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Determining Airline Performance: Analysis of Entrepreneurial Orientation and Absorption Capacity through Innovation

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Abstract: The purpose of this literature study is to develop hypotheses regarding the influence between variables that can be used for further research. The research article on literature review of airline performance determination: analysis of entrepreneurial orientation and absorption capacity through innovation is a study in the field of human resource management. The approach used in this literature review is descriptive qualitative. The data collection technique is to use literature studies or review previous relevant articles. The data used in this descriptive qualitative approach came from previous studies relevant to this study and sourced from academic online media such as Thomson Reuters Journal, Springer, Taylor & Francis, Scopus Emerald, Elsevier, Sage, Web of Science, Sinta Journal, DOAJ, EBSCO, Google Scholar, and digital reference books. The results of this literature review article are: 1) Entrepreneurial orientation affects airline innovation; 2) Absorption capacity affects airline innovation; 3) Entrepreneurial orientation affects airline performance; 4) Absorption capacity affects airline performance; 5) Entrepreneurial orientation innovation affects airline performance; 6) Entrepreneurial orientation affects performance through airline innovation; and 7) Absorption capacity affects performance through airline innovation.

Keywords: Performance, Innovation, Entrepreneurial Orientation, Absorption Capacity

INTRODUCTION

The aviation industry is one of the most vital sectors in the modern global economic system because it serves as the main driver of inter-country connectivity, international trade, and human mobility (Hartono et al., 2020). The growth of this sector continues to increase in line with globalization, economic integration, and the increasing need for fast and efficient transportation. However, in the last decade, the global aviation industry has faced various serious challenges, such as fuel price fluctuations, geopolitical uncertainty, and changes in consumer behavior after the COVID-19 pandemic. Technological disruption and demands for environmental sustainability are also pressuring airlines to innovate aggressively in order to maintain their long-term performance and competitiveness (Supardi et al., 2023).

In the national context, Indonesia's aviation sector plays a strategic role in supporting connectivity between regions in the world's largest archipelago. Data from the Central Statistics

Agency, (2025), shows that the number of domestic flight departures in the 2018–2022 period experienced significant fluctuations. In the years before the pandemic, aircraft movement trends showed an increase, reflecting economic growth and increased community mobility. Then in 2020, the number of aircraft departures fell dramatically due to social restriction policies and a decline in economic activity. After a period of recovery in 2021–2022, flight volumes began to increase again, but have not yet fully returned to pre-pandemic stability. This condition illustrates the instability of the national aviation sector's performance, which is influenced by external and internal factors, such as operational management, pricing policies, and airline innovation (Daulay et al., 2022).

Source: (National Statistics Agency, 2022)

Figure 1. Data on Domestic Aircraft Departures in Indonesia from 2018 to 2022

Figure 1 illustrates Indonesian domestic flight departure data from 2018 to 2022, showing fluctuating patterns due to economic dynamics and the global pandemic. This figure shows that after a sharp decline in 2020, there was a gradual recovery in the following years. This pattern reflects the challenges faced by airlines in maintaining business performance amid market uncertainty, while also emphasizing the need for adaptive and innovation-based managerial strategies. In other words, the graph provides empirical evidence that internal organizational capabilities, such as entrepreneurial orientation and absorption capacity, are key to maintaining the stability and growth of airline performance (Susanto et al., 2021).

The main problem that arises is that many airlines, both globally and nationally, still face difficulties in maintaining their operational and financial performance in a sustainable manner. Although some airlines have invested in digitalization and customer service, the level of innovation produced has not been optimal. This is due to weak *entrepreneurial orientation*, which includes the ability to take risks, think creatively, and act proactively in capturing market opportunities. In addition, the low *absorptive* capacity of organizations in recognizing, assimilating, and applying external knowledge hinders effective learning and innovation processes. As a result, many airlines fail to turn market opportunities into sustainable competitive advantages, which ultimately leads to a decline in performance (Ananta & Albanna, 2023).

