

AVIATION Fact Sheet¹

COSTS OF DECOUPLING

Economic Impact: Decoupling would result in reduced U.S. aircraft sales to China and lower revenues, impacting U.S. output and jobs.

- Losing access to China's aviation market would translate into a loss of \$38 billion to \$51 billion in annual output and cause the U.S. civil aviation manufacturing industry to shed 167,000 to 225,000 jobs.
- From 2020 to 2029, the opportunity cost of the U.S. of losing the ability to sell goods and services in China would amount to \$277.2 billion in the fleet market and \$41.9 billion for MRO services.²
- From 2020 to 2038, the opportunity cost of losing access to China's market would be \$875 billion (\$342 billion for fleet; \$129 billion for MRO services; and \$404 billion for other commercial services).³

R&D and Competitiveness: Lost China market share would reduce economies of scale, R&D budgets, and long-term competitiveness and increase domestic costs for U.S. aviation firms.

- Lost revenue from the China market would translate into a \$1.5 to \$3.3 billion annual reduction of U.S. aviation R&D spending over a 20-year time frame.
- In every market segment, U.S. losses would result in gains for third country competitors, who could reinvest the proceeds to develop technologies and platforms to outcompete U.S. industry.
- With fewer sales over which aviation companies could amortize expenses, costs would increase for U.S. travelers, airlines, and suppliers.

National Security: Shifting global aviation demand away from U.S. suppliers would damage the U.S.' ability to invest in aerospace defense technologies and diminish its ability to influence the aerospace defense technologies used by third countries.

- Reduced U.S. R&D budgets for civil aviation manufacturing would result in U.S. companies losing a competitive edge in commercial segments, with spillover effects on technologies used for defense.
- Unpredictable U.S. policy could lead third countries to view U.S. suppliers as unreliable, motivating them to look for alternative suppliers to mitigate political risk and reduce their long-term ties to U.S. commercial and defense aerospace companies.

- 1 For a full explanation of methodology and detailed sourcing, please see the Aviation chapter of "Understanding U.S.-China Decoupling: Macro Trends and Industry Impacts," U.S. Chamber of Commerce, 2021.
- 2 Assumes, absent decoupling, that the U.S. would maintain a 45% share of China's fleet market and a 33% share of China's MRO market.
- 3 Assumes, absent decoupling, that the U.S. would maintain its fleet and MRO services market share, as well as fleet growth of 4.5% and services growth of 5.7% in the China market.

INDUSTRY SNAPSHOT AND BILATERAL TRENDS

The U.S. is a global leader in aviation manufacturing and R&D, providing major benefits to the U.S. economy.

- The U.S. holds a 43% global market share in aircraft manufacturing (2018) and a 38% share in engine and engine part manufacturing (2018), while North American manufacturers account for more than 50% of global commercial aircraft component sales (2019).
- U.S. domestic aircraft and parts manufacturing R&D reached \$14 billion in 2016.
- Aviation manufacturing contributed 0.83% of U.S. GDP in 2016 and supported over 700,000 jobs. In the same year, the broader civil aviation industry directly contributed 2.3% of U.S. GDP and over 4 million jobs, with indirect contributions amounting to more than 5% of GDP and 11 million jobs.

The U.S. relies on global trade and the China market specifically to sustain its global position as a leader in aviation manufacturing.

- Exports accounted for more than half of U.S. aircraft manufacturing revenue in 2017, reaching \$131 billion in 2018.
- China is the largest export market for U.S. aircraft, with net exports of U.S. aviation-related goods to China hitting a record of \$17.7 billion in 2018.

- China ranks as the U.S.' 11th-largest source of aviation-related goods as of 2018, and the U.S. does not import civil aircraft, engines, or significant aircraft parts from China. The resulting trade surplus allows U.S. aviation firms to reinvest in R&D and purchase critical components from third countries, such as top suppliers France and Canada.
- U.S. firms work with Chinese firms to develop China's domestic commercial aviation industry, which remains reliant on foreign parts, engines, and systems. Only half of the components for China's domestically made C919 aircraft are domestically produced.

China is the fastest-growing market for aviation fleets and services.

- China is forecasted to buy \$1.3 trillion worth of new planes between 2019 and 2038, representing nearly 75% of global demand for new single-aisle aircraft.
- Over the same period, China's fleet is forecasted to require \$1.6 trillion in commercial services—including marketing, customer service, MRO, and ground, flight, and cargo operations.
- China is the fastest-growing market for MRO services, forecasted to rise from \$7.2 billion today to \$18.3 billion in the next decade, equivalent to 16% of the projected total global MRO market.

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China's Decoupling Policies:

- China announced plans to develop its own commercial jetliner in 2006, and in 2008 it established the Commercial Aircraft Corporation of China (COMAC) to advance that goal.
- China's aviation sector is heavily restricted and dominated by the state-owned companies AVIC and COMAC. Joint ventures and technology transfer are requirements for U.S. participation.
- The Made in China 2025 industrial plan set a target of having Chinese producers supply 10% of the domestic commercial aircraft manufacturing market by 2025, and 10-20% of the global market for regional jetliners.
- Beijing reportedly instructed its carriers to delay the delivery of new U.S. aircraft and not to place new orders for U.S. aircraft amid the trade war between 2017 and 2019.

U.S.' Decoupling Policies:

- U.S. import tariffs cover more than 75% of aviation-related products imported from China.
- In February 2020, the Trump administration considered restricting the sale of commercial jet engines made by a GE-Safran joint venture to China. While the joint venture license cleared in April 2020, there is now increased risk that future exports of U.S. aviation technologies to China will be blocked.
- The June 2020 amendment to the Export Administration Regulations broadening the scope of the Military End User rule vastly expanded the range of Chinese aviation entities that require an export license based on their connection to Chinese military organizations.