

The Dynamics of Consumer Protection in The Low-Cost Carrier (LCC) Aviation Business Amid Digital Transformation

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Abstract. *Consumer protection in the low-cost carrier (LCC) aviation industry has become a challenge in the era of digital transformation, particularly in terms of information transparency, passenger rights, and dispute resolution mechanisms. This study aims to analyze the effectiveness of consumer protection policies in the LCC business between Indonesia and Malaysia and evaluate the digital-based dispute resolution mechanisms implemented in both countries. The research employs a normative juridical method with a comparative approach, involving an analysis of consumer protection regulations and digital technology in aviation dispute resolution. The findings indicate that Malaysia has a more comprehensive regulatory framework through the Aviation Consumer Protection Code 2016 and strict supervision by the Malaysian Aviation, which enables digital dispute resolution with greater transparency. Conversely, Indonesia still faces challenges in regulatory effectiveness, weak airline compliance oversight, and limited utilization of digital technology in dispute resolution. This comparison highlights the need for Indonesia to enhance its online complaint system, strengthen law enforcement, and develop a more efficient digital-based dispute resolution mechanism. The digital transformation in the aviation industry must be accompanied by adaptive policies to ensure optimal consumer protection amid the rapid growth of the LCC sector.*

Keywords: *Aviation Regulation; Consumer Protection; Digital Transformation; Dispute Resolution; Low-Cost Carrier (LCC).*

1. Introduction

Air travel has become an essential component of modern transportation, supporting economic growth, tourism, and global connectivity. The increasing demand for affordable transportation has encouraged major changes in the aviation industry, including the emergence of the low-cost carrier (LCC) model. Initially, commercial aviation was dominated by full-service airlines that provided comprehensive facilities but at relatively high prices. As competition increased and consumer preferences shifted toward affordable travel, airlines began adopting more efficient business strategies to reduce operational costs while maintaining safety and service quality.

The low-cost carrier (LCC) concept emerged as a disruptive innovation through its no-frills business model, emphasizing operational efficiency, high aircraft utilization, and additional charges for optional services. This model has become increasingly popular worldwide because it offers more affordable and flexible travel options for passengers (Hassan & Salem, 2022). In Southeast Asia, particularly in Indonesia and Malaysia, LCC growth has accelerated due to the rising middle-class population and increasing demand for cost-effective transportation. Consequently, LCCs now play a major role in expanding air travel accessibility and increasing passenger mobility across the region.

In Indonesia, airlines such as Lion Air, Citilink, and AirAsia Indonesia dominate the LCC market by offering affordable fares and extensive domestic routes. Likewise, Malaysia has developed into a strategic aviation hub in Southeast Asia through airlines such as AirAsia, Firefly, and MYAirline. The expansion of LCCs in both countries has intensified competition in pricing, route networks, and service models, while simultaneously increasing access to air transportation for wider segments of society. However, alongside these advantages, concerns regarding consumer protection and regulatory enforcement have also become more significant.

Various consumer complaints continue to arise in the LCC industry, including flight delays, sudden cancellations, baggage issues, and difficulties in obtaining refunds or compensation (Anugrah, 2020). At the same time, the aviation industry has experienced rapid digital transformation through online ticketing systems, chatbot-based customer service, and automated boarding processes (Oktariani & Zulfickar, 2020). Although digitalization improves efficiency and convenience, it also creates new challenges related to transparency, accountability, and accessibility in consumer dispute resolution mechanisms.

From a legal perspective, consumer protection in Indonesia is primarily regulated by Law No. 8 of 1999 on Consumer Protection and Minister of Transportation Regulation No. 89 of 2015 on Flight Delay Management. Nevertheless, the

implementation of these regulations still faces many obstacles, particularly weak supervision and ineffective law enforcement against airlines violating passenger rights. Consumers often encounter difficulties in obtaining compensation due to complicated procedures and limited access to information, especially in digital-based service systems where direct interaction with airlines is increasingly reduced.