This arises from the fact that most previous research in the field of aviation management has only examined the relationship between innovation and airline performance, or between entrepreneurial orientation and business performance, without simultaneously integrating the mediating role *of airline innovation* and *absorption capacity*. Furthermore, most of these studies were conducted in non-aviation industries or developed countries, which have different market characteristics, regulations, and infrastructure compared to Indonesia. Therefore, comprehensive research is needed to examine how entrepreneurial orientation and absorption

capacity interact in influencing airline performance through innovation, particularly in the context of Indonesia's aviation industry, which is undergoing digital transformation and adapting post-pandemic (Sutrisno & Romdoni, 2022).

The novelty of this research lies in its approach, which attempts to synthesize the relationship between entrepreneurial orientation, absorption capacity, innovation, and airline performance in a single integrated conceptual model. This model not only confirms previous empirical findings but also broadens the perspective by placing innovation as a strategic mediating mechanism that connects internal organizational factors with performance outcomes. This approach contributes theoretically to the development of human resource management and innovation strategy literature in the aviation sector, while also providing practical contributions to airline management in designing knowledge- and innovation-based strategies to improve performance sustainably (Wahid et al., 2023).

In summary, global and domestic dynamics in the aviation industry demonstrate the importance of innovation and adaptability for sustainable performance. The fluctuating trends shown in Figure 1 provide empirical evidence of the strategic need for airlines to improve their entrepreneurial orientation and absorption capacity. This study contributes by offering an integrated conceptual framework that links these capabilities with innovation and performance, thereby filling a significant theoretical and practical gap in the existing literature. Ultimately, this study emphasizes that innovation-driven organizational transformation, rooted in entrepreneurial competence and knowledge-based, is inevitable to achieve competitiveness and long-term growth in the aviation industry (Pandini & Hwihanus, 2023).

Problem Statement

Based on the background of the problem above, the following problem formulations were obtained to be used as hypotheses for further research: 1) Does entrepreneurial orientation affect airline innovation?; 2) Does absorption capacity affect airline innovation?; 3) Does entrepreneurial orientation affect airline performance?; 4) Does absorption capacity affect airline performance?; 5) Does innovation affect airline performance?; 6) Does entrepreneurial orientation affect performance through airline innovation?; and 7) Does absorption capacity affect performance through airline innovation?

METHOD

This study uses a descriptive qualitative approach with a *literature review* method. This approach was chosen because it is suitable for exploring, understanding, and critically synthesizing various previous research results related to the influence of entrepreneurial orientation and absorption capacity on airline performance through airline innovation. In this context, the study not only presents a summary of the findings but also compares, contrasts, and interprets previous research results to identify patterns of interrelationships between variables and *research gaps*.

This method is in line with the *systematic literature review (SLR)* approach, which emphasizes transparency in the literature selection and analysis process so that the results can be replicated. Thus, this study contributes to building *a conceptual framework* that can be used as a basis for developing hypotheses in subsequent empirical studies, (Boulton, M. J., & Houghton, 2021).

The data in this study is entirely sourced from secondary data, in the form of scientific articles, digital books, research reports, and academic publications relevant to the variables of entrepreneurial orientation, absorption capacity, innovation, and airline performance. Literature sources were collected from various reputable international databases, including Scopus, Web of Science, Taylor & Francis, Emerald Insight, Sage, SpringerLink, Elsevier, DOAJ, and EBSCO. To broaden the scope of the literature, the researchers also searched for additional publications through Google Scholar using a combination of keywords such as

"entrepreneurial orientation," "absorptive capacity," "airline innovation," and *"airline performance."* The literature obtained was selected based on topic suitability, relevance to the research variables, and source credibility. The literature search was conducted during the period 2019–2024, taking into account current research trends in strategic management and innovation in the aviation industry. Table 1 below summarizes the data sources used in this study, (Susanto et al., 2024).

Data analysis was conducted using a *comparative* thematic analysis approach. The analysis stages included data reduction, data presentation, and conclusion drawing. In the reduction stage, all articles collected were examined and filtered based on their suitability with the research variables. The presentation stage was carried out by compiling findings from previous studies into a matrix or summary table to facilitate comparison. Next, a thematic analysis was conducted by identifying patterns of correlation, similarities, and differences in research results discussing the relationship between entrepreneurial orientation, absorption capacity, innovation, and airline performance.

