World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(RESEARCH ARTICLE)

Check for updates

Addressing Supply Chain Inefficiencies to Enhance Competitive Advantage in Low-Cost Carriers (LCCs) through Risk Identification and Benchmarking Applied to Air Australasia's Operational Model

Babatunde Olusola Awotiwon [1], Joy Onma Enyejo [2,*], Fadekemi Rukayat Adedoyin Owolabi [3], Idayat Ninilola Ololade Babalola [4] and Toyosi Motilola Olola [5]

[1] *Department of Business Administration, University of South Wales, United Kingdom.*
[2] *Department of Business Management, Nasarawa State University, Keffi. Nasarawa State, Nigeria.*
[3] *Department of Strategic and Digital Marketing, University of South Wales, UK.*
[4] *Goizueta Business School, Emory University, Atlanta Georgia, USA.*
[5] *Department of Communications, University of North Dakota, Grand Forks, USA.*

World Journal of Advanced Research and Reviews, 2024, 23(03), 355–370

Publication history: Received on 22 July 2024; revised on 26 August 2024; accepted on 29 August 2024

Article DOI: https://doi.org/10.30574/wjarr.2024.23.3.2684

Abstract

This study examines the issues in Air Australasia's supply chain operations as a leading low cost carrier (LCC) in the market. It delves into the inefficiencies within the airlines supply chain that affect its operational efficiency and competitiveness. The goal of this research is to pinpoint key areas of inefficiency and suggest strategies for enhancing the airlines operational effectiveness and competitive edge. The study's population includes individuals engaged in managing the airlines supply chain like supply chain managers and logistics coordinators among others. A group of 25 participants was purposefully selected to gain a thorough understanding of how the airline manages its supply chain processes. The research uses a blend of qualitative and quantitative methods and Data was gathered through organized interviews surveys and by examining internal documents such, as financial reports and operational records. The researchers looked closely at the data to find common themes and used statistical techniques to analyze the quantitative data for patterns and relationships between variables. Their discoveries pointed out weaknesses in procurement processes and logistics coordination as well as issues with risk control. They provided recommendations on how Air Australasia could enhance its edge by implementing stronger risk assessment strategies and align its supply chain operations with industry norms for better performance and sustainability over time. The research adds to our knowledge of how supply chains work in the low cost carrier (LCC) industry and offers advice for businesses looking to improve their operations efficiently. These suggestions focus on streamlining supply chain operations and improving customer satisfaction to help Air Australasia stay competitive in the LCC market.

Budget airlines, Low Cost Carriers (LCCs) managing the supply chain effectively to gain an edge through identifying risks and benchmarking strategies within the context of Air Australasia operating in the aviation market of Australasia.

Keywords: Supply Chain Management (SCM); Low Cost Carriers (LCCs); Competitive Advantage; Risk Identification; Benchmarking; Australasian Aviation Market

1. Introduction

The budget airline sector has become a player in the worldwide aviation field. Especially in areas such as Australasia where long distances and isolation call for cost effective air travel options (Button 2012) shown in figure 1. These airlines succeed by keeping their operations efficient and providing services at competitive prices; this approach has

* Corresponding author: Joy Onma Enyejo

opened up air travel to a wider range of people. With the rapid growth of the budget airline market comes new hurdles to tackle. Especially when it comes to managing the supply chain effectively. Effective management of supply chain operations is essential for LCCs such as Air Australasia because they have an influence on operating expenses s service dependability and overall competitiveness. Inadequacies in the supply chain like delays in acquiring goods and services lack of coordination in logistics and dependence, on a supplier can result in significant operational challenges that hinder the airlines capacity to offer affordable fares and draw in passengers (Graham 2013).

Figure 1 Global Low-Cost Carrier (LCC) Market Overview (Sejal Akre, 2022)

The first illustration shows a bar graph illustrating the expansion of the LCC sector over time in terms of market size in USD billion from 2018 to 2030 with an upward trend. The chart emphasizes an average annual growth rate (AAGR) of 16. 3 % From 2024 to 2030 indicating the increasing significance of the LCC approach in the aviation sector. This development is particularly crucial in areas such, as Australasia, where vast distances and remote locations necessitate air travel options. LCCs have become a player in the travel industry by providing budget friendly travel options to cater to the needs of cost-conscious consumers. However, this growth also presents challenges in the realm of managing the supply chain. Issues such as delayed procurement, ineffective coordination of logistics and reliance on a supplier can result in significant disruptions, to operations. These inefficiencies hinder an airlines capacity to maintain pricing and dependable service thus impacting its ability to effectively compete in the rapidly expanding LCC market. Effective management of the supply chain is vital for LCCs to maintain their expansion and competitive advantage, in the field.

The LCC model has become a player in the international aviation sector. Especially in areas such as Australasia where long distances and remote locations require affordable air travel options. The LCC model focuses on providing services at lower prices to ensure airlines can run smoothly and pass on the benefits, to passengers (as shown in figure 2 according to O'Connels research in 2007). In the regions market sector for air travel experiences a notable rise in demand due to the growing numbers of tourists and business travellers. This trend is especially evident in the travels between Australia and Asia as highlighted by Nolan (1996). Nevertheless, LCCs like Air Australasia face competition that necessitates them to constantly enhance their supply chain management approaches to stay ahead in the game according to Forsyth (2003).

Inefficiencies in the supply chain can pose problems for airlines and hinder their competitiveness in the market by impacting operations negatively (Christopher 2005). It is essential to tackle these issues by identifying risks and comparing performance against industry standards to maintain an edge. This research delves into examining Air Australasia's supply chain to pinpoint inefficiencies. Suggest enhancements aligned with best practices in the industry sector. The findings from this analysis aim to boost efficiency and improve the competitive standing of LCCs operating in that region.