Internationally, complaints against LCC airlines have also become a major issue. In the United States, Frontier Airlines and Spirit Airlines frequently receive complaints regarding delays and cancellations, with both airlines recording poor on-time performance and high cancellation rates (Rafie, 2024). In Europe, Ryanair has faced numerous complaints related to baggage policies and pricing transparency, receiving more than 950 baggage-related complaints between 2018 and 2022 (Inasis, 2023). Furthermore, the Spanish government imposed a fine of 179 million euros on several airlines, including Ryanair and Vueling, for misleading commercial practices such as hidden baggage fees and lack of price transparency (Abdul et al., 2018).

The issue of misleading business practices has also been highlighted in broader consumer protection studies. Nazari, Abu Bakar, & Arif emphasized the importance of stronger regulations to protect consumers from misleading information in digital commerce (Muhamad Nazari et al., 2023). Similar concerns are highly relevant in the LCC aviation sector, where unclear service descriptions and digital-based systems may disadvantage consumers. In Indonesia, operational disruptions such as grounded aircraft and lost baggage complaints continue to affect passenger confidence (Arbar, 2025). Financial instability among LCC airlines, such as the bankruptcy protection case involving Spirit Airlines, further demonstrates the vulnerability of this business model and its potential impact on consumer rights (Rafie, 2024).

This research aims to analyze the effectiveness of consumer protection policies in the low-cost aviation business (LCC) between Indonesia and Malaysia in the era of digital transformation and also to analyze the dispute resolution mechanisms between consumers and LCC airlines in Indonesia and Malaysia in utilizing digital technology.

2. Research Methods

This research uses a normative juridical legal research method. The approaches employed in this study are the statutory approach, conceptual approach, and comparative approach. The statutory approach is used to examine regulations related to consumer protection and air transportation in Indonesia and Malaysia, while the conceptual approach analyzes legal principles concerning consumer rights in the aviation sector. The comparative approach is applied to compare

dispute resolution regulations and practices between both countries (Marzuki, 2017).

The specification of this research is descriptive-analytical, as it aims to describe and analyze legal protection mechanisms for consumers of low-cost carriers (LCCs) in the digital era. The study also examines the effectiveness of digital-based dispute resolution mechanisms implemented in Indonesia and Malaysia. The data collection method in this research uses secondary data obtained through library research. The legal materials consist of primary legal materials, including legislation and official regulations related to consumer protection and aviation law, as well as secondary legal materials such as books, scientific journals, research reports, and other relevant legal documents (Efendi & Ibrahim, 2018). The data analysis method used in this research is qualitative analysis. The collected legal materials are analyzed systematically through legal interpretation to evaluate the effectiveness of consumer protection regulations and digital dispute resolution mechanisms for low-cost carrier consumers in Indonesia and Malaysia.

3. Results and Discussion

3.1. Effectiveness of Consumer Protection Policies in Low-Cost Carrier (LCC) Aviation Business Between Indonesia and Malaysia in the Era of Digital Transformation

The low-cost carrier (LCC) aviation industry has experienced rapid growth over the past two decades, particularly in the Southeast Asian region. The LCC business model, which offers cheaper ticket prices with limited services, has attracted many passengers, especially in developing countries such as Indonesia and Malaysia. However, behind the advantage of more competitive pricing, various challenges arise in terms of consumer protection, which require more serious attention.

Along with the increasing digitalization in the aviation industry, the way consumers interact with airlines has also undergone significant changes. Ticket purchases are now mostly conducted online through airline websites or applications, without the need for travel agents as intermediaries. This convenience brings benefits in terms of efficiency but also poses risks, such as a lack of understanding of service terms, hidden additional charges, and limited access to customer service when problems arise.

In Indonesia, the growth of LCCs is driven by increasing public mobility and policies that support interregional connectivity. Airlines such as Lion Air and Citilink dominate the market with various domestic and international routes. Meanwhile, in Malaysia, AirAsia has pioneered the LCC industry and successfully developed an extensive flight network. Both countries have consumer protection regulations in aviation, but their implementation and effectiveness remain debatable, especially

in addressing issues such as flight delays, unilateral cancellations, and a lack of clarity regarding passenger rights.