The results of this process were used to develop a conceptual framework that illustrates the relationship between variables and explains the mediating mechanism of innovation in influencing organizational performance. This approach provides a more comprehensive understanding of the dynamics of variables and enables the development of measurable hypotheses for further research, (Dewi, 2024).

The validity of the research is maintained through the selection of literature sources from reputable international academic databases and a systematic selection process. Reliability is strengthened by conducting cross-source comparisons from various countries and industrial sectors so that the analysis results are not partial. Each stage of selection and synthesis is carried out consistently to avoid interpretation bias.

RESULTS AND DISCUSSION

Results

The following are the research findings, considering the context and problem formulation:

Airline Performance

Airline performance is a measure of the extent to which an airline is able to achieve its strategic objectives, both in terms of finance, operations, and customer service. According to (Yu et al., 2024), airline performance is not only measured based on financial indicators such as profitability and cost efficiency, but also includes non-financial aspects such as punctuality, customer satisfaction, and flight safety (Zhang et al., 2021).

The indicators or dimensions contained in airline performance variables include: 1) Financial Performance: Describes the airline's ability to generate profits through indicators such as Return on Assets (ROA), Return on Equity (ROE), and net profit margin. This aspect shows the effectiveness of management in managing company assets and capital; 2) Operational Efficiency: Assesses the extent to which airlines are able to optimize resources such as fuel, fleet, and labor. Common indicators include *load factor, on-time performance,* and *cost per available seat kilometer (CASK);* 3) Service Quality: Related to customer satisfaction, comfort, and reliability of flight services. This aspect is measured through customer satisfaction surveys, complaint rates, or *airline ratings*; 4) Market Growth: Indicates the airline's ability to expand its route coverage, market share, and passenger numbers. Market growth reflects the success of the airline's marketing strategy and competitiveness (Sewsankar & Loewenberger, 2024).

Airline performance variables are relevant to previous studies conducted by: (Gökalp & Soran, 2022), (Rinaldy et al., 2022), (Taliah & Zervopoulos, 2024).

Innovation

Airline innovation refers to the ability of airlines to introduce, develop, and implement new ideas, processes, or products to improve efficiency, customer experience, and company competitiveness. According to (Kastelli et al., 2022), innovation is a key force in creating economic superiority through new combinations of existing resources (Fajarratih et al., 2023).

The indicators or dimensions contained in the innovation variable include: 1) Product and Service Innovation: The airline's ability to create new services or improve existing services, such as *self check-in, in-flight entertainment*, and digital customer services; 2) Process Innovation: Related to the efficiency and optimization of business processes, such as the implementation of predictive maintenance systems, digitization of flight operations, or automation of baggage management; 3) Technological Innovation: The use of cutting-edge technologies such as *artificial intelligence* for demand forecasting, integrated flight information systems, or the use of *sustainable aviation fuel*; 4) Business Model Innovation: Involves the development of strategic partnership patterns, dynamic pricing systems, loyalty programs, or diversification of revenue sources (e.g., logistics and air cargo) (Jumawan et al., 2023).

Innovation variables are relevant to previous studies conducted by: (Alaghbari et al., 2024), (Hysa et al., 2020), (Kalmykov, 2024).

Entrepreneurial Orientation

Entrepreneurial orientation is an organization's strategic tendency to take risks, innovate, and act proactively to capture business opportunities in the market. (Octavia et al., 2020a) defines entrepreneurial orientation as a multidimensional construct that includes being innovative, proactive, and willing to take risks. In the context of airlines, entrepreneurial orientation is reflected in a company's ability to identify new market opportunities, respond to changes in customer demand, and develop innovative strategies for efficiency and growth (Shiratina et al., 2020).

The indicators or dimensions contained in the entrepreneurial orientation variable include: 1) Innovative: The tendency of organizations to encourage new ideas, conduct experiments, and develop products or services that are different from competitors; 2) Proactive: The ability of companies to act as pioneers in exploiting market opportunities, responding to changes, and leading competition; 3) Risk-Taking: Management's willingness to make investments and strategic decisions that involve uncertainty in the hope of obtaining long-term profits; 4) Independence and Competitiveness: The ability of an organization to compete actively by increasing efficiency, reducing costs, and strengthening its market position through aggressive and adaptive strategies (Octavia et al., 2020b).