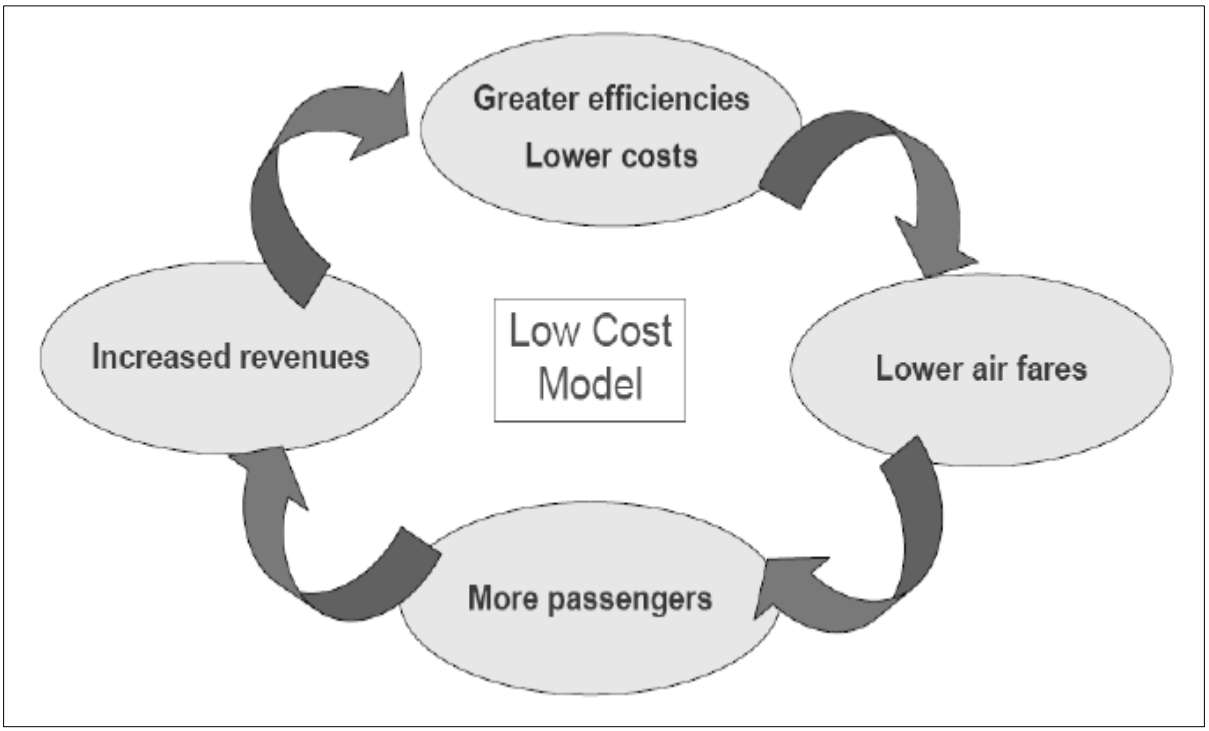

Figure 2 Operation concept of low-cost airline (Sanja, Steiner. 2006)

Figure 2 shows an illustration of the LCC framework that demonstrates how improved efficiencies and reduced costs result in cheaper airfares that draw in additional passengers. The rise in passenger numbers leads to increased earnings which then loop back into the system to support efficiencies and cost savings. This approach works well in the aviation sector with a special focus on areas such as Australasia where long distances and remote locations require economical air transport options. The LCC model relies on keeping expenses down to provide affordable prices that appeal to many passengers and help bring in a significant number of travellers. However operational hurdles like procurement delays, logistical issues and reliance, on one supplier can disrupt this balance. These challenges may hinder an airline's efforts to keep costs and prices competitive. The inefficiencies mentioned can weaken the advantage of LCCs which may impact their passenger appeal and hinder revenue growth over time; potentially posing a threat to the sustainability of the LCC business model, in the market.

1.1. Problem Statement

The LCC market in the region is highly competitive with a focus on operational efficiency that can impact an airlines success greatly. Air Australasia and other LCC airlines encounter challenges in managing their supply chain. Issues within the supply chain like delays and higher costs affect the airlines competitiveness. The challenges do not only have an impact on the airline's financial success but also influence its capacity to meet customer demands in a fiercely competitive industry sector. As the region shows potentials for expansion with rising interest from Asia Air Australasia's existing supply chain management methods are not completely fine-tuned to make the most of these possibilities. The lack of a method for recognizing risks and comparing with industry standards worsens these inefficiencies making it crucial to tackle these issues to boost the airlines overall effectiveness and standing in the market.

1.2. Research Objectives

The main goal of this study is to pinpoint and rectify the supply chain inefficiencies that are impeding the efficiency of Air Australasia in the competitive LCC market of the Australasian region as illustrated in figure 3. The research seeks to assess the airlines existing supply chain methods and pinpoint the critical areas where inefficiencies arise specifically honed in on the procedures leading to higher expenses, delays and less, than ideal resource distribution. The study also aims to use methods for recognizing risks to discover disruptions in the supply chain early on and take a proactive approach to managing those risks effectively. The research also aims to compare Air Australasia's supply chain processes with the practices in the industry to identify areas for enhancement. This study intends to suggest tactics that can improve the airlines supply chain performance and make it more competitive and sustainable in the ever-changing aviation sector.

Visual representation in Figure 3 highlights the study's research goals centered around addressing supply chain inefficiencies within Air Australasia as the objective of the research project is to identify and resolve these issues effectively. From this core objective stem four sub goals that delve into areas of the research focus; 1) The initial sub goal involves assessing supply chain practices to pinpoint inefficiencies and their effects on performance. 2) The second sub goal aims to apply risk identification methodologies to uncover risks, within the supply chain and propose suitable mitigation measures. The third goal involves comparing Air Australasia's methods with those of industry players to pinpoint areas needing enhancement. Moreover, the fourth goal seeks to suggest strategies in line with industry norms for better supply chain effectiveness. Each objective is elaborated with steps or key areas for a thorough strategy, toward reaching the main research aim.