Consumers often face significant obstacles in resolving disputes with low-cost carrier (LCC) airlines, as existing complaint mechanisms do not always provide timely, transparent, or fair solutions. One of the main challenges is the lack of responsiveness from airlines in addressing consumer grievances, which often results in prolonged waiting times and unresolved cases. Many consumers report difficulties in accessing clear information regarding their rights, the complaint submission process, and the expected timeline for resolution. In some cases, airlines implement complex procedures that discourage consumers from pursuing their claims, further limiting their ability to obtain just compensation.

Additionally, airline policies are often structured in ways that prioritize business interests over consumer rights. For example, strict non-refundable ticket policies, hidden fees, and inflexible rebooking or cancellation terms place consumers at a disadvantage when unexpected situations arise. Many low-cost carriers (LCCs) offer lower fares by making tickets non-refundable, meaning that if a passenger cancels their trip for any reason, whether due to illness, emergency, or unforeseen circumstances, they cannot get their money back. In some cases, airlines may offer travel credits instead of refunds, but these often come with strict limitations, such as expiration dates or additional fees for rebooking. This puts consumers in a difficult position, as they may end up losing the full cost of their ticket without any flexibility. While LCCs advertise low base fares, passengers often encounter hidden fees that increase the total cost of their journey. These may include extra charges for checked baggage, seat selection, onboard meals, printing boarding passes at the airport, or even basic carry-on luggage. Since these fees are not always clearly disclosed at the time of booking, consumers may end up paying much more than expected, making it difficult to accurately compare ticket prices across airlines.

Many LCCs have strict policies regarding flight changes or cancellations. If passengers need to modify their travel dates, they may be required to pay high rebooking fees, sometimes exceeding the original ticket price. Additionally, some airlines limit the number of times a booking can be changed or impose restrictions on available alternative flights. In cases of flight cancellations due to personal emergencies, passengers often struggle to receive fair compensation or find alternative travel options without incurring significant additional costs. These policies disproportionately affect travelers who experience last-minute emergencies, such as medical issues, family emergencies, or work-related schedule changes. Unlike full-service airlines, which may offer more flexible cancellation and refund options, LCCs operate on a model that prioritizes cost-cutting over passenger convenience. As a result, consumers bear the financial risk of unforeseen disruptions, often without adequate recourse.

These challenges highlight the urgent need to strengthen regulations and oversight to ensure that consumer protection mechanisms function more effectively. Governments and regulatory bodies must implement stricter enforcement of consumer rights laws, requiring airlines to adopt fairer policies and more efficient complaint resolution systems. Increased transparency in airline operations, clearer communication regarding passenger rights, and the adoption of digital technologies for dispute resolution can also help improve the overall consumer experience. Strengthening consumer advocacy groups and providing more accessible legal channels for dispute resolution will further empower consumers to challenge unfair practices and demand better accountability from airlines. Ultimately, a more balanced approach between airline business interests and consumer protection is necessary to ensure a fair and sustainable aviation industry.

Consumer protection in the low-cost carrier (LCC) aviation business has become a crucial issue in the era of digital transformation, as more consumers rely on budget airlines for affordable travel. Despite offering lower fares, LCCs often present challenges related to information transparency, hidden costs, service limitations, and complaint resolution mechanisms. Many passengers face difficulties in understanding fare structures, additional charges, and refund policies, which can lead to dissatisfaction and disputes. Moreover, the strict policies implemented by LCCs, such as non-refundable tickets, high rebooking fees, and inflexible cancellation terms, often place consumers at a disadvantage when they encounter unexpected circumstances. Another significant challenge is the effectiveness of complaint mechanisms, as some airlines provide digital platforms for handling consumer grievances, but their responsiveness and transparency remain issues. In many cases, passengers do not receive timely updates on their complaints or clear information regarding their compensation rights. The rise of LCCs in Indonesia and Malaysia has further highlighted the need for strong consumer protection policies, as both countries experience high air travel demand and intense airline competition. However, their approaches to regulation and enforcement differ, affecting the effectiveness of consumer protection measures in each country. Ensuring fair treatment, transparent pricing, and efficient dispute resolution mechanisms is essential to maintaining consumer trust and confidence in the LCC sector.

