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The Effect of the COVID-19 Pandemic on Financial Performance of Full-Service Versus Low-Cost Airlines

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ABSTRACT

This study analyzes the post-pandemic recovery of the low-cost and full-service airline industries. An analysis of the financial performance of five full-service and four low-cost airlines during and after the pandemic is conducted using four different financial ratios. Low-cost airlines recovered faster and had better performance after the pandemic, despite receiving less federal aid. To explain this difference in recovery speed, the author examined the air traffic, market share, fleet, route structure/choice of airports, and employee productivity between low-cost and full-service airlines using data from the Bureau of Transportation Statistics (BTS) from 1998 to 2022.

Introduction

The COVID-19 pandemic has had a devastating impact on the airline industry. The International Air Transport Association (IATA) has described 2020 as "the worst year in history for air travel demand". According to the IATA, global passenger traffic as measured in revenue passenger kilometers declined by 65.9% compared to 2019, and international passenger demand dropped 75.6% and domestic demand fell 48.8% below 2019 level. In 2023, after three full years since the first hit of the Covid-19, the aviation industry is still grappling with the impact of the pandemic, and the recovery is slow and uneven. Specifically, there is a clear difference in the recovery of the full-service versus low-cost airlines in the post-pandemic era.

The following government-sponsored acts have been passed to support the airline industry during the COVID-19 pandemic (Treasury.gov):

1. CARES Act: The Coronavirus Aid, Relief, and Economic Security (CARES) Act allocated $25 billion for passenger airlines, $4 billion for air cargo carriers, and $17 billion for businesses deemed critical to national security.
2. Consolidated Appropriations Act, 2021: This act provided $15 billion in payroll support for airlines.
3. American Rescue Plan Act of 2021: This act provided $14 billion in payroll support for airlines.

Shown below is the disparity of the federal financial aid to the airlines studied in this paper below. Other than Southwest Airlines, the full-service airlines received most of the financial aid from the government:

Table 1. Shows the airlines in this study and respective government/taxpayer aid amounts (Alpha.org):

Airline	Aid
Alaska Airlines (Full Service)	$2.3 Billion

American Airlines (Full Service)	$13.4 Billion
Delta Airlines (Full Service)	$11.9 Billion
Hawaiian Airlines	$718 Million
United Airlines (Full Service)	$11.4 Billion
Allegiant Air (Low-Cost)	$380 Million
JetBlue (Low-Cost)	$2.2 Billion
Southwest Airlines (Low-Cost)	$7.1 Billion
Spirit Airlines (Low-Cost)	$754 Million

Table 1 Aid provided to Full-Service and Low-Cost Airlines

The COVID-19 pandemic had a significant impact on both low-cost carriers and full-service carriers. Full-service carriers struggled during the pandemic because of reduced demands for premium services, as most travelers switched to remote work and travel restrictions made traveling increasingly difficult. Travel restrictions also forced full-service airlines to scale back on their extensive international routes, further harming their business. Many full-service airlines also had to tackle high maintenance costs for premium services and extremely large fleets. The government had to issue millions of dollars in aid for these full-services carriers, leading to debt and concerns about the financial health of these airlines (Hotle et al., 2020). Low-cost carriers also experienced hardship during the pandemic, but not to the extent of the full-service carriers. The reduction in travelers and the subsequent reduction in profits also affected low-cost carriers (Flrosi Triant). However, because of their flexibility and cost-efficiency, low-cost carriers were able to be resilient in domestic markets. Their freedom from the traditional hub-and-spoke model, in which an airline allocates most resources and staff in one airport, allowed them to pivot quickly from destination to destination and operate smaller or half full aircraft. The demand for minimal connections on flights skyrocketed, and low-cost carriers were able to capitalize.

Background

There are two types of airlines in the airline network competition. Full-service airlines are the more well known "conventional airlines". They utilize hub-and-spoke models, offer "premium services", and appeal most to customers willing to pay (Pels, 2008). The characteristic "premium services" of full-service airlines include meals, business and first class, beverages, comfortable seats, blankets, pillows, carry-on bags, and in-flight entertainment. Full-service airlines also maintain several other features linked to customer satisfaction and loyalty, such as airport lounges and frequent flier programs. Full-service airlines also operate code-share flights and are generally members of airline alliances, which means they enjoy reliability between partners of alliances and increased market presence. International and long-haul markets fit full-service airlines best, as customers in these markets are willing to pay the most for comfort.

Even with all the advantages of full-service airlines, low-cost carriers are not without their own benefits. Low-cost carriers dominate domestic, short haul routes. It is in their name; base fares from these airlines are extremely cheap, allowing low-cost carriers to have much more appeal to travelers than their more expensive

rivals. The main reason why low-cost airlines are so low-cost is because they do not have the previously described "premium services". This a-la-carte approach of avoiding amenities and comfort products reduces costs and base fare price significantly. High aircraft utilization is another advantage that comes with low-cost operation; these carriers fly their planes more frequently throughout the day, which spreads costs across more flights and increases revenue potential. Compared to full-services airlines, low-cost airlines have lower operating costs because they aim for rapid turnaround times at airports, minimize ground time, and maximize aircraft utilization.

