds that many mergers fail to improve, especially if the integration costs exceed expected synergies. Delta’s rapid profitability recovery thus represents a positive outlier relative to this skeptical branch of M&A literature.

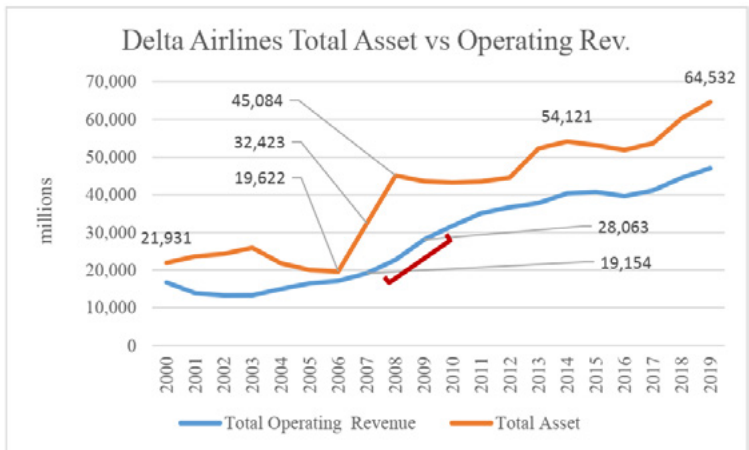


Figure 5. Delta Airline Total Asset vs. Operating Revenue

Source: Delta Airlines Annual Reports

Finally, Figure 5 shows substantial asset growth from \$19.6 billion in 2006 to \$45.1 billion in 2008 and to \$64.5 billion in 2019. This expansion reflects both asset consolidation and new strategic value created through global market access, especially in Asia-Pacific region. The post-merger growth pattern is consistent with literature that associates

horizontal consolidation with improved valuation and asset utilization (Bradley, et al., 1988). Delta's asset productivity improvements, confirmed through rising operating income ratios and revenue growth, therefore add to the body of evidence supporting value-enhancing consolidation in network industries.

Conclusion

The deregulation and liberalization of the air transportation sector, initiated by the Deregulation Act of 1978, have precipitated two significant trends. The proliferation of low-cost carriers (LCCs) striving to sustain their market position by minimizing air travel expenses was the primary trend. The second trend has been the heightened frequency of consolidations via mergers and acquisitions. Economic downturns, rising fuel and labor costs, globalization, and evolving passenger expectations further accelerated consolidation. These developments are closely connected to several theoretical perspectives, including market Power Theory, Synergy Theory, Transaction Cost Economics, Financial Distress Theory, Hub-and-Spoke Theory, and Globalization Theory, each of which explains different strategic motivations behind airline mergers.

Against this background, the aim of this study was to examine the financial and operational performance effects of the 2008 Delta-Northwest merger and evaluate whether its outcome align with the strategic expectations suggested by these theories. Using descriptive indicators, five performance graphs, and statistical comparisons of pre- and post-merger data, the study assessed changes in Delta's revenue, capacity, costs, profitability, and asset base from 2000 to 2019.

The results clearly indicate that although Delta experienced a challenging transition year in 2008, the long-term effects of the merger were strongly positive. Operating revenue accelerated sharply after 2009, capacity (ASM and RPM) expanded dramatically due to the nearly doubled fleet, and profitability recovered to its highest level in last two decades. Asset growth and strengthened financial stability enabled Delta to invest in service quality, technology, and global expansion. These outcomes indicate that the merger not only stabilized Delta during a period financial distress but also positioned it as one of the world's strongest airlines.