Entrepreneurial orientation variables are relevant to previous studies that have been researched by: (Sulistyowati et al., 2022), (Rahmadi et al., 2020), (Rahayu & Sriyono, 2023).

Absorption Capacity

Absorption capacity is defined as an organization's ability to recognize the value of external information, assimilate it, and apply it in a business context to create innovation. This concept emphasizes the importance of organizational learning processes in transforming external knowledge into valuable internal capabilities. In the aviation industry, absorption capacity is reflected in airlines' ability to utilize new technologies, understand global market trends, and apply international best practices (Ummah, 2019).

The indicators or dimensions contained in the absorption capacity variable include: 1) Knowledge Acquisition: The ability of an organization to recognize and obtain new information or technology from the external environment, such as business partners, regulators, or competitors; 2) Knowledge Assimilation: The process of interpreting, understanding, and integrating external information into the company's internal knowledge system; 3) Knowledge

Transformation: The ability to combine new knowledge with existing knowledge to generate new insights and solutions; 4) Knowledge Exploitation: The application of acquired knowledge to create innovative products, services, or processes that impact organizational performance improvement (Suhartono et al., 2024).

The absorption capacity variable is relevant to previous studies conducted by: (Neis & Rohenkohl, 2024) , (Soussi et al., 2022), (Lei et al., 2022).

Previous Research

Based on the above findings and previous studies, the research discussion is formulated as follows:

Table 1. Relevant Previous Research Findings

No	Author (Year)	Research Results	Similarities With This Article	Differences With This Article
1	(Al-shami et al., 2022)	The Entrepreneurial Orientation variable affects Airline Innovation in the Airport Industry, mediated by Strategic Alignment	This article has similarities in examining the Entrepreneurship Orientation variable as the independent variable and examining the Airline Innovation variable as the dependent variable.	Another difference is in the mediating variable of Strategic Alignment
2	(Cruz-Ros et al., 2021)	The variables of Absorptive Capacity and Service Delivery Process affect Airline Innovation and Performance	This article has similarities in examining the Absorptive Capacity variable as an independent variable and examining the Innovation variable as a dependent variable.	Another difference in the independent variable is the Service Delivery Process
3	(Putniņš et al., 2020)	The Entrepreneurial Orientation variable influences Airline Performance and Driving Performance	This article has similarities in examining the independent variable of Entrepreneurial Orientation and examining the dependent variable of Airline Performance	Another difference in the dependent variable is Driving Performance
4	(Moryadee & Jitt-Aer, 2020)	The variables of Absorptive Capacity, Corporate Sustainability, and Supply Chain Agility influence Airline Performance	This article has similarities in examining the independent variable Absorptive Capacity and examining the dependent variable Airline Performance	Another difference lies in the independent variables Corporate Sustainability and Supply Chain Agility
5	(Syengo et al., 2024)	The Innovation variable affects the Performance of Kenyan Airlines	This article has similarities in examining the independent variable of Innovation and examining the dependent variable of Airline Performance	The difference lies in the research object, which is Kenyan airlines
6	(Kwak et al., 2024)	Entrepreneurial Orientation and Organizational Culture Variables Influence Airline Performance through Innovation	This article has similarities in examining the independent variable of Entrepreneurial Orientation, the dependent variable of Airline Performance, and the Mediation of Innovation	Another difference lies in the independent variable of Organizational Culture
7	(Heksarini et al., 2024)	The variables of Absorptive Capacity and Intellectual Capital influence Performance mediated by Innovation	This article has similarities in examining the independent variable Absorptive Capacity, the dependent variable Performance, and Innovation Mediation	Another difference in the independent variable Intellectual Capital

Discussion

Based on the research question, previous studies, and the literature review above, the discussion in this study is as follows:

1. The Influence of Entrepreneurial Orientation on Airline Innovation

Based on a review of the literature and relevant previous studies, it can be stated that entrepreneurial orientation influences airline innovation.

