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AIRLINES

The US airline industry consists of about **3,000** companies, with combined annual revenue of **$120 billion**. Major airlines include American, United, and Delta, and the air operations of cargo and courier companies, such as FedEx and UPS. The industry is **highly concentrated**: almost 90 percent of revenue comes from the top 12 companies. The government classifies airlines as "major," "national," "regional," and various others. About 40 national airlines have annual revenue between $100 million and $1 billion, and 90 regional airlines have annual revenue under $100 million. The remainder of the industry consists of small air companies that generally have annual revenue between $5 and $50 million.

Competitive Landscape

Airlines depend highly on the health of the **US economy**, which affects air travel by business and consumer passengers. Because many costs are fixed, the profitability of individual companies is determined by efficient operations and on favorable fuel and labor costs. Small airlines can compete by servicing local or regional routes. The industry is highly **capital-intensive**: average annual revenue per employee is about $200,000.

Products, Operations & Technology

Airlines carry **passengers, cargo,** and **mail**, or have **specialized functions**, such as medical air transport or oil platform servicing. Flights may be scheduled or nonscheduled (charter). About 70 percent of industry revenue comes from scheduled passenger traffic, 10 percent from carrying cargo and express mail, 4 percent from charter flights, and 1 percent from hauling US mail. Other revenue comes from providing maintenance, servicing, training, and reservations. Some airlines carry only cargo, using specially equipped planes. Some major airlines, including **United, Northwest, and American**, have large cargo operations that contribute 5 to 10 percent of revenue. For smaller passenger airlines, cargo may contribute more than 10 percent of revenue.

The **basic operations** of airlines include acquiring and maintaining airplanes, acquiring and operating airport facilities, acquiring passengers or freight, managing staff, and operating flights.

The **flight equipment** (airplanes) that an airline uses is crucial to efficient operations. The **cost, capacity, and fuel efficiency** of airplanes vary substantially. The major airlines operate about 20 types of aircraft with a total of about 4,700 planes; of these, around 600 were made by Airbus and around 4,000 by Boeing. Manufacturers of smaller aircraft for regional airlines, with seating capacities of 30 to 90, include Bombardier, Fokker, Embraer, and Saab. The largest aircraft can hold 360 passengers or 70 tons of cargo, and are used for long flights with a "**stage length**" of more than 3,000 miles, but the major carriers operate mainly planes that hold from 130 to 175 passengers.

A large plane like the Boeing 747 consumes 3,500 gallons of **fuel** per hour, while a midsize one like the Boeing 737 consumes about 800 gallons. Larger planes require a larger crew. The operating cost of an airplane is often expressed in **cents per seat mile**, with typical values between 3 and 7 cents. The **list price** for a new Boeing 737-700 is close to $50 million. A Boeing 747-400 lists for $200 million. The actual price airlines pay for new planes can be substantially lower than the list price, especially if they place big orders. A large market exists for **used aircraft**, which can have a useful life of 20 years or more.

Airlines **lease** terminals; ticket counters; gates (sometimes called "slots"); cargo facilities; and maintenance facilities from **airports**, which are usually owned by local government authorities. In some cases, airlines can sublease their facilities to other airlines. About 640 airports have regular airline service in the US; close to 220 are served by the large carriers. American and Delta have service to virtually all 220, while Southwest serves about 60. In addition to paying for airport facilities, airlines pay **landing fees** for each flight, which are $1 per 1,000 pounds of landing weight at a regional airport, or about $100 for a Boeing 737. Landing fees at major airports can be more than twice as high.

Routine aircraft **maintenance** is done at local airports, but the big carriers typically have one or several large central maintenance facilities for major overhauls. Many smaller airlines **contract maintenance** out to the major carriers.

Because of the large number of **flight departures** - American, Delta, and Southwest each handle 1 million departures annually - scheduling staff and equipment is a major **logistics problem**. Southwest operates its million departures with 365 aircraft and 30,000 employees; 10,000 are flight crew and 15,000 ground crew. Airlines measure in terms of departures, rather than flights, because a single flight may have several stops. Each airplane makes an average of 2,700 departures, about eight per day.