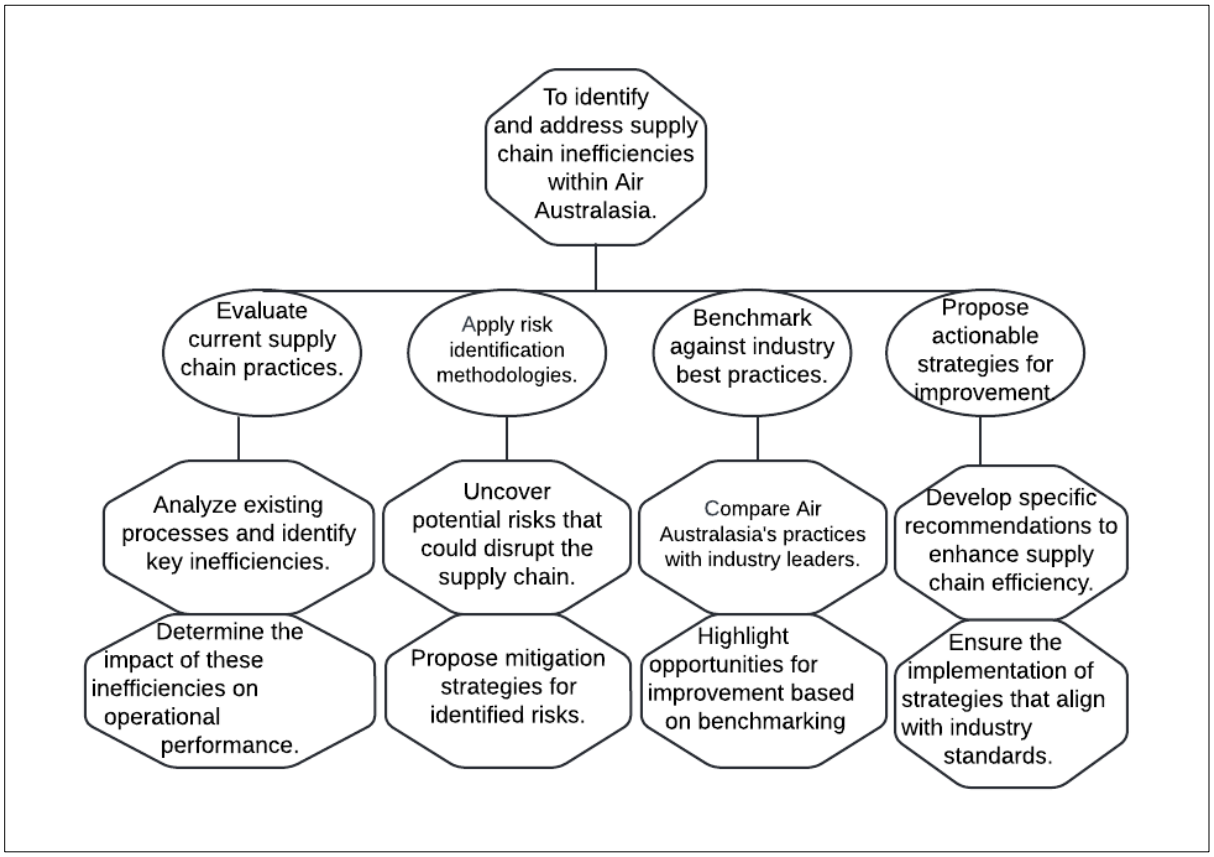

Figure 3 Research Objectives Overview

1.3. Population of the Study and Sample Size

The study's participants consist of individuals engaged in managing Air Australasia's supply chain operations such as supply chain managers and logistics coordinators along with procurement officers and industry specialists who play a direct role in or engage with the airlines supply chain procedures as outlined in table 1. This research also takes into account information from industry publications and case studies, within the Australasian LCC sector. The individuals selected as stakeholders were picked due to their responsibilities in overseeing and managing the airlines supply chain operations which makes their perspectives quite valuable in pinpoint inefficiencies and suggesting enhancements to boost competitive edge effectively You're focusing specifically on these stakeholders is with the goal of offering precise suggestions that can be easily implemented within the operational framework of Air Australasia and other LCCs, in the area The research ensured a well thought out sample size to gain a thorough comprehension of the supply chain inefficiencies embedded within Air Australasia. The study involved 25 participants who were carefully chosen to represent a variety of viewpoints and backgrounds in the airline industry's supply chain operations. This group size was considered appropriate for capturing a range of perspectives and challenges faced by the industry. By selecting these participants, the study aimed to conduct an analysis that would lead to practical insights and suggestions, for improvement.

1.4. Significance of the Study

This research is important for both purposes and real-world use in the supply chain management field with a specific focus on the LCC industry in the Australasian market through its examination of Air Australasia's challenges and inefficiencies. The study's results are anticipated to enhance knowledge by providing an in-depth look, at how supply chain inefficiencies can impact competitive edge within a fiercely competitive sector. Basically, the suggestions from the study are designed to help Air Australasia and other LCCs improve their supply chain operations to make them more efficient and cost effective while also enhancing service quality. Additionally implementing the risk assessment and benchmark techniques outlined in this research could act as a blueprint for airlines looking to enhance their supply chain efficiency leading to a stronger competitive position and long-term sustainability, in the aviation industry.

Table 1 Population and Sample Size Summary

Population Group	Description	Sample Size	Purpose
Supply Chain Managers	Individuals responsible for overseeing the entire supply chain operations	10	To provide insights into the strategic challenges in SCM
Logistics Coordinators	Personnel managing the logistics and transportation aspects of the supply chain	8	To identify inefficiencies in logistics coordination
Procurement Officers	Staff involved in sourcing and procurement processes	5	To explore procurement-related challenges and dependencies
Industry Experts	External consultants and experts with knowledge of industry best practices	2	To benchmark against industry standards and practices
Total		25	

2. Literature Review

2.1. Supply Chain Management in Aviation

Managing the supply chain is crucial in the aviation sector. Even more so for LCCs where how efficiently operations are carried out directly impacts their competitiveness in the market. An executed supply chain management in aviation requires harmonizing different tasks such, as purchasing goods and services handling logistics and overseeing inventory to guarantee seamless and cost-efficient operations illustrated in figure 4. Airline companies like Air Australasia can benefit greatly from optimizing their supply chain operations. This optimization not helps in cutting down costs and enhancing service quality but also boosts their competitive edge in the market (Atache et al., 2024). Nevertheless, the intricate nature of the aviation supply chain. Involving coordination with parties, like suppliers, airports and regulatory authorities. Frequently results in operational inefficiencies (Christopher & Lee 2004). The inefficiencies mentioned could negatively impact an airlines capacity to keep expenses low and offer top notch service (Enyejo and colleagues in 2024).

Figure 4 Supply Chain Management for Aviation Industry (Krevon, 2015)

In Figure 4 of the report offers a look at how supply chain management (SCM) plays a vital role in the aviation sector by focusing key areas like managing inventory levels efficiently overseeing stock control measures handling vendor relationships and contracts effectively and managing overall logistics operations. These aspects play a role in enhancing operational effectiveness especially for budget airlines such, as Air Australasia where every facet of supply chain management can significantly influence their competitive edge. Effective inventory management ensures that essential components and materials are accessible when required, thereby minimizing downtime and preventing setbacks. Stock control is about finding the right balance between what you have in stock and what your customers need to make sure you don't have too much or too little of a product available at any given time. When it comes to dealing with vendors and managing contracts with them smoothly takes negotiations. Building strong relationships with suppliers who play a crucial role in getting favorable deals and maintaining a steady supply chain. Effective supply chain management allows LCCs to cut down expenses while still delivering top notch service levels which ultimately impacts their ability to stay competitive in the aviation industry. The picture highlights how having an integrated supply chain management strategy is key to achieving operational excellence, in the aviation sector.

2.1.1. Importance of Supply Chain Management in Aviation

Supply chain management plays a role in the aviation sector with a specific focus on LCCs. Operational efficiency directly influences profitability and competitive edge for LCCs in the industry sector. Successful supply chain management within aviation guarantees access to essential resources like fuel and spare parts at the right locations to reduce delays and enhance operational effectiveness as depicted in figure 5, by Cohen & Roussel (2005). In a competitive industry like the aviation sector in Australasia. A supply chain management (SCM) strategy enables airlines such as Air Australasia to cut down operational expenses while upholding exceptional service standards. This plays a role in staying ahead in the competitive landscape as highlighted by Wensveeen (2011). Moreover, maintenance of relationships with suppliers and adherence to regulations are key components of SCM in aviation. Efficient logistics management is equally important, for ensuring flight operations and satisfactory customer experiences as emphasized by Christopher (2016).

