

Airline Passenger Satisfaction Analysis Report

Executive Summary

In this summary, we conduct a comprehensive analysis of passenger satisfaction within the airline industry. The database used contains feedback from passengers with different travel profiles, categorized by flight distance (short, medium, or long), the purpose of travel (business or personal), the chosen flight class (business, economy, and economy plus), and whether the passenger is a returning customer or a first-time flyer. Once segmented by these criteria, passengers rate a range of services spanning from online purchase to luggage retrieval after the flight, using a scale from 1 to 5, where 1 represents the lowest satisfaction and 5 the highest.

Analysis Process

The analysis begins with a data cleaning phase (ETL) to address missing data or irregularities that could affect statistical analysis. Next, we perform descriptive analysis of the services rated on a scale of 1 to 5. Additional categories are created for a more effective analysis, including age groups (0-1, 2-11, 12-18, 31-65, +65), flight types (short, medium, or long distance), and whether the flight experienced delays during takeoff or landing.

- Age Range Category: Age categories are established to reflect the economic implications for airlines. For instance, children under 2 years old typically travel with parents and do not require an additional seat.
- Flight Distance Category: Flights are divided into short, medium, or long distance using the median of recorded distances.
- Flight Delay Category: Categories of "On Time," "Expected Delay," and "Off Schedule" are created based on the average flight delay.

Frequent Passenger Profile

The analysis of frequent passenger profiles shows that most passengers travel for business purposes, with the predominant age range being 31 to 65 years. There is no significant gender differentiation among passengers. Additionally, 50% of trips are short-distance, 23.86% are medium-distance, and 26.1% are long-distance.

Percentage of Satisfied Passengers

The initial analysis aims to determine the percentage of satisfied passengers. It is found that 43.45% of surveyed passengers are satisfied overall. Subsequently, variations are analyzed based on the aforementioned categories.

Flight Class: The choice of flight class significantly influences satisfaction, with 69.44% satisfaction for business class, in contrast to 18.77% for economy class.

Purpose of Travel: Business trips have a 58.37% satisfaction rate, while personal trips have only 10.13% satisfaction. This is related to the choice of flight class, as 95% of business travelers opt for business class.

Age: It is observed that younger passengers tend to rate more evenly compared to other age groups.

Returning Customers vs. New Customers: Returning customers have a satisfaction rate of 47.81%, while new customers have a satisfaction rate of 23.97%.

Areas for Improvement

Regarding the identification of areas for improvement in terms of airline revenue, we focused on two specific customer groups that represent over 80% of total airline revenue: those who are older than 18 and younger than 65 years and choose to travel in business class and those who opt for economy class within the same age range.

Business Class Customers:

➤ Services Before the Flight:

Ease of Airline Ticket Acquisition: Improving the ease and convenience of the airline ticket purchase process can have a positive impact on the satisfaction of business class customers.

Airport Gate Location: The airport experience can be enhanced by optimizing signage and information regarding gate locations.

➤ Services During or After the Flight:

Boarding and Landing Times: Evaluating and adjusting the airline's chosen boarding and landing times to better align with the needs and preferences of business class customers.

In-Flight Wi-Fi Service: Improving the quality and availability of in-flight Wi-Fi service can increase satisfaction among business class passengers.

Economy Class Customers:

➤ Services Before the Flight:

Online Check-In Services: Facilitating and promoting the online check-in process can streamline the experience for economy class passengers.

Ease of Airline Ticket Acquisition: Similar to business class customers, improving accessibility and convenience in ticket purchase is essential for economy class passengers.

Airport Gate Location: Optimizing signage and information about gate locations can enhance the overall airport experience.

➤ Services During or After the Flight:

In-Flight Wi-Fi Service: Like business class passengers, the improvement in the quality and availability of in-flight Wi-Fi service is a key factor for economy class passenger satisfaction.

It is important to note that, while these areas for improvement have been identified, we do not yet have information about the costs associated with these improvements or maintenance of services. A more comprehensive analysis would require comparing these costs with potential benefits in terms of increased revenue.

Factors Contributing to Customer Satisfaction

A regression analysis is conducted to identify the independent variables that influence overall airline service satisfaction. The top five factors are:

- Online Boarding Service (airline ticket purchase or reservation modifications online).
- In-Flight Entertainment Services (movies, music, series, etc.).
- Seat Comfort.
- In-Flight Wi-Fi Service.
- In-Flight Attendant Service.

Conclusions

In summary, the analysis suggests that improving the quality of certain specific services, such as the ease of online ticket purchase, seat comfort, and in-flight Wi-Fi service, could increase passenger satisfaction and potentially have a positive impact on airline revenue. It is important to consider that a more comprehensive analysis would require further examination of the costs associated with these improvements and maintenance.