Over the past decade, America has seen an increasing shift toward low-cost carriers. Their low fares attract budget-conscious travelers, and their focus on cost-efficiency and streamlined operations have allowed them to enjoy lower overhead costs and expand their networks. One shining example of this would be the low-cost carrier JetBlue. JetBlue was founded in August 1998, and after flying only domestically for two decades, they started a route between New York John F. Kennedy International and London Gatwick International in 2021. In 2022, they added a new transatlantic route between Boston Logan International and London Gatwick International, illustrating the expansion low-cost airlines are experiencing.

Another factor contributing to the increased popularity of low-cost carriers is merging and acquisition activity. In the early 1960s, many full-service carriers were starting up and expanding their business. However, in a span of 60 years, only three have survived, and those three (United, American, and Delta) have survived to dominate the North American full-service industry. What happened to all the other ones? Pan American, Eastern Airlines, Pacific Southwest Airlines, Virgin America, US Airways, Continental Airlines, Aloha Airlines, and Northwest Airlines all either went bankrupt or merged with one of the three previously mentioned giants that we see today. This, for low-cost carriers, means less competition, and more room and resources for growth. Low-cost airlines are also very popular because they use "point-to-point". Unlike full-service carriers, low-cost operators do not need to worry about transferring at major hubs where their resources are consolidated. Instead, low-cost carriers cater to nonstop routes that are on demand, filling up their planes and producing more revenue as a result.

Airline Financial Performance Before, During and After The COVID-19 Pandemic

A good way of measuring the financial efficiency and performance of a company is by exploring a variety of financial ratios, such as current ratio, total asset turnover, net profit margin, and ROA (return on asset). Looking past the numbers, these ratios can also evaluate the nature of a company. Total asset turnover is defined as total assets divided by revenue, and net profit margin is defined as net income (profit) divided by revenue. Therefore, ROA, which is total asset turnover divided by net profit margin, must be total asset divided by net profit (Investopedia.com)**.** Low-cost airlines, with their route flexibility and low overhead costs, possess characteristics of a high turnover, low net profit business. Full-service airlines are the opposite, possessing the characteristics of a low turnover, high net profit business. Consider the example of Olive Garden versus McDonalds. Most tables in Olive Garden will only house a few guests per day, but because of the luxury and the high-quality food provided, Olive Garden will make much more out of each guest than McDonalds does. Tables at McDonald's may house hundreds of guests per day, but the "fast food" dynamic of the restaurant makes the profit accumulated by each guest extremely low compared to Olive Gardens. The same analogy can be applied to full-service versus low-cost airlines, with full-service being more like Olive Garden and low-cost airlines being more like McDonald's. Which one prevails in a crisis?

Current Ratio

The first performance metric examined is current ratio. The current ratio is a measure of a company's short-term liquidity and ability to pay its current liabilities with its current assets. It is calculated by dividing the current assets by the current liabilities (Flouris et al., 2004). A higher current ratio indicates a better liquidity position, while a lower current ratio indicates a potential liquidity problem.

In general, the current ratio is averaged at 0.5 for the full-service airlines and 0.9 for the low-cost airlines, which means the industry has fewer current assets than current liabilities. This could be due to the high capital intensity and debt level of the airline industry, as well as the seasonal and cyclical nature of the business.

The average current ratio went up to 1.6 for low-cost airlines and 1.1 for full-service airlines. One possible reason for why the current ratio was higher during the pandemic than before and after is that the airlines received substantial financial support from the government, which boosted their current assets. The full-service and low-cost airlines in this study received a total of $50.2 billion in government/taxpayer aid since the beginning of the pandemic (Alpa.org). This aid came in various forms, such as grants, loans, equity injections, tax relief, and wage subsidies. Some of this aid was conditional on maintaining certain levels of service, employment, or environmental standards.

Another possible reason is that the airlines reduced their current liabilities by renegotiating or deferring some of their payments, such as leases, debt service, or supplier contracts. For example, Delta Airlines reported that it deferred $1.1 billion of aircraft rent payments in 2020. United Airlines also reported that it deferred $1.5 billion of principal and interest payments on debt and finance leases in 2020. These actions helped the airlines preserve their cash flow and liquidity during the crisis. Figure 1 shows that current ratios for low-cost airlines were consistently higher than the full-service airlines. The characteristics of low-cost airlines benefit them during times of crisis like the COVID-19 pandemic: less debt, higher asset turnover, and lower operating costs.

