

# Factors Affecting Purchasing Aircraft

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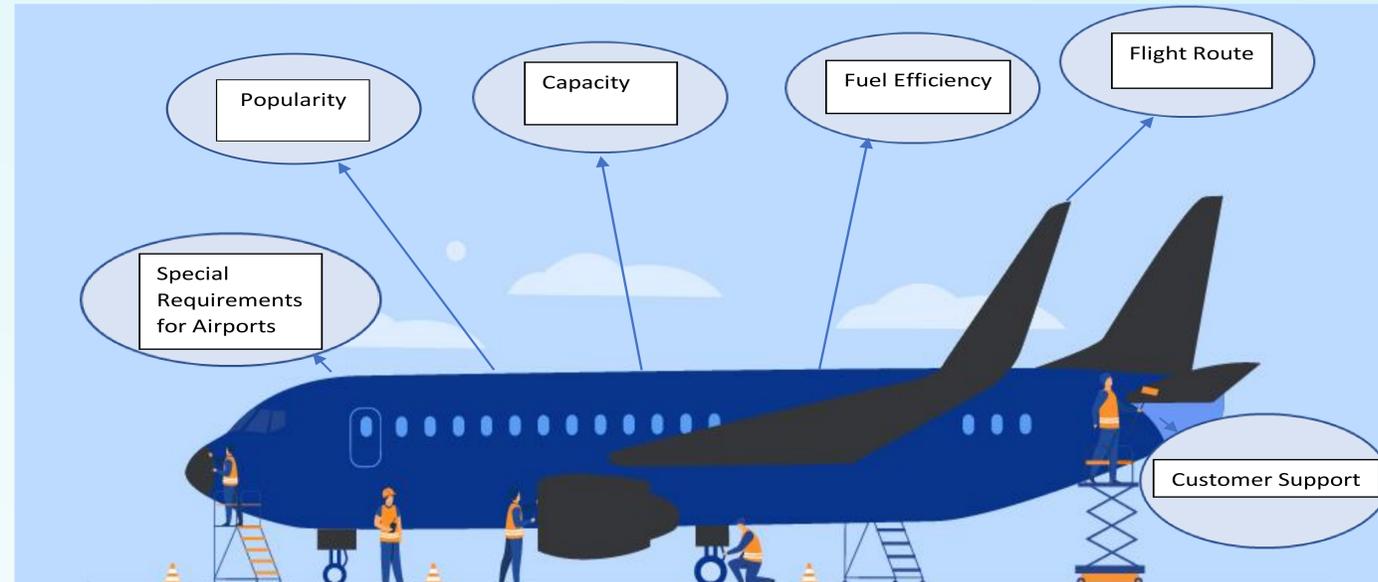
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## Abstract

Purchasing aircraft is one of the most critical actions in the functioning of airline companies. The emergence of more interconnected global economies and the expansion of international business operations have led to a steady increase in travel demand after the COVID-19 pandemic. Each aircraft purchase includes a sizable amount of money and consideration. With a clear plan, airline businesses can buy the ideal range of aircrafts for their size and operating requirements. However, if companies buy their fleet without a solid strategy, these expensive aircrafts will become a financial burden to the firms. Therefore, the airlines must consider every relevant component for their strategy to be effective. In this paper, we compare Boeing and Airbus's aircraft capabilities, technical support, and maintenance costs over the aircraft's service life. Subsequently, we discuss the significant elements influencing airline firms' purchasing practices. We conclude by projecting the global fleet market for the next 30 years and the factors that airlines should consider most when buying aircrafts. This paper can assist airlines and aircraft manufacturers in making effective decisions regarding their purchasing policies.

## Factors Affecting The Decision

### 1. General Factors



Source: Roger (2022)

## Weighting Analysis Chart

| Factors                                       | Weighting          | Aircraft 1 |                | Aircraft 2 |                |
|---|--------------------|------------|----------------|------------|----------------|
|   |                    | Score      | Weighted Score | Score      | Weighted Score |
| <b>Performance</b>                            | <b>30%</b>         |            |                |            |                |
| Take-off and landing performance              | 10%                |            |                |            |                |
| Climbing performance                          | 5%                 |            |                |            |                |
| Cruising performance                          | 5%                 |            |                |            |                |
| Payload performance                           | 10%                |            |                |            |                |
| <b>Fuel</b>                                   | <b>20%</b>         |            |                |            |                |
| Fuel consumption efficiency                   | 20%                |            |                |            |                |
| <b>Aircraft system and Maneuverability</b>    | <b>20%</b>         |            |                |            |                |
| System design and equipments                  | 5%                 |            |                |            |                |
| Panel set-up and System interface             | 5%                 |            |                |            |                |
| System and maneuver commonality               | 5%                 |            |                |            |                |
| <b>Crew training and Manpower utilization</b> | <b>30%</b>         |            |                |            |                |
| Crew training costs                           | 15%                |            |                |            |                |
| Crew manpower utilization                     | 15%                |            |                |            |                |
|   | <b>Total Score</b> |            |                |            |                |

(Author's original creation)

## Research Purpose

- Compare Boeing and Airbus's aircraft capabilities, technical support, and maintenance costs over the aircraft's service life.
- Discuss the significant elements influencing airline firms' purchasing practices.
- Predict the global fleet market in the three decades later and the factors that airlines should consider the most when buying aircrafts.

### 2. Financial Factors



(Author's original creation)

### 3. Mechanical Factors

- The utility of an engine is closely related to the performance of the carrying aircraft family. Consequently, as the aircraft reaches the end of its economic life, so does the engine (Archer, 2018).
- Engines and aircrafts purchasing is also beginning to depend on the green-time lease, which allows airlines save money by circumventing costly end-of-life restorations.
- With increase in aviation safety, airlines consider more safety features in the potential investments like redundant systems, and integration of new technologies such as FADEC.

### 4. Internal Factors

- Internal factors are so called political factors that wield influence implicitly.
- Aircraft manufacturers have special lobbying departments aiming to divert Airlines' policies.
- State-owned airlines are likely to be influenced by capricious government policies and country to country relationship.

## Few Noteworthy Information

- The commercial aviation industry drives 5% of the GDP in the US (Impact, 2022).
- The big four led the airline industry with a domestic market share of 66 percent (Salas, 2022).
- Airline Prices have fallen 44.9 percent since the deregulation (Smith & Cox, 2011).
- During the Covid pandemic, international passenger traffic dropped 60 percent in 2019 (Observations on the Ongoing, 2021).
- Airlines worldwide will require more than 18,000 aircrafts over the next decade (Unnikrishnan, 2020).
- In the past sixteen years, there have been significant changes in the price of jet fuel (Salas, 2022)

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