The study's findings corroborate several theoretical foundations explaining different motivations underlying mergers. Post-merger revenue and yield improvements is in line with Market Power Theory, consistent with Kim and Signal's (1993) findings. The development in Delta's operational efficiency, route optimization, and enlarged international network supports Synergy Theory (Gaughan, 2017). The reduced duplication and enhanced efficiency align with arguments of Transaction Cost Economics (Brueckner et al., 2013). Financial difficulties that Delta experienced during pre-merger period reflects Financial Distress Theory, as seen in Andrade et al. (2001), pointing out to how mergers can serve as a path to recovery. Increase in ASM, RPM, and network alignment is providing evidence related to Hub-and-Spoke Theory, consistent with Borenstein's (1992) arguments. Finally, Delta's post-merger empowered international positioning supports Globalization Theory, in congruence with Iatrou and Oretti's (2007) findings.

The study also contributes to the empirical literature on M&As by providing additional evidence on how mergers in network-based, capital-intensive industries can generate substantial long-term gains when strategic complementarities exist. It confirms the conclusions of Healy et al., (1992); Kim & Singal, (1993); Cilberto et al., (2019); and Yook, (2004). Delta's case illustrates that positive outcomes are not automatic but require careful alignment of strategy, integration processes, and market conditions.

Despite its supportive findings, the study possesses certain limitations, as well. The study relies on a singular instance of mergers and acquisitions, albeit a significant one in the history of air transportation, thereby limiting the generalizability of its findings. The analysis ought to be broadened to encompass additional mergers and acquisitions that occurred within the sector. The second limitation is that the study solely examines the financial outcomes of mergers and acquisitions. Researchers may undertake further studies to evaluate the improvements in diverse business processes that led to these financial outcomes. Notwithstanding its limitations, the study has significant implications for practitioners and policymakers. The Delta-Northwest case exemplifies how a merger, when strategically motivated and properly executed, can enhance resilience, improve network efficiency, and support long-term competitiveness in a deregulated and globalized airline industry.

References

- AIRLINES of AMERICA. (2024) Retrieved from <https://www.airlines.org/dataset/u-s-airline-mergers-and-acquisitions/>
- ANDRADE, G., MITCHELL, M., & STAFFORD, E. (2001). New evidence and perspectives on mergers. *Journal of Economic Perspectives*, 15(2), 103-120. <https://doi.org/10.1257/jep.15.2.103>

