



COMPARATIVE ANALYSIS OF SUPPLY CHAIN RESILIENCE IN THE AIRCRAFT INDUSTRY: A CASE STUDY OF BOEING AND AIRBUS

Li Yaofei ¹, Adi Saptari ², Hally Hanafiah ³, Isa Bin Halim ⁴

^{1,2,3}President University, li.yafei@student.president.ac.id, adi.saptari@president.ac.id,
hally.hanafiah@president.ac.id

⁴Univeraiti Teknikal Malaysia Melaka, isa@utem.edu.my

ABSTRACT

Boeing and Airbus are the leading companies in the aircraft industry and both of these companies compete in dominating the global market for commercial airplanes. Boeing is an American Multinational aircraft manufacturer while Airbus is a European multinational aircraft manufacturer. The objective of this paper is to analyze and compare the supply chain resilience of two major aircraft manufacturers, Boeing and Airbus. This comparison includes comparing their response to global disruption such as covid-19 pandemic, component shortage, trade tensions, and political tensions. To compare the global supply chain of Boeing and Airbus, this paper uses the Supply Chain Resilience Framework as a tool of analysis. Supply Chain Resilience Framework is a model to analyze supply chain resilience including principles of redundancy, flexibility, visibility, and collaboration to evaluate how each company manages disruptions. This paper used the qualitative research method by reviewing previous literature. The data collection will be done through reviewing previous researches, journals, articles, official reports, official website of Boeing and Airbus, and any other related resources. Through this comparison using the Supply Chain Resilience Framework, this research presents the research findings, highlighting identification of Key Resilience Strategies and Comparative Analysis of Resilience Factors between Boeing and Airbus. This comparative analysis on the resilience in the supply chain of Boeing versus Airbus emphasizes different strategies and practices each company has implemented to deal with global disruption.

Keywords: Aircraft Industry, Resilience framework, SCOR model, Supply Chain.

References

Journal

- Blackhurst, J., Dunn, K. S., & Craighead, C. W. (2011). An empirically derived framework of global supply resiliency. *Journal of Business Logistics*, 32(4), 374-391. <https://doi.org/10.1111/j.2158-1592.2011.01051>.
- Brandon-Jones, E., Squire, B., Autry, C. W., & Petersen, K. J. (2014). A contingent resource-based perspective of supply chain resilience and robustness. *Journal of Supply Chain Management*, 50(3), 55-73. <https://doi.org/10.1111/jscm.12050>
- Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *International Journal of*

- Logistics Management*, 15(2), 1-14. <https://doi.org/10.1108/09574090410700275>.
- Ivanov, D., & Dolgui, A. (2020). Viability of intertwined supply networks: Extending the supply chain resilience angles towards survivability. *International Journal of Production Research*, 58(10), 2904-2915. <https://doi.org/10.1080/00207543.2019.1634854>.
- Johnson, M., & Brown, S. (2022). The evolution of Boeing's supply chain strategies. *Aerospace Journal*, 30(3), 45-60.
- Jones, A. (2021). The impact of semiconductor shortages on the aerospace industry. *Journal of Supply Chain Management*, 28(4), 112-130.
- Miller, T., & Adams, K. (2021). Digital transformation in Airbus's supply chain. *Supply Chain Review*, 22(1), 76-85.
- Pettit, T. J., Fiksel, J., & Croxton, K. L. (2010). Ensuring supply chain resilience: Development and implementation of an assessment tool. *Journal of Business Logistics*, 31(1), 1-21. <https://doi.org/10.1002/j.2158-1592.2010.tb00125>.
- Rajesh, R. (2019). Sustainable supply chains in the aerospace industry: A case study of Airbus. *Journal of Cleaner Production*, 20(5), 215-228.
- Scholten, K., Scott, P. S., & Fynes, B. (2014). Mitigating supply chain disruptions through resilience. *International Journal of Production Research*, 52(1), 12-28.
- Sheffi, Y. (2005). *The resilient enterprise: Overcoming vulnerability for competitive advantage*. MIT Press.
- Sheffi, Y., & Rice, J. B. (2005). A supply chain view of the resilient enterprise. *MIT Sloan Management Review*, 47(1), 41-48.
- Smith, J. (2021). The economic impact of the global aircraft manufacturing industry. *Global Economics Review*, 18(2), 99-117.
- Sodhi, M. S., & Tang, C. S. (2012). *Managing supply chain risk*. Springer.
- Tang, C. S. (2006). Perspectives in supply chain risk management. *International Journal of Production Economics*, 103(2), 451-488. <https://doi.org/10.1016/j.ijpe.2005.12.006>
- Thompson, R. (2022). Airbus's competitive strategies in the global market. *European Business Review*, 35(1), 23-40.
- Wang, Y. (2020). Trade tensions and their impact on the aerospace supply chain. *International Trade Journal*, 34(3), 123-139.

Online Document

- Airbus (2020). *Airbus annual report 2020*.
<https://www.airbus.com/company/annual-report.html>.
- Boeing (2020). *Boeing annual report 2020*.
<https://www.boeing.com/investors/annual-report.page>.
- Boeing. (2023). Boeing reports fourth quarter results. Retrieved from Boeing Investors.
- IATA (2021). *Air passenger market analysis*. International Air Transport Association.
- Investopedia (2024). How Boeing makes money. Retrieved from Investopedia.