Indonesia has implemented various regulations to protect consumers in the aviation sector. Law Number 8 of 1999 concerning Consumer Protection emphasizes consumers' rights to clear and non-misleading information. Additionally, Minister of Transportation Regulation Number 89 of 2015 regulates the handling of flight delays, including compensation that must be provided by airlines to passengers. In practice, however, many cases show that LCC airlines do not fully comply with the established regulations. For example, in cases of flight

delays, some airlines still fail to provide compensation as stipulated in Minister of Transportation Regulation Number 89 of 2015. Many passengers complain about the lack of information regarding their rights when experiencing delays or flight cancellations (Margaretha et al., 2023). This shows that although regulations have been established, their implementation on the ground still faces many obstacles, particularly in terms of oversight and law enforcement.

Furthermore, information transparency in LCC services remains a major issue. According to a survey conducted by the Indonesian Consumers Foundation (YLKI), many passengers feel that LCC airlines do not provide clear information regarding additional fees, such as baggage charges, seat selection, and schedule changes (Kamil, 2024). This has the potential to harm consumers, as they often only discover the existence of additional fees after the transaction is completed. In fact, Article 18 of Law Number 8 of 1999 states that businesses are prohibited from including standard clauses that may harm consumers (Doly, 2016), including non-transparent information about pricing and additional costs. Ruhaeni & Izadi (2020) highlight how modern Space Law regulates state responsibility for activities in outer space, both conducted by government agencies and non-governmental entities. This principle can be extended to other sectors, such as low-cost aviation, where the state has a responsibility to ensure that companies operate transparently and are accountable to consumers (Ruhaeni & Izadi, 2020).

Another phenomenon of concern is the often ineffective complaint mechanism. Many passengers experience difficulties in submitting complaints, whether through airline customer service or through the relevant authorities (Damayanthi & Parsa, 2020). Several cases show that airlines frequently fail to respond to passenger complaints quickly, leading many consumers to abandon their complaints due to the complicated and time-consuming process. In Indonesia, consumer complaints in the aviation sector can be submitted through the Directorate General of Civil Aviation (DJPU) of the Ministry of Transportation or the National Consumer Protection Agency (BPKN), but their effectiveness in handling disputes with LCC airlines remains limited.

One widely publicized case involves complaints against Lion Air regarding delays and flight cancellations without adequate compensation. This case has drawn public attention because many passengers claim they did not receive their rights as regulated (Nieamah, 2021). Similar complaints have also been raised against other airlines, such as Citilink, particularly concerning information transparency in online ticket purchases.

As illustrated by Budiman, Suparman, & Mashdurohatun (2018) in the context of spatial planning policies in Kuningan Regency, inconsistent policies and weak regulations can hinder efforts to achieve sustainable development. Their study

found that the lack of legally binding Detailed Spatial Plans (RDTR) caused uncertainty in land management and posed potential environmental risks (Budiman et al., 2018). Similarly, in the low-cost aviation industry, the lack of clear and consistent regulations regarding marketing practices and cost disclosure may allow misleading practices that harm consumers. Without a strong regulatory framework, airlines may have incentives to conceal additional costs or provide incomplete information, ultimately reducing transparency and infringing on consumer rights.

From these various phenomena, it is evident that while Indonesia has relatively comprehensive regulations concerning consumer protection in the aviation sector, gaps in implementation still exist. Strengthening regulatory oversight, improving information transparency by airlines, and enhancing the complaint mechanism are essential steps that must be taken to ensure consumer rights are well protected. Without improvements in these areas, the risk of consumer losses will persist, and public trust in LCC services may continue to decline.

Additionally, Indonesia's economic legal policies significantly influence the direction of regulations in the economic sector, including consumer protection in the aviation industry (Yusdiansyah et al., 2022). In this context, policies governing the utilization of digital technology in dispute resolution must align with the dynamics of economic legal politics to be effectively implemented. Moreover, harmonization between national regulations and industry policies remains a key challenge in ensuring that digital dispute resolution systems provide fairness and legal certainty for consumers.