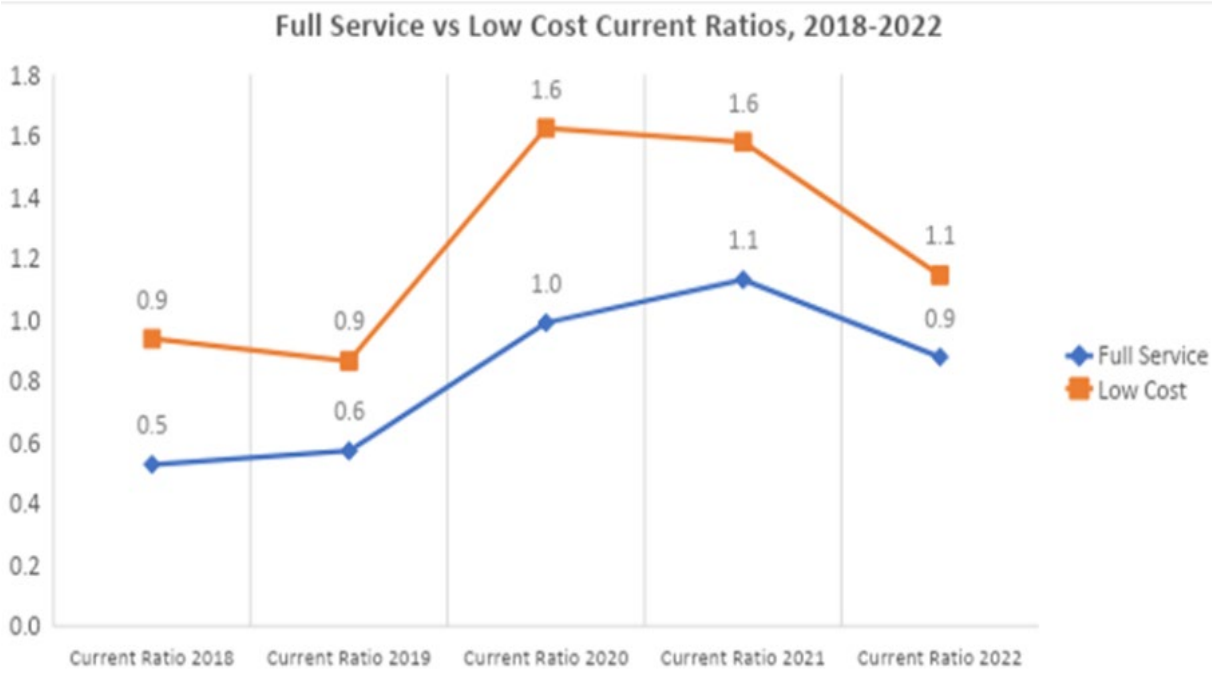

Figure 1. Full Service versus Low-Cost Current Ratios 2018-2022

Total Asset Turnover

Total asset turnover evaluates how effectively a company utilizes its assets to generate sales and is calculated by dividing a company's revenue by its total assets. A high total asset turnover ratio is generally considered a positive sign, as it means the company is making productive use of its resources and assets. On the other hand, a low total asset turnover ratio means the opposite; it indicates that the company is inefficient in using its resources or has excess assets.

Government aid to full-service airlines played a significant role in total asset turnover. Even though full-service airlines received over $39.8 billion in government aid (Alpa.org), the amount of decrease in asset turnover for full-service versus low-cost airlines was quite similar. During and after the pandemic, the total asset turnover of full-service airlines decreased significantly due to reduced demand for international and long-haul travel. Full-service airlines also experienced underutilized assets as travel restrictions and consumer preferences shifted away from major hubs and spoke models. In contrast, short-haul and point-to-point routes remained in demand and rebounded faster during times of uncertainty, which allowed them to maintain relatively stable asset turnover. Low-cost airlines responded better to changing market conditions.

Figure 2 shows the progression of full-service and low-cost total asset turnover ratios from 2018-2022. The low-cost ratio is higher during the pandemic and is only lower than that of full-service airlines by 0.1 after the pandemic. Low-cost total asset turnover managed to stay consistent in the market, despite lacking $40 billion in government aid and significantly less assets.