To implement airline innovation through entrepreneurial orientation, airline companies must pay attention to: 1) Innovative: Airline companies must have the ability to create and develop new ideas in services and operations. An innovative attitude enables airlines to introduce new services, such as *digital self-check-in,* automated baggage systems, or environmentally friendly flight concepts; 2) Proactive: Airlines need to have the ability to quickly anticipate market changes and customer needs. A proactive attitude is reflected in the company's ability to be *a first mover* in adopting new technologies or developing services that competitors do not yet offer; 3) Risk-taking: Airlines must be willing to invest in new technologies, open up potential international routes, or develop new business models, even if the results are uncertain; 4) Independence and competitiveness: Airlines must have a high competitive spirit in facing global market pressures. Independence in strategy and the ability to adapt to environmental changes will strengthen the airline's position in the market.

If airlines can pay attention to these four entrepreneurial orientations, it will have an impact on airline innovation, including: 1) Product and service innovation: Where new flight products are developed or customer service quality is improved, such as digital loyalty programs and app-based *in-flight entertainment* systems; 2) Process innovation: Updating operational systems such as the use of *predictive maintenance systems* for fleet efficiency and fuel management; 3) Technological innovation: By applying cutting-edge technologies such as *artificial intelligence* for demand analysis, *blockchain* in ticketing systems, or *sustainable aviation fuel* to support environmental sustainability; 4) Business model innovation: Through changes in strategic partnership patterns, diversification of revenue sources, and digitization of ticket distribution and air logistics systems.

The results of this study are in line with previous research conducted by (Al-shami et al., 2022), which states that there is an influence between entrepreneurial orientation and airline innovation.

2. The Influence of Absorption Capacity on Airline Innovation

Based on a literature review and relevant previous studies, it is stated that absorption capacity influences airline innovation.

To implement airline innovation through absorption capacity, airline companies must pay attention to: 1) Knowledge acquisition: Airline companies must actively seek and obtain information from external sources such as industry partners, regulators, research institutions, and aviation technology providers; 2) Knowledge assimilation: Once knowledge is acquired, airlines need to have systems and mechanisms in place to analyze and integrate this information into the organization's internal knowledge; 3) Knowledge transformation: Airlines need to be able to combine new knowledge with existing experience and practices to produce innovative solutions; 4) Knowledge exploitation: The application of this knowledge in the form of concrete innovations that provide added value to customers and the company.

If airlines can pay attention to these four aspects of absorption capacity, it will have an impact on airline innovation, including: 1) Product and service innovation: Driven by Knowledge Transformation and Knowledge Exploitation. Airlines combine acquired knowledge (e.g., the latest *in-flight entertainment* technology or healthy food trends) with internal competencies to create new products (routes, aircraft types) or new services (high-speed Wi-Fi, *personalized dining*, seamless *self-service check-in*); 2) Process innovation: Airlines can innovate *ground handling* processes, aircraft maintenance (*MRO)*, aircraft

turnaround time at airports, and *supply chain* management by adopting automation or predictive analytics technologies (e.g., predicting component failure before it occurs); 3) Technology innovation: Driven by the entire cycle, especially Acquisition and Exploitation. Airlines utilize Absorption Capacity to integrate *cutting-edge* technology*;* 4) Business model innovation: Airlines use new insights to redefine how they generate profits. Business model innovation can take the form of developing highly efficient *low-cost carrier* models, diversifying revenue through logistics (cargo) services, or creating loyalty programs that are fully integrated with the digital partner ecosystem (hotels, banks, ground service providers). Absorption Capacity enables airlines to replicate and modify proven successful business models from other industries into the aviation sector.

The results of this study are in line with previous research conducted by (Cruz-Ros et al., 2021), which states that there is an influence between absorption capacity and airline innovation.

3. The Influence of Entrepreneurial Orientation on Airline Performance

Based on a literature review and relevant previous studies, it is stated that entrepreneurial orientation affects airline performance.