Meanwhile, Malaysia, through the Malaysian Aviation Commission (MAVCOM), has adopted the Aviation Consumer Protection Code 2016 (ACPC 2016), which specifically regulates passenger rights (Hutagalung et al., 2018), including price transparency and compensation for service disruptions. ACPC 2016 stipulates that ticket prices must include all fees upfront, avoiding hidden cost practices. Additionally, MAVCOM provides an online complaint platform that facilitates consumers in submitting complaints and obtaining swift resolutions. This proactive approach demonstrates Malaysia's commitment to protecting consumers in the LCC sector.

Although Malaysia has ACPC 2016 as a consumer protection regulation in aviation, its implementation still faces challenges in practice. One emerging issue is airline compliance with price transparency provisions. Some LCC airlines in Malaysia, including AirAsia and Malindo Air, continue to receive complaints regarding additional costs that are not fully disclosed during ticket purchases. Despite ACPC 2016 requiring ticket prices to include all costs upfront, there are still cases where

service charges only become apparent once the consumer is about to complete the transaction.

Overall, consumer protection in the low-cost aviation business in Indonesia and Malaysia shows significant differences in regulation and policy implementation. Malaysia, through ACPC 2016 and the role of MAVCOM, has a more structured mechanism for ensuring information transparency, managing additional costs, and resolving consumer disputes. Meanwhile, Indonesia still faces challenges in enforcing existing regulations, such as Law Number 8 of 1999 on Consumer Protection and Minister of Transportation Regulation Number 89 of 2015, particularly in terms of sanction enforcement and consumer complaint effectiveness. To enhance consumer protection in the LCC aviation sector, Indonesia must strengthen oversight mechanisms, improve price transparency, and develop a more responsive and efficient dispute resolution system, as implemented in Malaysia.

3.2. Mechanism for Resolving Disputes Between Consumers and LCC Airlines Implemented in Indonesia and Malaysia in the Utilization of Digital Technology

Disputes between consumers and low-cost carriers (LCC) airlines can arise due to various factors, mainly related to information transparency, substandard services, and airline operational policies that often limit consumer rights. In the LCC aviation industry, the business model that focuses on cost efficiency frequently affects service quality, leading to consumer dissatisfaction and complaints.

One of the most common disputes involves flight delays and cancellations. LCC airlines tend to have lower operational flexibility compared to full-service airlines, so when disruptions such as technical issues or weather conditions occur, delays can be prolonged without adequate compensation (Akyuwen, 2021). In some cases, passengers complain about the lack of clear information regarding delays or cancellations, as well as the absence of compensation in accordance with applicable regulations. Additionally, disputes often arise regarding hidden charges that are not transparently disclosed to consumers. LCC airlines typically offer low base ticket prices but later impose additional fees for various services such as baggage, seat selection, meals, or schedule changes. Many consumers feel disadvantaged due to the lack of clear information from the outset regarding these costs, ultimately making the total ticket price much higher than advertised (Ramdan, 2024).

Another common dispute is related to lost or damaged baggage, one of the main complaints in the aviation industry. In the LCC system, baggage handling is often conducted with high efficiency to reduce costs, but this also increases the risk of damage or loss. In some cases, airlines fail to provide appropriate compensation

or complicate the consumer claims process, leading to significant dissatisfaction (Ayu & Kurniasari, 2023).

Unilateral flight schedule changes by airlines are also a frequent source of disputes. LCC airlines sometimes alter schedules for operational reasons without offering adequate alternatives to consumers. Travelers who have planned their trips according to a specific schedule may suffer financial losses due to such changes, particularly if they must cover additional accommodation or transportation costs. Furthermore, inflexible refund and rebooking policies are often problematic, leading to disputes (Disyon & Bhaskara, 2022). LCC airlines typically enforce stricter policies on ticket cancellations or changes, imposing high fees or even offering no refund options at all. This often leads to dissatisfaction, especially for passengers facing emergencies who need to cancel or reschedule their flights.

The lack of an effective complaint mechanism exacerbates disputes between consumers and LCC airlines. Many airlines do not have a responsive complaint system, delaying consumer complaints from being addressed. Some airlines even lack adequate customer service, making it difficult for consumers to find solutions to their issues.