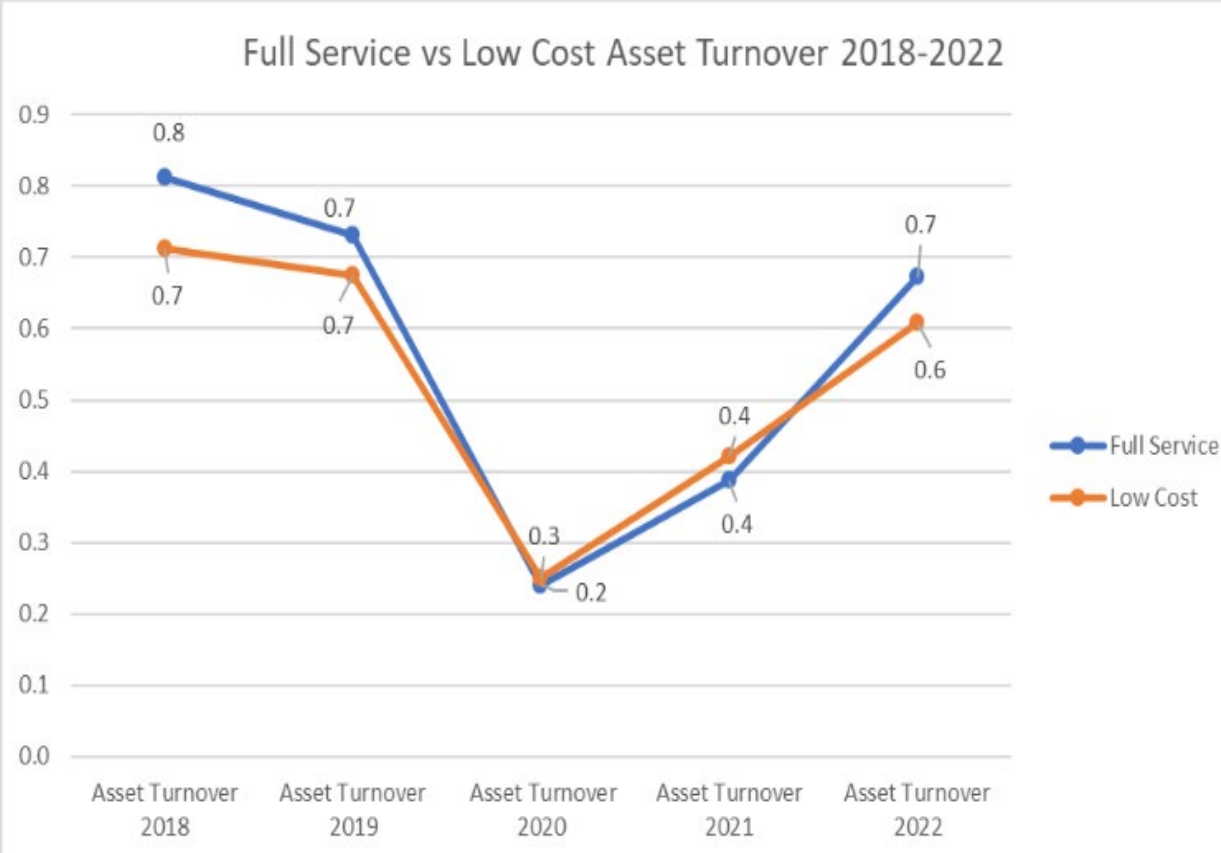

Figure 2. Full Service versus Low-Cost Asset Turnover 2018-2022

ROA (Return on Asset)

Like total asset turnover, ROA is an optimal metric for determining how effective a company is in using its assets to generate income. The difference is that it is found by dividing the net income of the company by the total assets.

A ROA indicates that a company is efficiently using its assets to generate income. A high ROA ratio can be indicative of effective asset management or strong sales growth relative to asset size. A low ROA ratio suggests that a company is not effectively utilizing its assets to generate sales. This might indicate inefficiencies in the company's operations or that the business has excess assets that are not being adequately employed to generate revenue.

Figure 3 depicts the change in ROA in the airlines categories over 2018-2022. The costly characteristics of full-service airlines made them more vulnerable to the sharp decline in demand during a pandemic. They experienced underutilized assets and increased depreciation costs. In contrast, low-cost airlines had more flexibility with their point-to-point routes, leaner cost structures, and the ability to quickly adjust capacity. These advantages helped them weather the crisis with a comparatively smaller drop in their ROA.

Figure 3. Full Service versus Low-Cost ROA 2018-2022

Net Profit Margin

Net profit margin measures a company's profitability by expressing net profit as a percentage of total revenue. In other words, the net profit margin is how much profit a company retains for each dollar of sales. It is calculated by dividing the net profit by revenue and multiplying by 100%. A high net profit margin indicates strong profitability and efficiency in converting sales into profit. Conversely, a low net profit margin signifies that a company is struggling to generate a significant profit from its revenue.

International and long-haul routes were disproportionately affected by travel restrictions and reduced demand during the pandemic. Moreover, the higher operational costs associated with the full-service business model caused full-service net profit margins to drop to a whopping -44% in 2020. Full-service airlines continued to struggle with -12% net profit margin in 2021. Low-cost airlines were affected as much, dropping only to -31% in 2020, and recovering to pre-pandemic levels a year earlier than full-service airlines did. This is because domestic and short-haul routes experienced a quicker recovery in demand. Their leaner cost structures also made them more fluid and flexible during the pandemic. As a result, the net profit margin of low-cost airlines did not decrease as much as that of full-service airlines (Reynolds-Feighan).