- ASSAF, A. G., BARROS, C. P., & DIEKE, P. U. (2011). Portuguese tour operators: A fight for survival. *Journal of Air Transport Management*, 17(3), 155-157. <https://doi.org/10.1016/j.jairtraman.2010.12.002>
- BARROS, C. P., & PEYPOCH, N. (2009). An evaluation of European airlines' operational performance. *International Journal of Production Economics*, 122(2), 525-533. <https://doi.org/10.1016/j.ijpe.2009.04.016>
- BEENA, P. L. (2006). *Mergers and acquisitions: India under globalization*. Routledge.
- BORENSTEIN, S. (1992). The evolution of U.S. airline competition. *Journal of Economic Perspectives*, 6(2), 45-73. <https://doi.org/10.1257/jep.6.2.45>
- BORENSTEIN S., and ROSE, N.L. (2014). *How airline markets work . . . or do they? Regulatory Reform in the Airline Industry*. In N.L. Rose (Ed.), *Economic regulation and its reform: What we have learned?* pp. 63-135. University of Chicago Press. <https://doi.org/10.7208/chicago/9780226138169.003.0003>
- BRADLEY, M., DESAI, A., & KIM, E. H. (1988). Synergistic gains from corporate acquisitions. *Journal of Financial Economics*, 21(1), 3-40. [https://doi.org/10.1016/0304-405X\(88\)90030-X](https://doi.org/10.1016/0304-405X(88)90030-X)
- BRUECKNER, J. K., LEE, D. N., & SINGER, E. S. (2013). Airline competition and domestic U.S. airfares: A comprehensive reappraisal. *Economics of Transportation*, 2(1), 1-17. <https://doi.org/10.1016/j.ecotra.2012.06.001>
- BUTTON, K. (2004). *Wings across Europe: Towards an efficient European air transport system*. Ashgate Publishing.
- CAMPA, J. M., & HERNANDO, I. (2004). Shareholder value creation in European M&As. *European Financial Management*, 10(1), 47-81. <https://doi.org/10.1111/j.1468-036X.2004.00242.x>
- CILIBERTO, F., COOK, E.E. & WILLIAMS, J.W. (2019) Network structure and consolidation in the U.S. airline industry, 1990-2015. *Rev Ind Organ* 54, 3-36 (2019). <https://doi.org/10.1007/s11151-018-9635-y>
- CORNETT, M. M., & TEHRANIAN, H. (1992). Changes in corporate performance associated with bank acquisitions. *Journal of Financial Economics*, 31(2), 211-234. [https://doi.org/10.1016/0304-405X\(92\)90004-H](https://doi.org/10.1016/0304-405X(92)90004-H)
- DELTA AIRLINES (1994-2022). *Form 10-K annual report of Delta Airlines, Inc.* Retrieved from <https://d1lge852tjjqow.cloudfront.net/CIK-0000027904/fa5d0b74-a99b-4db1-9c8d-1dca98c76c93.pdf>
- DOGANIS, R. (2006). *The airline business*. 2nd ed. Routledge.
- DYER, J.H., & SINGH, H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23, 660-679. <https://doi.org/10.5465/amr.1998.1255632>
- EISENHARDT, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550. <https://doi.org/10.5465/amr.1989.4308385>
- FIELD, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.
- FOCARELLI, D., & PANETTA, F. (2003). Are mergers beneficial to consumers? Evidence from the Italian market. *American Economic Review*, 93(4), 1152-1172. <https://doi.org/10.1257/000282803769206241>
- GAUGHAN, P. A. (2017). *Mergers, acquisitions, and corporate restructurings* (6th ed.). Wiley, Inc.
- GERRING, J. (2004). What is a case study and what is it good for? *American Political Science Review*, 98(2), 341-354. <https://doi.org/10.1017/S0003055404001182>
- GITTELL, J. H. (2003). *The Southwest Airlines Way: Using the Power of Relationships to Achieve High Performance*. McGraw Hill.
- GHOSH, A. (2001). Does operating performance really improve following corporate acquisitions? *Journal of Corporate Finance*, 7(2), 151-178. [https://doi.org/10.1016/S0929-1199\(01\)00018-9](https://doi.org/10.1016/S0929-1199(01)00018-9)
- GUDEMUNDSSON, S. V. & LECHNER, C. (2006). Multinational airline alliances: Balancing strategic constraints and opportunities. *Journal of Air Transport Management*, 12(3), 153-158. <https://doi.org/10.1016/j.jairtraman.2005.11.007>
- HAGHIGHI, M. & GHASSEMI, A. (2012). Ranking of the factors affecting airlines' strategic alliance success using experts' views. *Tourism Management Studies*, 8(23), 27-50. <https://doi.org/10.1016/j.tms.2012.08.001>
- HEALY, P. M., PALEPU, K. G., & RUBACK, R. S. (1992). Does corporate performance improve after mergers? *Journal of Financial Economics*, 31(2), 135-175. [https://doi.org/10.1016/0304-405X\(92\)90002-F](https://doi.org/10.1016/0304-405X(92)90002-F)
- HONG, S., & ZHANG, A. (2010). An efficiency study of airlines and air cargo/passenger divisions: A DEA approach. *World Review of Intermodal Transportation Research*, 3(1-2), 137-149.
- HÜSCHEL RATH, K., & MÜLLER, K. (2014). Airline Networks, Mergers, and Consumer Welfare. *Journal of Transport Economics and Policy*, 48(3), 385-407. <http://www.jstor.org/stable/24396294>
- IATA. (2020). *Annual review*. Retrieved from <http://www.iata.org>