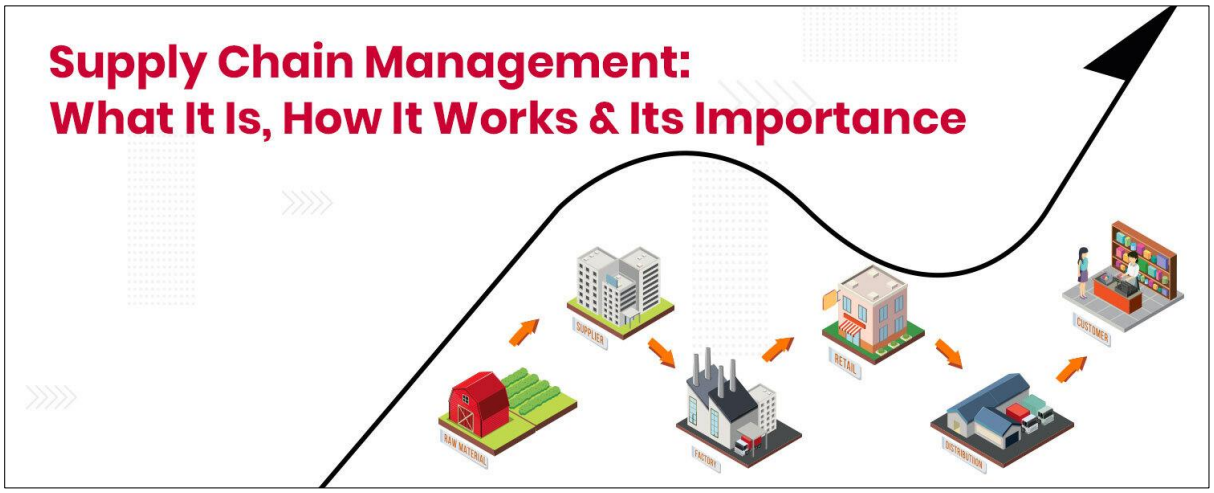

Figure 5 Importance of Supply Chain Management (Deepika, 2023).

Figure 5 illustrates the process of Supply Chain Management (SCM) highlighting its role in different phases—from sourcing raw materials to working with suppliers and manufacturers to reaching retail outlets and logistics before finally reaching customers hands. In the aviation sector and especially for LCCs, SCM plays a role in making sure that all elements, like parts and fuel are managed effectively and delivered promptly to the appropriate locations. Ensuring efficiency is key to keeping operations reliable and costs optimized while reducing delays in the process flow diagram depicts how each step in the supply chain is interconnected; any issues in one segment can lead to impacts across the entire system of flight operations supporting competitive pricing and guarantee the service quality along with customer contentment, in aviation industry. The increasing trend shown in the chart also indicates possibilities for expansion and enhancement through managed supply chain operations which underlines the importance of strong SCM, for the prosperity of airlines.

2.1.2. Overview of Supply Chain Strategies in the Airline Industry

The airline industry's supply chain strategies aim to improve efficiency and customer satisfaction while cutting costs as well as focusing areas like inventory management and logistics besides maintaining relationships with suppliers efficiently (Christopher & Towill; 2000). In particular effective inventory management guarantees the availability of parts and essential supplies when required to reduce downtime and uphold service reliability whereas procurement strategies involve negotiating extended contracts with suppliers, for better pricing and quality assurance. In the field of logistics within the airline industry companies need to oversee the prompt transportation of various goods like fuel and catering services while ensuring smooth coordination (Mentzer 2001). Building relationships with suppliers is essential for nurturing collaborations that foster innovation and cost efficiency – crucial elements, in the competitive aviation sector. By combining these approaches airlines can establish a supply chain that contributes to their overarching business goals.

2.1.3. Unique Challenges Faced by Low-Cost Carriers

LCC encounter obstacles when it comes to managing their supply chains because they prioritize minimizing operational expenses while staying competitive in pricing (Idoko et al., 2024). A key difficulty they face is finding ways to make operations more efficient without sacrificing service quality; this frequently leads LCCs to implement supply chain approaches (Forsyth 2003). It can be challenging to achieve this goal in the aviation sector due, to the nature of demand and the ever-changing costs of fuel. In addition to that LCC airlines usually run with personnel and assets which can put pressure on logistics and inventory control handling multiple suppliers can be difficult in maintaining good connections with them especially when trying to secure better prices while not compromising on quality The competitiveness, in the LCC industry amplifies these obstacles requiring airlines to constantly come up with new ideas and adjust to stay relevant in the market

2.2. Risk Identification in Supply Chain Management

Identifying risks plays a role in managing supply chains effectively and is especially important for LCCs like Air Australasia since any disruptions in operations can have a significant impact on both profits and customer satisfaction levels. Uncovering threats that could disrupt the supply chain such as fluctuations in fuel costs, lags in supplies and political instability are key to effective risk identification (referencing O'Connels work published in 2007). For example,

sudden maintenance problems or delays in receiving crucial parts can result in costly periods of downtime directly affecting the airline's ability to stick to its schedule and meet service obligations. It is important for LCCs to be prepared for risks such as changes in regulations and environmental factors to maintain smooth operations (Christopher & Lee 2004). By identifying and managing these risks in a structured manner and implementing strategies to address them effectively can improve the resilience and effectiveness of their supply chains (Enyejo et al. 2024).

2.2.1. Key Risks Associated with Supply Chain Operations in Aviation

The aviation sectors supply chain processes face significant risks that can greatly affect an airlines effectiveness and financial performance. One of the concerns is the unpredictable changes in fuel prices that can lead to substantial fluctuations in operational expenses for airlines; this is particularly critical for LCCs operating with narrow profit margins (as depicted in figure 6. O'Connel 2007). Supply chain issues like delays in receiving airplane components can cause airlines to experience operational downtime and impact their ability to stick to schedules and service standards directly (referencing Ijiga et al., 2024). Regulatory modifications related to safety protocols can also pose risks by necessitating costly operational changes (Christopher & Lee 2004). Moreover, global supply chains are at risk of disruption due, to turmoil and natural calamities result in shortages and higher expenses.

Figure 6 Benefits of Supply Chain Risk Management (RiskOptics, 2022)

Within Figure 6 lies a detailed portrayal of the components comprising the supply chain. Encompassed are transportation methods such as airplanes and ships as well as logistics procedures and technology supervision. In the realm of aviation with a focus on LCCs the supply chain encounters notable risks mainly attributed to the volatility of fuel prices. These price changes can result in fluctuations in operational expenses – a significant hurdle for LCC companies operating on narrow profit margins. The image also shows how supply chain operations are interconnected; when there are issues in one aspect – like delays in shipping or fuel availability – it can cause problems throughout the network of operations. Repercussions may include operational expenses and service delays which could result in losing a competitive edge. The visual underscores the worldwide nature of supply chains by underscoring the essential requirement for strong risk management plans to lessen the effects of these variations and interruptions on aviation activities.