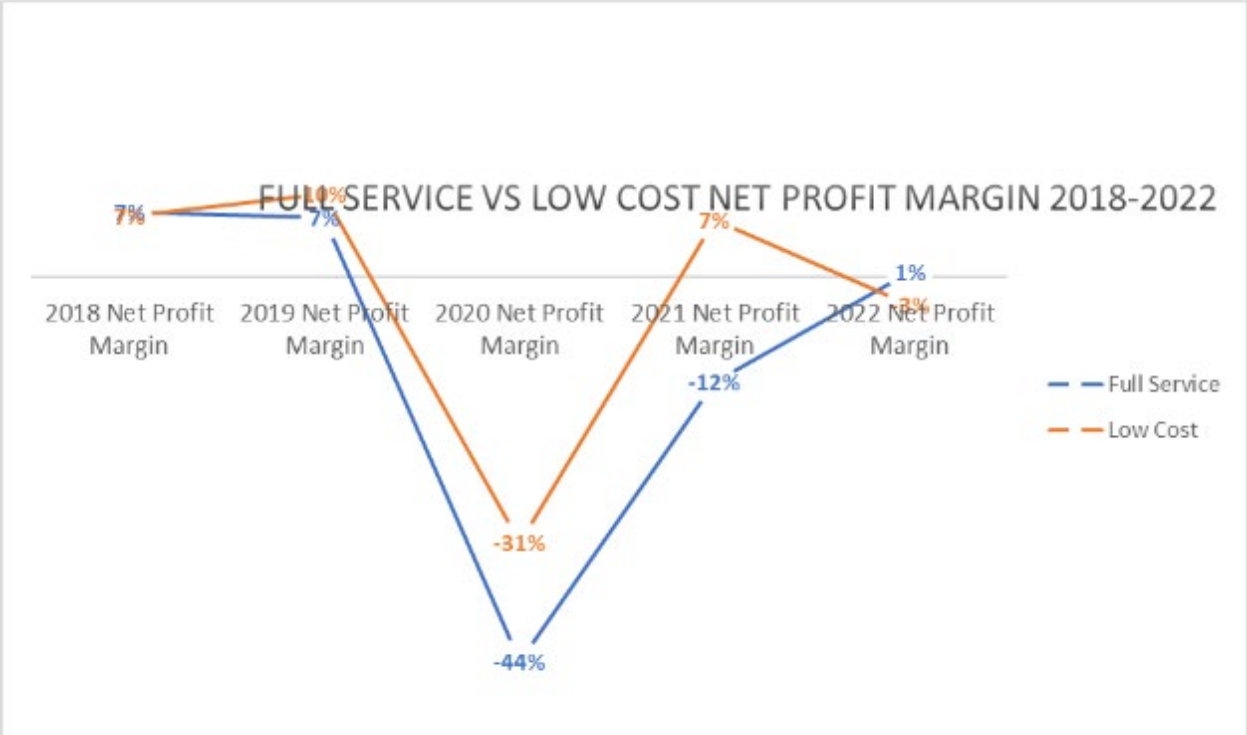

Figure 4. Full Service versus Low-Cost Net Profit Margin 2018-2022

Why Did Low-Cost Airlines Recover Better than Full-Service in the Wake of a Pandemic?

As the data has shown, low-cost airlines recovered back to normal levels after the pandemic despite less federal aid. Why? There are three main subcategories of both business models that impacted the financial performance during and after the pandemic. They are fleet, route structure/choice of airports, and employee productivity.

Fleet

The first metric is fleet. Fleet is a key difference in the business model of low-cost versus full-service airlines. With full-service fleets and their aforementioned "premium services", larger and therefore more expensive aircraft are required. Business and first class, meal storage, and international long-haul flights all require wide body aircraft that can also seat lots of people. A large contrast is seen in the fleets of low-cost airlines. As of 2021, none of the major US low-cost airlines (Southwest, JetBlue, Allegiant, and Spirit) operate wide body aircraft of any sort. How does this play into the COVID-19 pandemic? Simply put, in a time of travel restrictions and limited demand, large and expensive aircraft become liabilities for full-service carriers. If nobody wants to fly, then having a $440 million Boeing 777 sitting in a warehouse is a waste of time and resources. Low-cost airlines do not have this problem. Their aircraft are already comparatively smaller to begin with, preventing them from becoming too large of a liability if underutilized.

Table 2 effectively summarizes the total travel distance covered for each airline before, during and after the COVID-19 Pandemic. This data is based on the Bureau of Transportation (BTS) record of domestic flights. Data for each flight includes the origin, destination, miles traveled, and departure and arrival times. Interestingly, the total travel distances for the low-cost airlines are comparable to that of the full-service airlines. Despite their smaller assets, low-cost airlines can still compete with full-service airlines in terms of distance traveled. On average, low-cost airlines cover 30-40 million miles in the year per one billion dollars of asset, and full-service airlines only cover 13-24 million miles per one billion dollars of asset. For example, Southwest Airlines had more miles than American, Delta and United Airlines despite having a fraction of their assets.