To improve airline performance through entrepreneurial orientation, airlines need to pay attention to and implement the following: 1) Innovative: Active support for new ideas, experiments, and the development of new technologies or processes. Innovative involves the willingness to deviate from existing industry standard practices; 2) Proactive: Conducting predictive market analysis to identify new unserved routes or new customer segments. Being quick to adopt new technologies before they become industry standards (e.g., *real-time baggage tracking)*; 3) Risk-taking: Investing in new types of aircraft that are more fuel-efficient but not yet widely tested, or opening new international routes that are in high demand but subject to intense political/regulatory competition. Allocate a special budget for *pilot* projects that may fail; 4) Independence and competitiveness: Delegate decision-making authority to line managers (e.g., price or flight schedule adjustments). Aggressively challenge *incumbent* airlines in certain markets, for example by offering highly competitive prices or very different services.

If airlines can pay attention to these four entrepreneurial orientations, it will have an impact on airline performance, including: 1) Financial performance: Entrepreneurial orientation improves financial performance. Innovation and Risk-Taking (investment in new *revenue management* technology) enable airlines to increase revenue per seat and reduce operating costs. Being proactive in identifying new markets (profitable routes) also ensures a superior new revenue stream; 2) Operational efficiency: Entrepreneurial orientation significantly improves operational efficiency. Independence in decision-making allows ground teams to respond quickly to operational issues. Innovation in processes (e.g., data-driven *predictive maintenance*) reduces aircraft *downtime* and increases fleet utilization; 3) Service quality: Airlines proactively create and test unique new services (e.g., seamless biometric *check-in* processes, personalized *in-flight entertainment*) that differentiate them from competitors. High service quality supports premium pricing; 4) Market growth: Proactively identifying and filling market gaps (routes with emerging demand). Aggressive competitiveness ensures airlines can capture market share from competitors through innovation-driven service differentiation.

The results of this study are in line with previous research conducted by (Putniņš et al., 2020), which states that there is an influence between entrepreneurial orientation and airline performance.

4. The Influence of Absorption Capacity on Airline Performance

Based on a literature review and relevant previous studies, it is stated that absorption capacity affects airline performance.

To improve airline performance through absorption capacity, airlines need to pay attention to and implement the following: 1) Knowledge acquisition: Airlines must be able to recognize and obtain relevant information from the external environment, such as industry partners, aviation authorities, research institutions, and global technology trends; 2) Knowledge assimilation: Companies need to internalize and integrate this information into their organizational structure and work culture. Knowledge assimilation creates harmony of understanding between work units so that each department is able to consistently implement best practices; 3) Knowledge transformation: Knowledge transformation refers to the ability to combine new knowledge with internal experience to produce innovative solutions. Airlines can utilize historical flight data analysis to create more efficient route strategies or predictive maintenance programs; 4) Knowledge exploitation: Knowledge exploitation can be realized through the implementation of integrated information systems, improved fuel efficiency, optimized flight schedules, or service diversification such as air logistics and digital cargo.

If airlines can pay attention to these four areas of absorption capacity, it will have an impact on airline performance, including: 1) Financial performance: Innovative new services and loyalty programs (the result of transformation & exploitation) can increase revenue per passenger (yield) and attract regular customers; 2) Operational efficiency: Integrated management systems help predict and reduce delays, improving operational reliability; 3) Service quality: Personalized services, smooth processes, and quick responses to complaints (based on knowledge from acquisition) directly improve customer experience; 4) Market growth: The ability to continuously innovate (through transformation) makes airlines difficult for competitors to imitate, creating a sustainable competitive advantage in the market.

The results of this study are in line with previous research conducted by (Moryadee & Jitt-Aer, 2020), which states that there is an influence between absorption capacity and airline performance.

5. The Influence of Airline Innovation on Airline Performance

Based on a literature review and relevant previous studies, it is stated that airline innovation affects airline performance.

To improve airline performance through airline innovation, airline companies need to pay attention to and implement: 1) Product and service innovation: Development of hybrid cabin classes (such as Premium Economy), private suites in business class, or seats with more legroom in economy class; 2) Process innovation: Use of *self-service kiosks*, automatic bag drop, and biometric-based boarding processes (facial recognition) to speed up processes and reduce queues; 3) Technological innovation: Development of mobile applications that are not only for booking, but also as a travel information center, digital *boarding passes*, and a 24/7 customer service channel; 4) Business model innovation: Joining global alliances (such as Star Alliance, SkyTeam) or forming joint ventures to expand route networks, share resources, and offer broader benefits to customers.

