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AMERICAN COMPASS

CASE STUDY

Airbus's Industrial Flight Plan *How European bureaucrats built the business that beat Boeing*

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EXECUTIVE SUMMARY

In 1970, the United States dominated commercial aerospace. Supported by the legacy of industrial capacity and technical expertise developed in the Second World War, American firms built the most advanced, reliable commercial aircraft. The most prominent was Boeing, which held 60% global market share, while Douglas held another 26%.¹

A consortium of European governments founded Airbus as a direct response to American dominance, to compete with Boeing and ensure Europe had its own robust aviation ecosystem. Detractors dismissed Airbus as “just another European jobs program.”² According to free-market dogma, such industrial planning, executed under public control, subject to political disputes, and undisciplined by profit-seeking investors, was sure to fail.

Instead, Airbus caught up and surpassed Boeing as the world's leading aircraft manufacturer, gaining a reputation for cutting-edge innovation from fly-by-wire controls to composite materials. Boeing, for its part, descended into financialization and outsourcing, disgoring capital to shareholders while lagging in R&D investment, which led ultimately to embarrassing production delays and catastrophic crashes that grounded large portions of its fleet.

KEY LESSONS

Policymakers can identify critical industries primed for public investment. European politicians and bureaucrats correctly identified aerospace as a vital sector not only in 1970 but also for the century to follow and devised a long-term strategy for building technical and commercial leadership.

Government support can foster competitive firms. Market fundamentalism posits that markets create the correct incentives and competitive pressures

KEY FACTS

12-
15%

Airbus
**manufacturing
cost advantage** over
Boeing (1990s)³

\$1.27

spent by Airbus on
**R&D for every dollar
spent by Boeing,**
2013–2022⁴

661

deliveries made by
Airbus in 2022⁵

480

deliveries made
by **Boeing** in 2022⁶

to spur productivity and innovation, while active efforts by policymakers to boost particular firms or industries will backfire. But far from a catastrophic failure, Airbus—created and subsidized by a consortium of states—became the global leader in sales, quality, and innovation.

Shareholder primacy does not necessarily yield the most competitive or innovative firms. The case for shareholder primacy relies upon an assumption that prioritizing shareholder returns will create the most effective companies and ultimately the most social value. Consideration of other factors like employment or supply-chain location is supposed to increase costs and diminish returns. Adopting this mindset, Boeing pursued industry consolidation, rapidly returned capital to investors, reduced R&D spending, and outsourced aggressively. While generating record profits, it lost market share to Airbus and began to struggle with production and safety. Airbus built a European supply chain, kept European workers employed, and fostered an entire European aerospace industry—all while catching and passing Boeing from a standing start.

BACKGROUND

After the Second World War, American firms dominated the aircraft manufacturing sector. The wartime demand for aircraft resulted in the aerospace industry's modernization. A combination of industrial strength, management expertise, and a strong engineering talent pool contributed to the rise of leading commercial aircraft manufacturers. Constant consumer and military demand, coupled with technological innovations like jet engines, fueled American industry.⁷ In 1970, the U.S. aerospace industry's revenue was almost six times Europe's.⁸ The Boeing Company alone accounted for 60% of large passenger aircraft delivered globally that year. The Douglas Aircraft Company, another American firm, built 26%. All European manufacturers combined built 13% of large passenger aircraft.⁹

The European aviation industry emerged more slowly in the postwar era. National champions dominated the industry, specializing in shorter-range aircraft. By the late 1960s, France, Germany, and Britain were concerned that the advent of the Boeing 747, with its larger capacity and longer range, would cement American supremacy. The Europeans wanted to avoid dependence on American manufacturers for new aircraft and build upon the industrial capacity and jobs provided by their national champions. No entrepreneurs stood ready to launch, or private investors to finance, a direct competitor to Boeing. Pooling resources was the only way forward.

POLICY INTERVENTION

In July 1967, France, Britain, and Germany launched the European Airbus Project, a joint aircraft development and production program tasked with putting into service a twin-engine jetliner carrying 250–300 passengers by 1973.¹⁰ The expected cost was \$532 million—approximately \$4.7 billion today.¹¹ In September, the three countries signed a memorandum of understanding to launch the development of the A300, a short-to-medium-range twin-engine aircraft. Airbus Industrie GIE was founded in 1970 and the Spanish joined in 1971. In 1972, the A300 successfully took flight, with its first commercial flight in 1974 launching Airbus's infamous rivalry with Boeing.