2.2.2. Methods and Tools for Risk Identification and Assessment

Identifying and evaluating risks in the aviation supply chain involves using a mix of quantitative techniques. One common method is the SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) which assists in pinpointed both external factors that could affect how the supply chain functions (based on O'Connel's research from 2007). This tool plays a role, in spotting possible risks associated with operational shortcomings market rivalries and regulatory modifications. Moreover, prompted by the acronyms and philosophies encapsulated in PESTLE analysis. Economic, social, technological, legal and environmental factors (Igba, E., et al., 2024). Serves as a beneficial instrument for evaluating the encompassing external conditions and their impact on the logistics network (Christopher & Lee 2004). Employed these approaches enable airlines such, as Air Australasia to systematically analyze risks and devise plans to counteract them (Godwins, O.P., et al.,2024).

2.3. Benchmarking in Supply Chain Management

Benchmarking plays a role in supply chain management for airlines as it helps them compare their operational methods with industry standards to pinpoint areas for enhancement that can benefit both their internal processes and external relations (referencing Ijiga et al., 2024). LCCs like Air Australasia undertake benchmarking by analyzing performance metrics like cost effectiveness and supplier performance in comparison to top competitors (referencing Luu et al., 2008). This method assists in establishing objectives and creating plans to improve the efficiency of the supply chain system effectively (referencing Owolabi, F. R. A., et al., 2024). Benchmark analysis also supports enhancement by incorporating successful techniques from top industry players. This could result in cost savings and operational efficiencies (Basuar 2001).

When it comes to Air Australasia's operations benchmark analysis is crucial, for refining logistics and purchasing methods. This helps the airline stay ahead in a market where costs are a key factor.

2.3.1. Definition and Importance of Benchmarking in Operational Efficiency

Benchmark evaluation involves assessing an organizations methods and performance indicators in comparison to competitors or industry standards to enhance efficiency and establish performance goals for ongoing enhancement, in the supply chain management field (reference; Luu et al., 2008 as shown in figure 7). For airlines like Air Australasia that prioritize efficiency to stay ahead in the market competition benchmarking is a valuable tool that helps identify opportunities, for cost reduction, enhanced service quality and overall operational improvement (as discussed by Mentzer et al., 2001). By studying the supply chain management practices of leading airlines Air Australasia can implement strategies to streamline operations cut down on wastage and allocate resources optimally (referencing Ijiga et al., 2024).

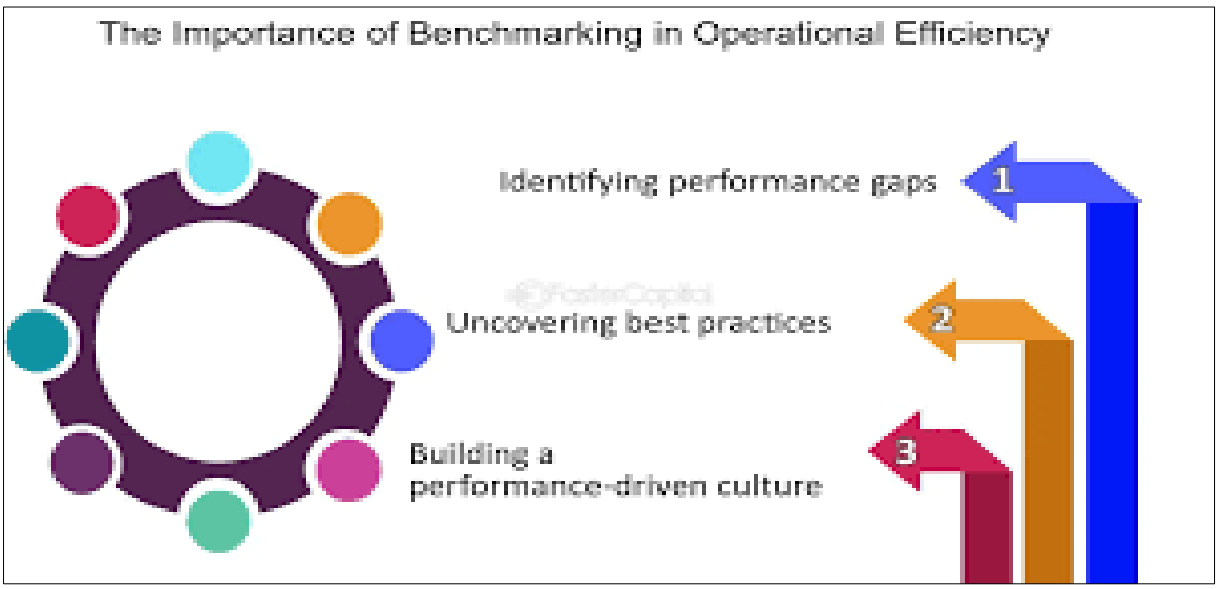

Figure 7 The Importance of Benchmarking in Operational Efficiency (Christopher, M. 2016)

Figure 7 shows how important benchmark analysis is for efficiency in the supply chain management field specifically. The illustration portrays benchmark as a process that includes three main stages. Identifying performance gaps discovering best practices and promoting a culture focused on performance improvement. For budget airlines such as Air Australasia benchmark analysis is a valuable tool to identify inefficiencies in their operations. By comparing their performance, against industry benchmarks these airlines can establish goals to bridge these performance gaps. This approach not pushes for ongoing enhancements but also nurtures a work atmosphere that prioritizes quality and productivity." Air Australasia is looking into its supply chain methods to incorporate tactics that boost efficiency and cut down expenses while staying competitive in the ever-evolving aviation industry landscape." The visual components like arrows and circular symbols highlight the continuous aspect of benchmarking as a strategic method, for achieving lasting operational advancements.

2.3.2. Case Studies of Successful Benchmarking in the Aviation Industry

Leading airlines have found success in using strategies to improve their operations and stay ahead in the market competition. For instance, Qantas Airways has managed to save costs and enhance service quality by learning from industry leaders and optimizing its supply chain processes through benchmark practices (Qantas, 2017) as detailed in table 2. Similarly Southwest Airlines regularly compares its performance with airlines with a focus on decreasing turnaround times and boosting fuel efficiency. Southwest Airlines has successfully held its place as an LCC in the fiercely competitive U.S market according to Forsyths findings in 2003.

In the context of Air Australasia's operations and business strategies discussed in these case studies offer insights on how benchmark analysis can boost supply chain performance and operational effectiveness (according to Iijga et al., 2024). Implementing approaches could help Air Australasia enhance its competitiveness within the Australasian market.