If airlines can pay attention to these four areas of innovation, it will have an impact on airline performance, including: 1) Financial performance: The combination of increased revenue and reduced costs results in healthier profit margins and better Return on Investment (ROI); 2) Operational efficiency: Process innovation (fast *turnaround*) and technology (route optimization by AI) improve *aircraft utilization*, which is the number of hours an aircraft flies per day, a key indicator of efficiency; 3) Service quality: Innovative airlines can differentiate themselves from competitors, not only based on price, but also based on the overall quality of the experience; 4) Market growth: With a combination of superior service, efficient operations,

and competitive prices, airlines can win customers from competitors and increase their market share.

The results of this study are in line with previous research conducted by (Syengo et al., 2024), which states that there is an influence between airline innovation and airline performance.

6. The Influence of Entrepreneurial Orientation on Airline Performance through Airline Innovation

Based on a literature review and relevant previous studies, it is stated that entrepreneurial orientation influences airline performance through airline innovation.

To improve airline performance through airline innovation and entrepreneurial orientation, airline companies need to pay attention to and implement: 1) Product and service innovation: Developing hybrid cabin classes (Premium Economy), personalized loyalty programs, partnerships with lifestyle brands, "all-inclusive" travel packages, and menus developed by renowned chefs; 2) Process innovation: Implementation of biometric-based boarding processes, automatic bag drop systems, predictive maintenance for aircraft, and flight route optimization using AI to save fuel; 3) Technological innovation: Developing an integrated mobile application as a "digital travel companion," using the Internet of Things (IoT) to monitor aircraft conditions in real time, and investing in the latest generation of more efficient aircraft such as the Airbus A350; 4) Business model innovation: Adopting a "hybrid" model (combining LCC and full-service), developing additional sources of revenue (ancillary revenue) from seat selection, baggage, insurance, and vacation package sales, and forming joint ventures on certain routes; 5) Innovative: A culture that encourages experimentation and supports new ideas. The company actively allocates resources to Research & Development (R&D) in services, processes, and business models; 6) Proactive: Being anticipatory of market trends and moving ahead of competitors. For example, being the first to open routes to up-and-coming destinations, or responding to sustainability trends by investing in Sustainable Aviation Fuel (SAF) before it becomes mandatory; 7) Risk-taking: Daring to make large and risky investments, such as ordering large numbers of new aircraft in anticipation of market growth, or launching new subsidiaries with different business models in competitive markets; 8) Independence and competitiveness: Having the spirit to directly challenge major competitors, whether through aggressive price wars, direct comparison marketing campaigns, or strategically opening the same routes as competitors to capture market share.

If airlines can pay attention to these eight aspects of innovation and entrepreneurial orientation, it will have an impact on airline performance, including: 1) Financial performance: Proactive and innovative nature encourages the creation of product/service innovations that increase revenue per passenger (yield). Process and Technology Innovation driven by efficiency directly reduces the largest operational costs (fuel and maintenance). The courage to take risks in business model innovation (such as ancillary revenue) opens up new revenue streams; 2) Operational efficiency: Process innovation (such as biometric boarding) and technology (such as predictive maintenance) born from an innovative culture directly reduce aircraft turnaround time, increase aircraft utilization, and reduce delays; 3) Service quality: Proactive in understanding customer needs and innovative in designing experiences, leading to product/service innovations (mobile applications, in-flight entertainment, cabin comfort) that are directly felt by passengers; 4) Market growth: Independence and competitiveness encourage airlines to capture market share with business model innovations (e.g., hybrid models) and the courage to take risks to open new routes. Proactivity allows them to become pioneers in untapped markets.

The results of this study are in line with previous research conducted by (Kwak et al., 2024), which states that there is an influence between entrepreneurial orientation and airline performance through airline innovation.

7. The Influence of Absorption Capacity on Airline Performance through Airline Innovation

Based on a literature review and relevant previous studies, it is stated that absorption capacity affects airline performance through airline innovation.