- IATROU, K., & ORETTI, M. (2007). *Airline choices for the future: from alliances to mergers*. Routledge. <https://doi.org/10.4324/9781315566399>
- INTERNATIONAL CIVIL AVIATION ORGANIZATION. (ICAO). (2019). *Air transport regulation panel reports*. Montreal: International Civil Aviation Organization.
- INTERNATIONAL CIVIL AVIATION ORGANIZATION. (ICAO). (2022). *The World of Air Transport in 2022*. Retrieved from <https://www.icao.int/sustainability/WorldofAirTransport/Pages/the-world-of-air-transport-in-2022.aspx>
- KIM, E. H., & SINGAL, V. (1993). Mergers and market power: evidence from the airline industry. *The American Economic Review*, 83(3), 549-569. <https://www.jstor.org/stable/2117533>
- KING, D. R., DALTON, D. R., DAILY, C. M., & COVIN, J. G. (2004). Meta-analyses of post-acquisition performance: Indications of unidentified moderators. *Strategic Management Journal*, 25(2), 187-200. <https://doi.org/10.1002/smj.371>
- KRUSE, T. A., PARK, H. Y., PARK, K., & SUZUKI, K. (2007). Long-term performance following mergers of Japanese companies: The effect of diversification and affiliation. *Pacific-Basin Finance Journal*, 15(2), 154-172. <https://doi.org/10.1016/j.pacfin.2006.07.001>
- MERKERT, R., & HENSHER, D. A. (2011). The impact of strategic management and fleet planning on airline efficiency—A random effects Tobit model based on DEA efficiency scores. *Transportation Research Part A: Policy and Practice*, 45(7), 686-695. <https://doi.org/10.1016/j.tra.2011.04.015>
- MERKERT, R., & MORRELL, P. S. (2012). Mergers and acquisitions in aviation—management and economic perspectives on the size of airlines. *Transportation Research Part E: Logistics and Transportation Review*, 48(4), 853-862. <https://doi.org/10.1016/j.tre.2012.02.002>
- MOELLER, S., SCHLINGEMANN, F., & STULZ, R. (2005). Wealth destruction on a massive scale? *Journal of Finance*, 60(2), 757-782. <https://doi.org/10.1111/j.1540-6261.2005.00745.x>
- MORRISON, S. A., & WINSTON, C. (1995). *The evolution of the airline industry*. Brookings Institution Press.
- PALLANT, J. (2020). *SPSS Survival Manual: A step-by-step guide to data analysis using IBM SPSS* (7th ed.). Routledge. <https://doi.org/10.4324/9781003117452>
- RAMASWAMY, K., & WAEGELEIN, J. F. (2003). Firm financial performance following mergers. *Review of Quantitative Finance and Accounting*, 20(2), 115-126. <https://doi.org/10.1023/A:1023089924640>
- ROLLER, L-H., STENNEK, J., & VERBOVEN, F. (2006). Efficiency gains from mergers. In M. Neumann & J. Weigand (Eds.), *The International Handbook of Competition* (pp. 230-256). Edward Elgar. Retrieved from https://competition-policy.ec.europa.eu/system/files/2021-10/efficiency_gains.pdf
- STATISTA. (2021). *Low-cost carrier market share worldwide*. Retrieved from <http://statista.com>
- TRB'S COOPERATIVE RESEARCH PROGRAMS (2021). *Service Development and Regional Economic Activity*. Retrieved from <https://crp.trb.org/acrpwebresource12/understanding-air-service-and-regional-economic-activity/how-has-air-service-changed-over-time/>
- U.S. DEPARTMENT OF TRANSPORTATION. (2021). *Airline market share*. Retrieved from <http://www.transportation.gov>
- VASIGH, B., FLEMING, K., & TACKER, T. (2018). *Introduction to air transport economics: from theory to applications*. Routledge. <https://doi.org/10.4324/9781315299075>
- YIN, R. K. (2018). *Case study research and applications: design and methods* (6th ed.). Thousand Oaks, CA: Sage.

Özet

Bu çalışmada 2008 yılında Delta ve Northwest Havayolları arasında gerçekleşen birleşme örneği temel alınarak, birleşme ve satın alma faaliyetlerinin hava taşımacılığı sektöründeki finansal etkileri incelenmektedir. Özellikle 1980'li yıllardan itibaren hava taşımacılığı sektöründe hız kazanan serbestleşme ve küreselleşme süreçleri yoğun bir rekabet ortamı yaratmıştır. Çalışmanın amacı bu yoğun rekabet ortamında gerçekleşen birleşmelerin, şirketlerin finansal performansı üzerindeki etkilerini ampirik olarak ortaya koymaktır.