From the start, Airbus was a state-backed enterprise with public funding. The A300 was initially financed by France (37.5%), Great Britain (37.5%), and West Germany (25%). Britain withdrew from the agreement after its Rolls-Royce engines were cut from the design, but France and Germany each increased their support to 50%. British firm Hawker Siddeley remained engaged for its critical work on wing design, investing £35 million in machine tools to build the wings and receiving a £35 million loan from Germany.¹² Additional support for Airbus would include R&D funding, infrastructure expansion, equity infusions, and loans.

Prompted by Boeing complaints to investigate Airbus's financing, the World Trade Organization eventually determined in 2010 that Airbus received:

- Over 1 billion euros in R&D funding for aircraft development between 1986–2005;
- Over 1 billion euros in infrastructure and infrastructure-related grants between 1989–2001, including land for Airbus facilities, construction of industrial facilities, and airport runway extensions; and
- Billions of dollars of share transfers and equity infusions between 1987–1998.¹³

All this support came atop the launch aid loaned by the member states to Airbus to finance the development of new aircraft. Through launch aid, governments provided financing at rates better than commercially available terms. Repayment on the loans was tied to aircraft sales, as a royalty-based system. By 2018, total launch aid subsidies exceeded \$22 billion.¹⁴ Sustained government assistance kept Airbus afloat until it made its first operating profit in 1990, 20 years after its launch.¹⁵

Beyond financing, Airbus leveraged European industrial expertise. The A300 included French (cockpit, control systems, fuselage components), British (wings), German (fuselage components), Dutch (moving parts of the wing such as flaps and spoilers), and Spanish (horizontal tailplane) contributions.¹⁶ Final assembly occurred in Toulouse, France. The member governments anticipated that a European supply chain for a globally competitive aircraft manufacturer would build and preserve European industrial capacity, accelerate economic growth, and provide good jobs.

Today, Airbus operates as a simplified joint-stock company. Aircraft manufacturing industry consolidation in the 1990s led the four member countries (France, Germany, Great Britain, and Spain) to reorganize the corporate structure in the 2000s. Since 2017, Airbus SAS builds commercial aircraft and is the parent company of two divisions: Airbus Defence and Space and Airbus Helicopters.¹⁷ Airbus shares are listed on several European indices. Approximately 26% are held by the French, German, and Spanish governments, with the rest publicly held.¹⁸

As Airbus grew, Boeing failed to take its would-be competitor seriously. Even the CIA produced an internal analysis on Airbus 1982, noting that American producers risked losing substantial share to the European firm.¹⁹ Airbus's market-share gains came initially at the expense of McDonnell Douglas (MCD), which merged with Boeing in 1997. The merger boosted Boeing's global market share to 70%.²⁰ The financialized corporate culture at struggling MCD came with it, proceeding to overtake Boeing's long-running emphasis on engineering

excellence. Shortly after the merger, a longtime Boeing engineer lamented that MCD's "predatory, autocratic culture has displaced Boeing's old problem-solving culture."²¹

In *Flying Blind*, *Bloomberg* journalist Peter Robison explains:

Boeing's success used to come from piling people and money onto problems until it crushed them ... the new ethos ... was primarily about extracting gains from stakeholders, not about working together to create new products. As it sold off plants, Boeing would squeeze its smaller and more vulnerable suppliers for better deals. Pitting cities and states against each other would secure more in tax breaks. Employees would be asked to sacrifice their pensions and benefits. Amassing influence over government would bring defense contracts and more predictable regulation.²²

Conditions deteriorated quickly, leading to the largest white-collar strike in U.S. history. Called by the Society of Professional Engineering Employees in Aerospace (SPEEA), the engineers and professional technicians union mobilized 23,000 workers in six states. A federal strike mediator privately described MCD executives at Boeing as "'hunter killer assassins' meeting Boy Scouts."²³ Boeing's 70% market share dwindled to the mid-40s.²⁴ As Airbus's market share inched closer to Boeing's, the latter doubled down on shareholder returns, slashing R&D spending, outsourcing supply chains, and shifting final assembly to right-to-work states.

IMPACT

Government backing and guidance were vital to Airbus's success. The company overtook Boeing because of its laser focus on its core purpose: creating a European aircraft manufacturer that supported the European aerospace industry.

To catch up with Boeing, Airbus became a leader in aircraft innovation.