Table 2 Case Studies of Successful Benchmarking in the Aviation Industry

Airline	Benchmarking Focus	Implemented Strategies	Outcomes
Qantas Airways	Cost Efficiency	Streamlined procurement processes, adopted best practices in logistics	Significant cost reductions, improved service delivery
Southwest Airlines	Turnaround Time Optimization	Introduced lean processes, optimized aircraft turnaround procedures	Reduced turnaround times, maintained market leadership
Delta Airlines	Customer service	Implemented customer-centric service enhancements	Increased customer satisfaction and loyalty
Ryanair	Operational Cost Reduction	Adopted fuel-efficient practices, renegotiated supplier contracts	Lowered operational costs, maintained competitive pricing

3. Research Methodology

3.1. Research Design and Approach

This study uses a mix of research methods to thoroughly examine supply chain inefficiencies and their effects on operational performance in LCCs like Air Australasia by combining qualitative and quantitative approaches together. It involves a detailed case study of Air Australasia through document analysis and interviews with figures such as supply chain managers and industry experts to gain insights into the airlines supply chain challenges and potential improvements. In the aspect of this process entails examining existing data like financial statements and performance indicators to recognize trends and connections that guide the benchmarking procedure.

3.2. Data Collection

The research gathered data from sources to analyze air Australasia's supply chain inefficiencies thoroughly; this included conducting structured interviews with key stakeholders such as supply chain managers and industry experts for qualitative insights on the challenges faced by the airline in managing its supply chain effectively and distributing surveys to a wider group of airline employees for quantitative data, on operational practices and their effectiveness perception. Information, from Air Australasia's records was gathered as secondary data sources encompassed financial statements and operational logs to analyze supply chain performance trends effectively over time by combining primary and secondary data for a comprehensive assessment.

3.3. Data Analysis

The research for this study followed a method to analyze both qualitative and quantitative data gathered from Air Australasia effectively. The qualitative data obtained from interviews and surveys underwent analysis to pinpoint common themes and trends concerning supply chain inefficiencies. Categorizing the data into themes that matched the research goals was a part of the process. These themes shed light on the obstacles encountered by Air Australasia and played a vital role in devising focused improvement strategies.

Quantitative information from sources than primary ones like financial statements and performance measures underwent analysis through statistical techniques. Summary statistics were utilized to encapsulate the data's essence;

meanwhile correlation examination delved into connections among factors such as supply chain effectiveness and operational productivity.

4. Research Findings

4.1. Identified Supply Chain Inefficiencies

Upon reviewing Air Australasia's supply chain operations as outlined in table 3 several notable inefficiencies were uncovered that greatly affect the airlines day to day performance. A significant issue pinpointed was in managing inventory, where discrepancies in stock levels often resulted in shortages of spare parts leading to delays, in aircraft maintenance and operational activities. Moreover, it was observed that the procurement procedure is excessively centralized resulted. This concentration also restricted the adaptability of the distribution network, hindered its ability to swiftly address unforeseen disturbances.

Moreover, the examination revealed challenges concerning coordination of logistics. Inadequate communication between departments resulted in scheduling discrepancies and longer lead times especially when it came to transporting goods and services between different sites.

Table 3 Summary of Identified Supply Chain Inefficiencies

Inefficiency Area	Description	Impact on Operations	Proposed Solutions
Inventory Management	Inconsistent stock levels of critical spare parts	Frequent maintenance delays, operational disruptions	Implement real-time inventory tracking and management systems
Procurement Process	Overly centralized procurement leading to delays	Increased lead times, limited flexibility in sourcing	Decentralize procurement, allow regional sourcing
Logistic Coordination	Poor communication between departments	Misaligned schedules, increased lead times	Integrate logistics management software, improve communication
Supplier Dependence	Heavy reliance on single-source suppliers	High vulnerability to supply chain disruptions	Diversify supplier base, establish multi-source agreements

4.2. Risk Identification Results

The risk assessment conducted for Air Australasia's supply chain highlighted crucial risks that could greatly impact the airlines effectiveness and performance as detailed in table 4 of the report provided. One of the risks identified was the exposure to disruptions in the supply chain resulting from excessive dependence on a single source of suppliers which could lead to delays, in operations if the supplier fails to meet delivery deadlines. A major concern also arose from the changes in fuel costs that have a direct influence on the airline's expense's structure and pose challenges in sustaining competitive pricing strategies.

Furthermore, the report emphasized the dangers linked to adherence with regulations specially concerning environmental norms. Violation of these could lead to penalties and halt in operations. The research also pointed out hazards in managing logistics efficiently. Mismatch between supply chain tasks and operational timelines may cause delays and decrease service standards.

4.3. Benchmarking Insights

The evaluation performed for Air Australasia offered insights into how the airlines supply chain management practices stack up against industry standards depicted in table 5. The assessment showed that although Air Australasia has shown progress in aspects like inventory control, it falls short when compared to top rivals in crucial areas such as managing supplier relationships and optimizing logistics. In particular, the airlines centralized purchasing strategy was deemed adaptable than the decentralized methods used by leading LCCs. The latter enables decision making and enhanced flexibility to adapt to market fluctuations.

The benchmark analysis revealed weaknesses in Air Australasia's logistics system with a focus on coordinating supply chain operations across sites efficiently. Rivals with smoother logistics operations showcased turnaround times and reduced operational expenses that bolstered their market competitiveness.

Table 4 Summary of Risk Identification Results

Risk Category	Description	Potential Impact	Mitigation Strategies
Supplier Dependence Risk	Over-reliance on single-source suppliers	Operational delays, increased lead times, potential for disruptions	Diversify supplier base, develop contingency sourcing plans
Fuel Price Fluctuation Risk	Volatility in global fuel prices affecting cost structure	Increased operational costs, reduced profitability	Implement fuel hedging strategies, optimize fuel efficiency
Regulatory Compliance Risk	Changes in environmental and safety regulations	Fines, operational shutdowns, costly adjustments	Continuous monitoring of regulations, proactive compliance efforts
Logistics Coordination Risk	Misalignment between supply chain activities and schedules	Increased lead times, reduced service quality	Integrate advanced logistics management systems, improve inter-departmental communication

4.4. Synthesis of Findings

The analysis of the study's results points out an interaction between supply chain challenges and gaps in benchmark comparisons that affect Air Australasia's performance highlighted in table 6. The inefficiencies in the supply chain identified include centralized purchasing and misaligned logistics coordination that lead to higher operating expenses and decreased adaptability. These issues are worsened by the risks revealed such as depending heavily on a single source of suppliers and the fluctuating prices of fuel which pose considerable dangers to the airlines capability to uphold consistent service standards.

Insights from analysis indicate that Air Australasia's supply chain operations are found to be less flexible and effective when compared to top performers in the industry signalling areas of improvement such as enhancing supplier relationships and optimizing logistics for increased competitiveness.