To improve airline performance through airline innovation and absorption capacity, airlines need to pay attention to and implement the following: 1) Product and service innovation: Airlines need to develop new services and improve the quality of existing products, such as digital check-in services, personalized passenger experiences, and the implementation of app-based loyalty programs. 2) Process innovation: Involving the renewal of operational systems to be more efficient, such as the use of *predictive maintenance systems*, flight schedule automation, and the digitization of safety procedures; 3) Technological innovation: The application of the latest technologies such as *artificial intelligence, big data analytics,* and *blockchain* to support decision making, fleet management, and customer data security; 4) Business model innovation: This includes changes in strategic partnership patterns, diversification of revenue sources, and the implementation of digital-based ticket distribution and logistics systems; 5) Knowledge acquisition: Companies need to actively acquire knowledge from various external sources such as business partners, research institutions, and aviation associations; 6) Knowledge assimilation: This stage ensures that the external information obtained can be interpreted, integrated, and understood by all elements of the organization; 7) Knowledge transformation: Combining new knowledge with existing knowledge to produce new relevant solutions; 8) Knowledge exploitation: The practical application of processed knowledge in operational activities, such as the development of integrated information systems, customer service improvements, or the development of new strategic routes.

If airlines can pay attention to these eight aspects of innovation and absorption capacity, it will have an impact on airline performance, including: 1) Financial performance: Affecting financial performance in the form of increased profitability and revenue due to operational efficiency and service innovation; 2) Operational efficiency: With existing innovations, operational efficiency can be achieved through resource optimization, flight punctuality, and cost reduction; 3) Service quality: With existing innovations, service quality can be improved through increased customer satisfaction, safety, and reliability of flight services; 4) Market growth: Through increased market share, expansion of new routes, and strengthening of competitive positions at the national and international levels.

The results of this study are in line with previous research conducted by (Heksarini et al., 2024), which states that there is an influence between absorption capacity and airline performance through airline innovation.

Conceptual Framework

The conceptual framework is determined based on the research problem, research objectives, and previous studies relevant to the literature review:

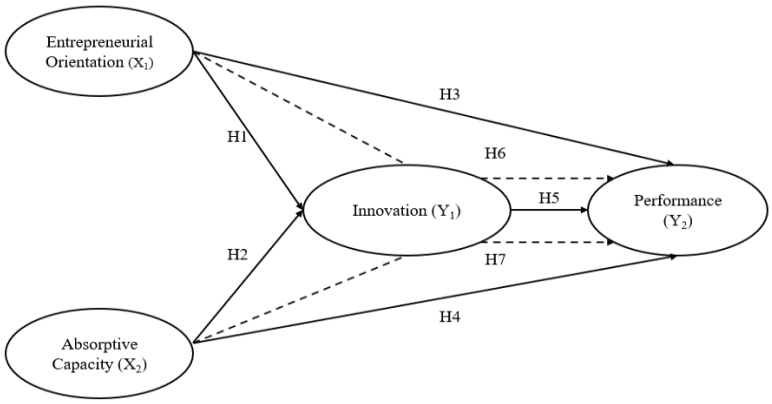

Figure 2. Conceptual Framework

Based on Figure 2 above, entrepreneurial orientation and absorption capacity influence airline performance through airline innovation. However, in addition to the variables of entrepreneurial orientation, absorption capacity, and airline innovation that influence airline performance, there are other variables that influence it, including:

1) Digital Capacity: (Dillahunt et al., 2024), (Kastelli et al., 2022), (Mikhaylova et al., 2021).
2) Strategic Leadership: (Younis & Hussain, 2023), (Adiguzel et al., 2020), (Ari Sulistyowati et al., 2025).
3) External Support: (Chang et al., 2023), (Sebayang et al., 2023), (Valdez-Juárez et al., 2021).

CONCLUSION

Based on the research question, results, and discussion above, the conclusion of this study is:

1. Entrepreneurial orientation influences airline innovation in Indonesia;
2. Absorption capacity influences airline innovation in Indonesia;
3. Entrepreneurial orientation influences airline performance in Indonesia;
4. Absorption capacity affects airline performance in Indonesia;
5. Airline innovation affects airline performance in Indonesia;
6. Entrepreneurial orientation affects airline performance through airline innovation in Indonesia;
7. Absorption capacity affects airline performance through airline innovation in Indonesia.

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