Table 2. Travel Distance for Low-Cost and Full-Service Airlines (Millions of Miles) by Year

Airline	Total Asset (2023)	2018 (Millions Of Miles Traveled)	2019 (Millions Of Miles Traveled)	2020 (Millions Of Miles Traveled)	2021 (Millions Of Miles Traveled)	2022 (Millions Of Miles Traveled)
Alaska Airlines Inc.	$14.2 Billion	242	348	180	254	354
American Airlines Inc.	$43.3 Billion	388	938	562	755	986
Delta Air Lines Inc.	$73.3 Billion	404	889	532	722	961
Hawaiian Airlines Inc.	$2.8 Billion	57	63	28	60	82
United Air Lines Inc.	$61.7 Billion	736	748	366	538	836
Allegiant Air	$4.2 Billion	85	91	86	101	133
JetBlue Airways	$10.9 Billion	326	332	172	253	362
Southwest Airlines Co.	$34.8 Billion	1013	1012	713	834	1071
Spirit Airlines	$6.7 Billion	181	203	139	196	264

Route Structure/Choice of Airports

Perhaps the most glaring difference between low-cost airlines and full-service airlines lies in the hub-and-spoke model. Low-cost airlines do not use it, while full-service airlines live on it. How does this play out when a pandemic hits? The hub-and-spoke model employs a concrete, unchanged route structure with a set number and location for its airports. The idea behind the hub-and-spoke model is to invest lots of assets and resources into

the airport of a large, populous, city. This is the "hub". The "spokes" are all other destinations branching out from that hub, both international and domestic. Airlines like United, Delta, and American all employ this hub-and-spoke model. So, why did this fail during a pandemic? Firstly, flying in and out of an airport costs money for all airlines (Flouris et al., 2005). Larger airports, such as Los Angeles International or New York John F. Kennedy International, are common sites for hubs but are also extremely expensive to operate out of. Couple this with the fact that demand for air travel significantly decreased during the COVID-19 pandemic. Airlines that pay and operate out of large hubs are getting less and less return on their investment in certain airports, leading to decreases in profit.

Once again, low-cost airlines do not have this issue, as the airports they operate out of are cheap. Also, low-cost airlines are not restricted to a few hubs around the country. They operate out of secondary airports, airports that are cheaper and still maintain the widespread, on demand routes all airlines look for. Low-cost airlines can sometimes even fly out of secondary airports for free, as the relationship between the airline and the airport is mutually beneficial. Secondary airports are often less congested and lead to reduced turnaround times, thus leading to increased aircraft utilization and efficiency (Doganis, 2001). The benefit for the airport is that low-cost airlines attract passengers and increase the airport's non-aeronautical revenue. A good example of primary (hub) airports versus secondary airports is Southwest's secondary airports versus those of United and American Airlines. Southwest operates out of Houston William P. Hobby Airport and Dallas Love Field for a fraction of the cost that United and American operate out of Houston Bush International and Dallas Fort Worth for, respectively.

Table 2 shows the changes in airport choice of the nine airlines explored in this study. The data is again extracted from the BTS flight record of origin and destinations, and the most traveled origin-destination pair for each of the nine airlines is shown. The table shows the route flexibility of low-cost airlines, as all of them experienced an origin change, a destination change, or both. The full-service airlines, on the other hand, showed little to no flexibility, as their origin-destination pairs did not change, even after the pandemic. For example, a major hub of Delta Air Lines (DAL) is Atlanta Hartsfield Jackson International Airport (ATL). Before the pandemic, the most frequent origin-destination pair was ATL and Orlando International (MCO) in the year 2018. After the pandemic, the most frequent origin-destination pair for DAL was still MCO and ATL. ATL is Delta's largest hub in terms of passenger traffic and assets, so DAL is "tied down" to ATL, in a way. Even if demand for flights in and out of ATL is low, DAL still must operate out of this airport because of all the resources invested in this airport. Alaska Airlines, Hawaiian Airlines, and United Airlines experience similar predicaments. In contrast, low-cost airlines possess route flexibility. For example, before the pandemic, Spirit Airlines (SAVE) operated many flights between Florida and Atlanta. However, after the pandemic, Spirit Airlines was able to switch to the more profitable Orlando-San Juan (MCO-SJU) route, as demand shifted. Southwest Airlines' origin-destination pair changed from Houston William P. Hobby Airport (HOU) and Dallas Love Field (DAL) pre-pandemic to Burbank (BUR) and Oakland (OAK) post-pandemic. Low-cost airlines are not tied down to a hub, so their routes shift with passenger demand.