For Airbus, competing with Boeing required developing a family of aircraft covering all sectors—from narrow-body to large wide-body—and doing it better. Technological innovation was critical. The A300 was the world's first twin-engine wide-body airliner. Airbus pioneered composite materials on primary structures, making its aircraft lighter and more durable. The A320, a narrow-body airliner, was the first commercial aircraft to use a digital fly-by-wire (FBW) system. This system replaces mechanical flight controls with computers that determine how best to make an airplane respond to a pilot's commands. Rather than learn each A320's individual quirks, pilots trained on an A320 cockpit could fly any plane in that line. FBW made commonality the norm and became the industry standard.²⁵

As Airbus launched its first planes, Boeing was hamstrung by legacy inventory. Developing new models had to be balanced against recouping past investments and selling inventory. The development of the 737 MAX illustrates this tension. In 2011, Airbus pitched American Airlines, a longtime Boeing customer, on its latest plane, the A320neo. Caught by surprise, Boeing scrapped plans for a new aircraft and pitched a reengineered "737 MAX" to American Airlines. The carrier announced orders from both producers that July.²⁶ Boeing poured more than \$30 billion of cash into stock buybacks during the MAX's

development,²⁷ and a former Boeing executive estimated that one in 25 MAX planes experienced some sort of safety issue in the months after delivery.²⁸ Shortly after entering service, the 737 MAX experienced two fatal crashes caused by design defects and was grounded by the FAA for 20 months.²⁹

From 2012 to 2022, Airbus spent more than Boeing on R&D every year except 2016 and 2017,³⁰ two years in which expense reclassification for the 787 and 77X aircraft (not new R&D) account for Boeing's higher spending. Institutional investors broadly opposed new airplane programs on the theory that rising R&D costs would cut into stock buybacks and dividend options.³¹ In 2021, Boeing closed its Seattle manufacturing R&D center.³² As of November 2022, the company planned to wait out the 2020s and defer new plane development until the 2030s.³³

Airbus caught and passed Boeing in market share.

One common misconception about Airbus is that they succeeded through sales to captive European customers. But after initial sales to Air France and Lufthansa, Airbus logged its first non-European sale, to Air Korea, in 1974.³⁴ Airbus made its first American sale in 1978 to Florida-based Eastern Airlines.³⁵

Relationship building and creative financing strategies led to significant deals in Asia, Africa, and South America, which Boeing considered its territory. In 1990, Boeing held 62% of the market, with McDonnell Douglas holding 23% and Airbus just 15%.³⁶ In 2003, Airbus outperformed Boeing for the first time, delivering 305 aircraft (the most common market share measure) to Boeing's 281, taking 52% market share.³⁷

Boeing's aggressive outsourcing led to supply chain issues and high costs. Historically, Boeing recouped the full cost of a plane's development after approximately 400 deliveries. But on its most recent signature airliner, the 787 Dreamliner, Boeing did not achieve positive cash flow until late 2015, 363 deliveries and three years after it entered service. By the end of 2020, the company was still left with \$20 billion in outstanding costs on developing the plane.³⁸ The FAA ordered a delivery halt on the Dreamliner between May 2021 and July 2022 as it investigated assembly quality control issues. A second delivery halt was called in February 2023 due to fuselage issues.³⁹ After nearly a decade in service, at the end of 2020, deferred costs on the Dreamliner were still approximately \$20 billion.⁴⁰

Airbus provided good, high-productivity employment.

Airbus successfully prioritized supporting the European aerospace industry while catching up to Boeing. From 1970 to 1998, while American employment in the aerospace industry fell by 63%, European employment fell by 4%.⁴¹ While Boeing worked to escape the confines of American labor law, Airbus worked within European labor law and collaborated closely with works councils. With high labor costs and obstacles to layoffs, Airbus adopted automated machinery more quickly and was also more likely to train and develop workers instead of firing them. By the mid-1990s, Airbus factories produced planes 12%–15% more cheaply than Boeing's.⁴²

ENDNOTES

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22. Peter Robison, *Flying Blind*, (2021), 81-82.
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24. *Ibid*, 71.
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34. "Champagne...and drought (1973-1977)," Airbus.
35. Peter Robison, *Flying Blind* (2021), 35.
36. John Newhouse, *Boeing Versus Airbus* (2007), 4.
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42. Peter Robison, *Flying Blind* (2021), 43.



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