Hava taşımacılığı sektöründe yapısal dönüşümün en önemli dönüm noktalarından biri, Amerika Birleşik Devletleri'nde 1978 yılında yürürlüğe giren Havayolu Serbestleşme Kanunu'dur (Airline Deregulation Act). Bu düzenleme ile birlikte ücretler, hat tahsisleri ve piyasaya giriş üzerindeki devlet denetimi büyük ölçüde kaldırılmıştır. Bu değişim, sektörün rekabet yapısını köklü biçimde dönüştürmüştür. Fiyat rekabeti artmış, yeni firmaların pazara girişi kolaylaşmış ve ölçek ekonomileri hava yolu şirketleri açısından daha belirleyici hâle gelmiştir.

Benzer bir serbestleşme süreci 1990'lı yıllarda Avrupa Birliği'nde de yaşanmıştır. Aşamalı olarak uygulanan serbestleşme politikaları sonucunda 1997 yılı itibarıyla tek bir Avrupa hava taşımacılığı pazarı oluşturulmuştur. Hem

ABD’de hem de Avrupa’da yaşanan bu gelişmeler, hava yolu şirketleri arasındaki rekabeti önemli ölçüde artırmıştır. Artan rekabet baskısı altında şirketler, maliyetlerini düşürmek, pazar paylarını korumak ve uluslararası ölçekte rekabet edebilmek için birleşme ve satın almalara yönelmiştir. Bu bağlamda birleşme ve satın alma faaliyetleri, sektör için yalnızca bir büyüme stratejisi değil, aynı zamanda şirketlerin varlıklarını sürdürmelerinin temel araçlarından biri haline gelmiştir.

Literatürde, şirketleri birleşmelere ve satın almalara yönelten nedenleri açıklamak amacıyla çeşitli teorik yaklaşımlar geliştirilmiştir. Pazar gücü teorisi, firmaların birleşmeler yoluyla rekabeti azaltarak fiyatlama güçlerini artırmayı hedeflediklerini ileri sürmektedir. Sinerji teorisi ise birleşmeler yoluyla maliyetlerin azaltılabileceğini ve gelirlerin artırılabilceğini, dolayısıyla firma değerinin yükseltilebileceğini savunur. İşlem maliyetleri ve etkinlik yaklaşımı, birleşmeler sayesinde tekrarlanan faaliyetlerin ortadan kaldırılabilceğini, kapasite ve rota optimizasyonu yoluyla verimlilik kazanımları elde edilebileceğini vurgular. Finansal sıkıntı teorisi, ekonomik zorluk yaşayan firmaların birleşme yoluyla yeniden yapılandırılabilceğini ve iflastan kaçınabilceğini öne sürer. Hub-and-spoke teorisi, birleşmeleri merkezi havaalanlarındaki konumların güçlendirilmesi motivasyonu ile açıklarken; küreselleşme teorisi, uluslararası pazarlarda varlığın ve rekabet gücünün artırılması amacıyla odaklanmaktadır.

Çalışmada yöntem olarak boylamsal vaka incelemesi esas alınmıştır. Analizde, Delta Airlines’ın 2000 – 2019 dönemine ilişkin faaliyet raporlarından derlenen finansal ve operasyonel veriler kullanılmıştır. Değerlendirme, ağırlıklı olarak temel performans göstergelerine (KPI) dayanmaktadır. Bu göstergeler arasında operasyonel gelirler, kapasite ölçütleri (ASM ve RPM), kârlılık seviyesi ve varlık büyüklüğü yer almaktadır. Nitel analiz kapsamında ise Delta’nın bölgesel taşıyıcı yatırımları, ittifak ilişkileri (SkyTeam ve ortak girişimler) ve Northwest Airlines ile gerçekleştirdiği birleşme gibi stratejik adımlar sistematik olarak ele alınmıştır.