Table 3. Full Service versus Low-Cost Airlines' Most Frequent Origination and Destination Airports 2018-2022

Business Model	Airline (Most Traveled Origin-Destination Pairs)	2018	2022
Full Service	Alaska Airlines Inc.	Anchorage, Seattle	Seattle, Anchorage
Full Service	American Airlines Inc.	Dallas Fort Worth, Los Angeles	New York LaGuardia, Chicago O'Hare

Full Service	Delta Air Lines Inc.	Orlando, Atlanta Hartsfield-Jackson	Atlanta Hartsfield-Jackson, Orlando
Full Service	Hawaiian Airlines Inc.	Kahului, Honolulu	Kahului, Honolulu
Full Service	United Air Lines Inc.	Newark, San Francisco	Newark, Orlando
Low Cost	Allegiant Air	Bellingham (WAS State), Las Vegas	Fresno, Las Vegas
Low Cost	JetBlue Airways	New York JFK, Los Angeles	Boston Logan, Washington Reagan
Low Cost	Southwest Airlines Co.	Houston Hobby, Dallas Love Field	Burbank, Oakland
Low Cost	Spirit Air Lines	Fort Lauderdale, Atlanta, Harts-field-Jackson	Orlando, San Juan

Comparing the most traveled routes for 2018 versus 2022, it is evident that both the full-service and the low-cost airlines have changed from operating longer routes to shorter routes due to changes in demand. Before the pandemic, business travel customers were the main customers for most airlines. Therefore, long trans coastal flights were in high demand. However, after the pandemic, the tourist travel demand recovered first. Consequently, both types of airlines shifted to the shorter route that brings the customers to the nearest tourism destination.

*In both maps, the airlines represented by each color are as follows:

- Alaska Airlines' origin-destination pair is represented by white dots connected by a blue line.
- American Airlines' origin-destination pair is represented by light green dots connected by a blue line.
- Delta Airlines' origin-destination pair is represented by red dots connected by a blue line.
- Hawaiian Airlines' origin-destination pair is represented by light purple dots connected by a blue line.
- United Airlines' origin-destination pair is represented by blue dots connected by a blue line.
- Allegiant Airlines' origin-destination pair is represented by dark green dots connected by a blue line.
- JetBlue Airways' origin-destination pair is represented by violet dots connected by a blue line.
- Southwest Airlines' origin-destination pair is represented by orange dots connected by a blue line.
- Spirit Airlines' origin-destination pair is represented by yellow dots connected by a blue line.