Table 5 Summary of Benchmarking Insights

Benchmarking Area	**Air Australasia's Current Practices**	**Industry Best Practices**	**Improvement Opportunities**
Procurement	Centralized procurement with slow decision-making	Decentralized procurement with regional autonomy	Decentralize procurement to increase agility and responsiveness
Logistics Coordination	Fragmented logistics, poor inter-department communication	Integrated logistics management with advanced software	Implement integrated logistics systems to streamline coordination
Supplier Relationship	Heavy reliance on single-source suppliers	Diversified supplier base with strong relationships	Develop a diversified supplier network to reduce risk
Operational Efficiency	Inconsistent inventory management leading to delays	Real-time inventory tracking and management	Adopt real-time inventory systems to reduce operational delays

5. Discussions and Recommendations

5.1. Addressing Supply Chain Inefficiencies

In order to tackle the supply chain issues highlighted at Air Australasia's operations, several key suggestions have been put forward for consideration. One important recommendation is to decentralize the procurement process which could greatly enhance the airlines flexibility and responsiveness. By empowering procurement teams to make quicker decisions and source from local vendors, the airline stands to reduce lead times and enhance the availability of essential resources. Additionally, this approach would help mitigate the risks linked to depending on one supplier since regional teams can cultivate relationships with multiple vendors thereby diversifying the supply chain.

Improving coordination in logistics is crucial for minimizing delays. Ensuring everything runs smoothly within the operations of a business entity. One effective approach is to introduce logistics software that brings together various elements of the supply chain process. Starting from sourcing to the ultimate delivery stage. By adopting this integrated system into the operations management strategy of a company can result in functioning and improved collaboration, among different departments. This integration guarantees synchronization of supply chain tasks and aligns them more effectively with operational timetables.

5.2. Enhancing Competitive Advantage

To boost Air Australasia's edge, it's crucial to not just fix existing inefficiencies but also adopt proactive measures that set the airline apart in the LCC sector. A vital suggestion is to embrace a customer focused approach in managing the supply chain. By syncing supply chain operations with customer demands like ensuring services are available on time and improving the overall travel experience, Air Australasia can foster stronger customer loyalty and stand out from rivals.

Utilizing technology to enhance operations is another approach to consider. By incorporating cutting edge analytics into the supply chain process at Air Australasia can offer instant performance data, facilitate faster decision making and improved forecasting accuracy. This tech upgrade could help the company predict and adapt to market shifts with efficiency to stay ahead in the competition.

Building connections with suppliers is essential to guaranteeing sustainability in the long run at Air Australasia. Forming alliances with important suppliers can help secure better terms, enhance service quality and provide access to cutting edge products and services.

Table 6 Synthesis of Findings Summary

Key Areas	Identified Issues	Associated Risks	Recommended Actions
Inventory Management	Inconsistent stock levels, leading to operational delays	Increased downtime, reduced service reliability	Implement real-time inventory tracking systems
Procurement Process	Centralized, slow procurement, limiting flexibility	Supplier dependency, potential for supply chain disruptions	Decentralize procurement, diversify suppliers
Logistics Coordination	Poor communication between departments, leading to inefficiencies	Misaligned schedules, increased lead times	Integrate logistics management systems, improve communication
Risk Management	Inadequate risk identification and mitigation strategies	Exposure to fuel price volatility, regulatory non-compliance	Develop comprehensive risk management frameworks

5.3. Practical Implications for the Industry

The results and suggestions from this research on Air Australasia have real world implications for the wider LCC sector. A key takeaway is the value of supply chain practices. The sectors focus on cost effectiveness frequently results in procedures which may impede the ability to react to shifts in the market. By embracing purchasing and improving

logistics coordination, other LCC operators can likewise enhance their flexibility and lower their exposure to disruptions in the supply chain.

Furthermore, incorporating cutting edge technologies like real time analytics and supply chain management software can give LCCs an advantage. These innovations help airlines anticipate changes in demand effectively manage stock levels efficiently and enhance overall operational performance. Embracing a data focused strategy can revolutionize the way LCCs operate by enabling them to uphold cost effectiveness while elevating the quality of service provided.

Additionally, prioritizing customer focused supply chain methods implies that LCCs could gain advantages by matching their approaches with customer preferences. This synchronization can result in heightened customer contentment and commitment both essential for achieving enduring prosperity in a competitive industry.

6. Conclusion and Key Findings

This study has found important supply chain issues in Air Australasia that impact their operations negatively. Like centralized purchasing methods and logistical coordination issues and their heavy reliance on single suppliers which cause higher costs and less flexibility making them susceptible to disruptions more easily. The risk assessment process pointed out risks such as volatile fuel prices and compliance challenges that make these issues worse. Comparisons with industry standards have shown that Air Australasia falls behind its rivals in managing supplier relations and optimizing logistics.

The research also put forward some suggestions to tackle these issues such as distributing procurement responsibilities across various departments improving coordination in logistics by leveraging advanced technology and focusing on meeting customer needs in supply chain management.

In summary of our study findings on Air Australasia's supply chain inefficiencies, it has shed light on operational areas needing strategic attention for improved performance and competitive edge in the airline industry landscape. The research emphasizes the significance of decentralized procurement processes adoption and enhancement in logistics coordination using technologies alongside a customer focused supply chain management approach. These approaches not tackle existing inefficiencies but also position Air Australasia to effectively navigate future hurdles in the ever-evolving LCC market.

The results and suggestions outlined in this research are relevant not only to Air Australasia but also provide valuable ideas for other LCCs looking to streamline their supply chain processes. With the proposed enhancements in place, LCCs can improve efficiency cut down expenses and elevate the quality of service they offer.

6.1. Contribution to Knowledge

This study greatly contributes to the supply chain management field with a focus on the LCC sectors challenges and inefficiencies in Air Australasia's supply chain operations are thoroughly examined to offer insights into enhancing operational efficiency and staying competitive in the market for other airlines to adopt as part of their supply chain improvement strategies.

Moreover, the research emphasizes the significance of purchasing, enhanced coordination in logistics and a focus on customer satisfaction in tackling these inefficiencies. These discoveries enrich our knowledge of how LCCs can enhance their supply chain processes to attain effective cost control and better service standards.

6.2. Future Research Directions

This study offers insights into the inefficiencies in Air Australasia's supply chain while also suggesting directions for future research opportunities to explore the influence of emerging technologies like blockchain and artificial intelligence on improving supply chain transparency and efficiency in the LCC sector. Moreover,' potential future studies could delve into the lasting impacts of procurement strategies, in the aviation industry specifically focusing on cost control and supplier relationships.