Veri seti, birleşme öncesi dönem (2000 – 2007) ve birleşme sonrası dönem (2009 -2019) olmak üzere iki alt döneme ayrılmıştır. Birleşmenin gerçekleştiği 2008 yılı, geçiş dönemi olarak değerlendirilmiş ve analiz kapsamı dışında bırakılmıştır. Birleşme öncesi ve sonrası dönemde temel performans göstergelerinde meydana gelen değişimler betimsel olarak analiz edilmiştir. Elde edilen sonuçlar, t-testi ve Wilcoxon işaretli sıralar testi kullanılarak istatistiksel olarak desteklenmiştir.

Analiz sonuçları, Delta’nın 2008 yılında zorlu bir geçiş süreci yaşamasına rağmen, birleşmenin uzun vadede önemli ölçüde olumlu etkiler yarattığını göstermektedir. 2009 yılından itibaren operasyonel gelirlerde belirgin bir artış gözlemlenmiştir. Filonun neredeyse iki katına çıkmasıyla birlikte kapasite göstergeleri önemli ölçüde yükselmiştir. Aynı dönemde kârlılık artmış ve son yirmi yılın en yüksek seviyelerine ulaşmıştır. Güçlenen finansal yapı, Delta’nın hizmet kalitesine, teknoloji yatırımlarına ve küresel genişleme stratejilerine daha fazla kaynak ayırmasını mümkün kılmıştır. Bu sonuçlar, birleşmenin Delta’yı yalnızca finansal açıdan istikrara kavuşturmakla kalmadığını, aynı zamanda şirketi küresel ölçekte güçlü bir konuma taşıdığını göstermektedir.

Çalışmanın bulguları, literatürde yer alan teorik yaklaşımlarla büyük ölçüde uyumludur. Birleşme sonrası gelir ve kârlılıktaki artışlar pazar gücü teorisini desteklemektedir. Operasyonel verimlilikte ve ağ yapısında yaşanan iyileşmeler sinerji teorisi ile örtüşmektedir. Verimlilik kazanımları işlem maliyetleri yaklaşımını desteklerken, birleşme öncesinde yaşanan finansal zorluklar finansal sıkıntı teorisi ile uyumlu sonuçlar sunmaktadır. Kapasite artışı ve ağ uyumu hub-and-spoke teorisini, birleşme sonrası güçlenen uluslararası konum ise küreselleşme teorisini desteklemektedir.

Çalışma ayrıca, uluslararası ağlara dayalı ve sermaye yoğun sektörlerde gerçekleşen birleşmelerin, diğer stratejik unsurlar ile bir araya geldiklerinde uzun vadede önemli faydalar sağlayabileceğine dair ek kanıtlar sunmaktadır. Delta – Northwest birleşmesi, olumlu sonuçların kendiğinden ortaya çıkmadığını; strateji, entegrasyon süreçleri ve piyasa koşullarının dikkatli biçimde uyumlu hâle getirilmesi gerektiğini göstermektedir.

Bununla birlikte çalışmanın bazı kısıtları bulunmaktadır. Öncelikle analiz, tek bir birleşme örneğine dayanmaktadır ve bu durum bulguların genellenebilirliğini sınırlamaktadır. Gelecek çalışmalar, sektördeki diğer birleşmeleri de kapsayacak şekilde genişletilebilir. Ayrıca çalışma yalnızca finansal sonuçlara odaklanmaktadır. Gelecekte yapılacak araştırmalar, bu sonuçlara yol açan operasyonel ve örgütsel süreçleri daha detaylı inceleyebilir. Sınırlılıklarına rağmen, çalışma gerek profesyoneller gerekse politika yapıcılar için önemli çıkarımlar sunmaktadır. Delta- Northwest örneği, birleşmelerin, doğru strateji ve etkin yönetimle birlikte uzun vadeli rekabet gücünü artırabileceğini göstermektedir.