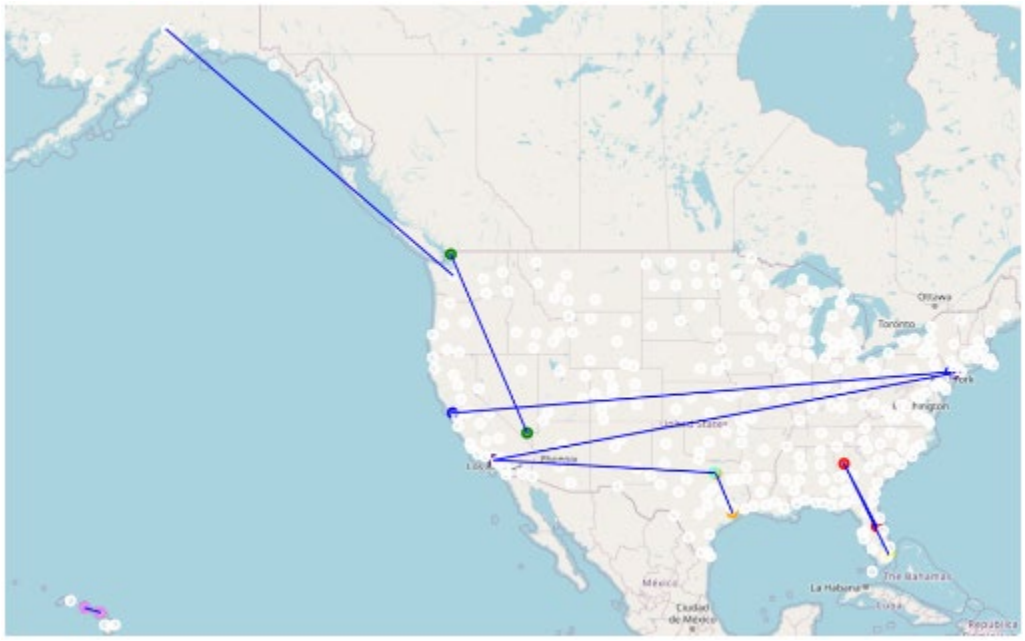

Figure 4. Map of Most Traveled Route by Airline, 2018

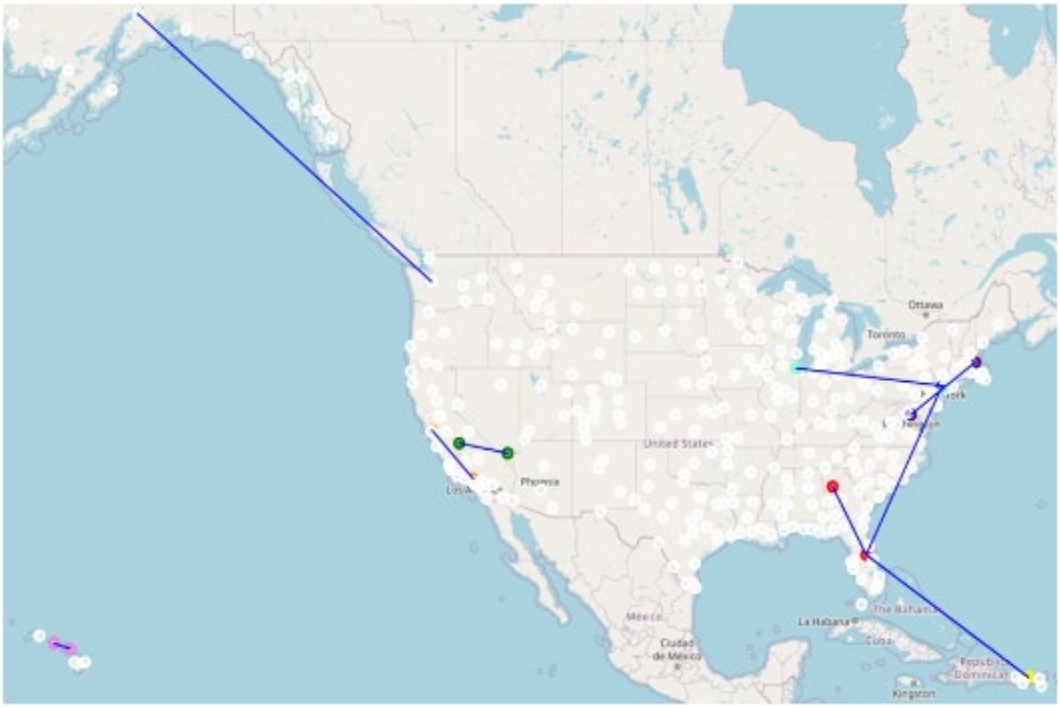

Figure 5. Map of Most Traveled Route by Airline, 2022

Productivity

A 2002 EUROPAIRS study shows that a pilot on an average low-cost airline fly approximately 25% more block hours and has roughly 13% more duty days than a pilot at a full-service airline (ECA, 2002). On average, low-

cost pilots have a 60% salary base and the remaining 40% is earned through performance (Flouris, 2005). Simply put, low-cost airlines and their employees focus on the essential: air travel. They do not sugarcoat and pamper their customers with “premium services"; they get straight to the “point”. In this system, most employees are offered performance-based benefits, and one employee may also fulfill multiple roles. This increased productivity gives low-cost airlines an advantage, as their human resource capital is larger and more productive than those of other airlines.

Conclusion

The theory that low-cost airlines recover faster than full-service airlines in the wake of a pandemic is supported by statistics from four reliable financial metrics. This shows that low-cost airlines are generally less affected by pandemics and crises, and they can also recover faster. The airline industry is no small industry, as it is worth around $80 billion US dollars in just the US alone. Coupling this with the dire situation the COVID-1 pandemic put most companies in, an important decision needs to be made. A perfect example of one such decision is the IATA grant that went almost entirely to full-service airlines. When deciding how to distribute extremely large sums of money, statistics like the ones covered in this paper are extremely important for deciding where the money goes. Aside from government grants for billions of dollars, investors could also benefit from statistics about the financial performance of full-service versus low-cost airlines. (Hotle) They will know where to invest their money, and this is important for the economic growth of the industry. From a general perspective, the health of the airline industry is important because it connects almost everything in our nation. An unhealthy airline industry may cause mayhem, as flying is so integral to all our everyday lives.

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Bibliography

Borenstein, Severin. "Hubs and High Fares: Dominance and Market Power in the US Airline Industry." *The RAND Journal of Economics, Volume 20, No. 3* (2004): 344-365.

Flouris, Triant et al. "The Financial Performance of Low-Cost and Full-Service Airlines in Times of Crisis." *Canadian Journal of Administrative Sciences* (2005): 22(1), 3-20.

Hotle, Susan. "The Impact of COVID-19 on Domestic US Air Travel Operation and Commercial Airport Service." *Transportation Research Interdisciplinary Perspectives* (2020).

Pels, Eric. "Airlines Network Competition: Full-Service Airlines, Low-Cost Airlines and Long-Haul Market." *Research in Transportation Economics* (2008): 3.

Reynolds-Feighan, Aisling. "Traffic Distribution in Low-Cost and Full-Service Carrier Networks in the US Air Transportation Market." *Journal of Air Transport Management* (2001): 265-275.

Murphy, Chris B. "What Is Net Profit Margin? Formula for Calculation and Examples." Investopedia.com, www.investopedia.com/terms/n/net_margin.asp. Accessed 7 June 2023.

"Pandemic Subsidies for Passenger Airlines." Alpa.org, Air Line Pilots Association, International, www.alpa.org/advocacy/pilot-supply/ pandemic-support-airlines. Accessed 26 June 2023.