Exploring another avenue involves studying supply chain strategies focused on customer needs and how they impact brand loyalty and competitive standing in the LCC market sector. Additionally, broadening the scope of the study to compare practices across geographical areas may offer a more comprehensive view of the obstacles and effective approaches, in managing supply chains in LCCs worldwide.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

[1] Atache, S., Ijiga, A. C. & Olola, T. M. (2024). ENHANCING PERFORMANCE IN THE NIGERIAN CIVIL SERVICE THROUGH ADVANCED AI TECHNOLOGIES: A CASE STUDY OF BIGGAN APPLICATIONS. *Malaysian Journal of Human Resources Management (MJHRM)* 1(2) (2024) 143-151. https://mjhrm.com.my/archive/2mjhrm2024/2mjhrm2024-143-151.pdf

[2] Basuar, R. (2001). New criteria of performance management: A transition from enterprise to collaborative supply chain. *Measuring Business Excellence*, *5*(4), 5-12.

[3] Button, K. (2012). *Low-Cost Carriers: An Evolution in Aviation*. Springer.

[4] Christopher, M. (2005). *Logistics and supply chain management: Creating value-adding networks*. Pearson Education.

[5] Christopher, M. (2016). *Logistics & Supply Chain Management* (5th ed.). Pearson Education. https://fastercapital.com/topics/the-importance-of-benchmarking-in-operational-efficiency.html

[6] Christopher, M. (2016). *Logistics & Supply Chain Management*. Pearson UK.

[7] Christopher, M., & Lee, H. (2004). Mitigating supply chain risk through improved confidence. *International Journal of Physical Distribution & Logistics Management*, *34*(5), 388-396

[8] Cohen, S., & Roussel, J. (2005). *Strategic Supply Chain Management: The Five Disciplines for Top Performance*. McGraw-Hill.

[9] Deepika, (2023). Supply Chain Management: What it is, How it Works & its Importance. https://nimbuspost.com/blog/supply-chain-management-what-it-is-how-it-works-its-importance/#

[10] Enyejo, J. O., Adeyemi, A. F., Olola, T. M., Igba, E & Obani, O. Q. (2024). Resilience in supply chains: How technology is helping USA companies navigate disruptions. *Magna Scientia Advanced Research and Reviews,* 2024, 11(02), 261–277. https://doi.org/10.30574/msarr.2024.11.2.0129

[11] Enyejo, J. O., Obani, O. Q, Afolabi, O. Igba, E. & Ibokette, A. I., (2024). Effect of Augmented Reality (AR) and Virtual Reality (VR) experiences on customer engagement and purchase behavior in retail stores. *Magna Scientia Advanced Research and Reviews*, 2024, 11(02), 132–150. https://magnascientiapub.com/journals/msarr/sites/default/files/MSARR-2024-0116.pdf

[12] Forsyth, P. (2003). Low-cost carriers in Australia: Experiences and impacts. *Journal of Air Transport Management*, *9*(5), 277-284.

[13] Godwins, O. P., David-Olusa, A., Ijiga, A. C., Olola, T. M., & Abdallah, S. (2024). The role of renewable and cleaner energy in achieving sustainable development goals and enhancing nutritional outcomes: Addressing malnutrition, food security, and dietary quality. *World Journal of Biology Pharmacy and Health Sciences*, 2024, 19(01), 118–141. https://wjbphs.com/sites/default/files/WJBPHS-2024-0408.pdf

[14] Graham, A. (2013). Managing Airports: An International Perspective (4th ed.). Routledge.

[15] Idoko, J. E., Bashiru, O., Olola, T. M., Enyejo, L. A., & Manuel, H. N. (2024). Mechanical properties and biodegradability of crab shell-derived exoskeletons in orthopedic implant design. **World Journal of Biology Pharmacy and Health Sciences**, 18(03), 116-131. https://doi.org/10.30574/wjbphs.2024.18.3.0339

[16] Igba, E., Adeyemi, A. F., Enyejo, J. O., Ijiga, A. C., Amidu, G., & Addo, G. (2024). Optimizing Business loan and Credit Experiences through AI powered ChatBot Integration in financial services. DOI:10.51594/farj.v6i8.1406

[17] Ijiga, A. C., Abutu E. P., Idoko, P. I., Ezebuka, C. I., Harry, K. D., Ukatu, I. E., & Agbo, D. O. (2024). Technological innovations in mitigating winter health challenges in New York City, USA. *International Journal of Science and Research Archive*, 2024, 11(01), 535–551. https://ijsra.net/sites/default/files/IJSRA-2024-0078.pdf

[18] Ijiga, A. C., Abutu, E. P., Idoko, P. I., Agbo, D. O., Harry, K. D., Ezebuka, C. I., & Umama, E. E. (2024). Ethical considerations in implementing generative AI for healthcare supply chain optimization: A cross-country analysis

across India, the United Kingdom, and the United States of America. *International Journal of Biological and Pharmaceutical Sciences Archive*, 2024, 07(01), 048–063. https://ijbpsa.com/sites/default/files/IJBPSA-2024-0015.pdf

[19] Ijiga, A. C., Olola, T. M., Enyejo, L. A., Akpa, F. A., Olatunde, T. I., & Olajide, F. I. (2024). Advanced surveillance and detection systems using deep learning to combat human trafficking. *Magna Scientia Advanced Research and Reviews, 2024*, 11(01), 267–286. https://magnascientiapub.com/journals/msarr/sites/default/files/MSARR-2024-0091.pdf

[20] Kreyon, (2015). Supply Chain Management for Aviation Industry. https://www.kreyonsystems.com/Blog/supply-chain-management-for-aviation-industry/

[21] Luu, V. T., Kim, S. Y., & Huynh, T. A. (2008). Improving project management performance of large contractors using benchmarking approach. *International Journal of Project Management*, *26*(7), 758-769.

[22] Mentzer, J. T. (2001). *Supply Chain Management*. Sage Publications.

[23] Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., & Smith, C. D. (2001). Defining supply chain management. *Journal of Business Logistics*, *22*(2), 1-25.

[24] O'Connel, J. F. (2007). The strategic response of full-service airlines to the low-cost carrier threat and the perception of passengers to each type of carrier. *Cranfield University: PhD Thesis*.

[25] Owolabi, F. R. A., Enyejo, J. O., Babalola, I. N. O., & Olola, T. M. (2024). Overcoming engagement shortfalls and financial constraints in Small and Medium Enterprises (SMES) social media advertising through cost-effective Instagram strategies in Lagos and New York City DOI: 10.51594/ijmer.v6i8.1462

[26] Qantas (2017). Share Price History. Available at: http://investor.qantas.com/investors/?page=historical-share-price

[27] Sanja Steiner, (2006). (PDF) Impact of Low-Cost Airlines on the European Air Transport Market (researchgate.net)

[28] Sejal Akre, (2022). Global Low-Cost Carrier (LCC) Market Overview https://www.marketresearchfuture.com/reports/low-cost-carrier-market-8504

[29] Wensveen, J. G. (2011). *Air Transportation: A Management Perspective*. Ashgate Publishing, Ltd.

[30] Yin, R. K. (2014). *Case Study Research: Design and Methods* (5th ed.). Sage Publications.