Airlines measure their performance using a number of **metrics**. Southwest carried 78 million **revenue passengers** in a recent year, about 75 per flight, and flew 60 billion **revenue passenger miles** (RPM). The average flight segment stage length was 600 miles. The full capacity of its flights in a recent year was 85 billion **available seat miles** (ASM). The **load factor** of its flights was 71 percent; that is, the average flight was 71 percent full (divide RPM by ASM). Operating revenue per ASM was 9 cents, while operating expense per ASM was 8 cents. The average passenger fare was $94, which translates into average revenue of about $7,000 per flight for this discount carrier.

http://www.hoovers.com/air-charter-services/--ID__339--/free-ind-fr-profile-basic.xhtml

AIR CHARTER SERVICES

The air charter service industry includes about 2,500 companies with combined annual revenue of $8 billion. Major companies include NetJets, Flex Jet, Flight Options, and Evergreen Aviation. The industry is **concentrated**: the 50 largest companies account for 60 percent of industry revenue.

Air charter is the on-demand, nonscheduled transportation of passengers and cargo, and is distinct from the $20 billion commercial airline industry.

Competitive Landscape

Demand is driven by **corporate profits** and the needs of the **US military**. The profitability of individual companies depends on **effective marketing** and **customer service**. Large companies have advantages in fleet size and name recognition. Smaller companies can compete effectively by serving small local markets and offering lower prices. The industry is **capital-intensive**: average annual revenue per worker is nearly $250,000.

Products, Operations & Technology

Major services include **domestic passenger** travel (50 percent of industry revenue); **international passenger** travel (15 percent); **domestic air freight** (10 percent); and **international air freight** (5 percent). Other services include surveying and photography, crop dusting, and aerial advertising.

Charter flights are used by wealthy individuals, large corporations, sports teams, the US military, and government agencies. In general, charter flight is more flexible, extensive, and efficient than traditional commercial air travel. Air charter planes have access to over 5,000 **general aviation airports**; scheduled commercial aircraft are restricted to the 700 US commercial airports.

Charter aircraft include small pistonprop planes; helicopters; turboprop aircraft; light, midweight, and heavy jets; and large, multi-engine jet airliners. Of the 12,000 charter aircraft in operation, around 85 percent are fixed-wing aircraft and 15 percent are helicopters. The smallest **pistonprop** charter plane accommodates one pilot and one to five passengers, has a non-pressurized aircraft cabin, and a range of several hundred miles. A typical **turboprop** is cabin-pressurized, accommodates one or two pilots and eight passengers, has a range of around 1,000 miles, and travels 200 miles per hour. Traveling up to 8,000 miles at 500 miles per hour, pressurized **heavy jets** are flown by two pilots, can accommodate 18, and include a full bathroom and flight attendant service. Depending on fuselage configuration, large charter **jet airliners** can transport cargo or accommodate up to 500 people. Jet airliners transporting more than 30 passengers must fly under the more restrictive FAA Part 121 guidelines governing scheduled commercial air transportation.

A charter aircraft typically departs from a military base or a small general aviation terminal known as a **fixed base operation** (FBO). US TSA employees verify passenger identification but don't screen passengers or luggage. On smaller charter aircraft, pilots may be responsible for non-flying tasks such as checking baggage, seating passengers, and performing minor aircraft maintenance or repairs. Upon arrival, charter flights and crew may wait for the passengers until the return flight to the home base. However, around 40 percent of charter travel is comprised of "**empty leg**" flights: return trips to a plane's home base with no passengers or cargo. Each chartered plane flies an average of 400 hours annually. Charter flights last an average of one hour, and the average aircraft consumes 25 gallons of fuel per hour.

Common metrics in the industry include **revenue passenger miles** (the total distance traveled by all paying customers); **available seat miles** (total number of seats available multiplied by miles flown); and **load factor** (the ratio of revenue passenger miles to available seat miles). The air charter industry's annual 20 billion available seat miles is about one-fifth the size of the commercial airline industry. The average industry load factor is 60 percent; the commercial airline industry has an average load factor of 80 percent.

Major technical **aircraft innovations** include incorporating GPS on charter planes; developing prototypes of low-cost very light jets (VLJ); and improving a plane's aerodynamic efficiency and load capacity. Third-party companies provide online software and marketplaces for charter airline booking, billing, and customer service operations.