To address these problems, the utilization of digital technology is increasingly relied upon to enhance the effectiveness of dispute resolution mechanisms between consumers and LCC airlines. With technological advancements, various digital complaint platforms can help expedite responses to consumer complaints and improve transparency in the dispute resolution process. The use of digital technology in resolving disputes between consumers and LCC airlines has become a crucial aspect of consumer protection in the era of digital transformation.

Digital technology has revolutionized various industries, including the aviation sector, by significantly enhancing service efficiency, accessibility, and consumer engagement. In the modern digital era, airlines increasingly rely on technological advancements to streamline operations, optimize customer interactions, and ensure regulatory compliance. The integration of digital solutions enables real-time monitoring of flights, automated customer service, and personalized travel experiences, which collectively improve overall consumer satisfaction.

In the context of consumer dispute resolution, digital platforms play a crucial role in facilitating transparent and efficient communication between consumers and service providers. These platforms provide structured channels where consumers can submit complaints, receive instant acknowledgments, and track the progress of their cases in real time. The implementation of automated processing systems powered by artificial intelligence (AI) and machine learning further enhances efficiency by categorizing complaints, identifying recurring issues, and

recommending appropriate resolutions. Additionally, digital dispute resolution tools can incorporate chatbots, virtual assistants, and predictive analytics to offer prompt responses, reducing reliance on traditional customer service methods that often involve lengthy waiting times and manual case reviews.

Furthermore, the integration of big data analytics allows for the identification of dispute trends and root causes, enabling airlines and regulatory bodies to take proactive measures in addressing systemic issues. By leveraging cloud-based systems, airlines can store and manage consumer complaints securely, ensuring accessibility across different platforms while maintaining data privacy. Blockchain technology also presents opportunities for enhancing transparency and trust in dispute resolution processes by creating immutable records of complaints, resolutions, and compensations. As the aviation industry continues to embrace digital transformation, the effective utilization of these technologies in consumer dispute resolution will be instrumental in minimizing conflicts, enhancing accountability, and ultimately improving the overall passenger experience.

Indonesia and Malaysia, as two Southeast Asian nations with rapidly growing aviation industries, have distinct characteristics that influence their approaches to consumer protection in the low-cost carrier (LCC) sector. These differences stem from various factors, including geographical conditions, legal frameworks, economic structures, and levels of technological development. Indonesia, as the largest archipelagic country in the world, consists of more than 17,000 islands, making air transportation a crucial mode of travel for both domestic and international passengers. The heavy reliance on air travel, especially in remote areas where alternative transport options are limited, has driven the rapid expansion of the LCC sector. However, the vast geographical spread also poses logistical challenges, such as ensuring regulatory oversight across multiple airports and maintaining consistent service quality.

Malaysia, on the other hand, has a more centralized geographical structure, with its aviation industry concentrated around key economic hubs such as Kuala Lumpur, Penang, and Johor Bahru. While air travel remains essential, Malaysia benefits from a more integrated transportation network that includes well-developed highways and rail systems, reducing the absolute dependence on air travel compared to Indonesia. This difference in geographical scale influences how consumer protection mechanisms are designed and implemented in each country.

Indonesia and Malaysia also differ in their legal traditions and regulatory approaches. Indonesia follows a civil law system, which relies on codified statutes and regulations as the primary sources of law. Consumer protection in Indonesia is governed by Law No. 8 of 1999 on Consumer Protection, alongside various sector-specific regulations issued by the Ministry of Transportation and other

relevant authorities. Enforcement of consumer rights often involves administrative bodies, courts, and alternative dispute resolution (ADR) mechanisms. However, the effectiveness of legal enforcement remains a challenge, particularly in ensuring that airlines comply with consumer protection policies.

Malaysia, in contrast, operates under a common law system, which integrates statutory regulations with judicial precedents. The country has adopted a more structured approach to consumer protection in aviation, notably through the Aviation Consumer Protection Code 2016, which is enforced by the Malaysian Aviation Commission. This framework provides clearer guidelines for handling consumer complaints, including defined timelines for airline responses and penalties for non-compliance. The integration of both legal precedents and statutory regulations allows Malaysia to adopt a more flexible yet enforceable approach to consumer protection.

Another key factor influencing consumer protection in aviation is the level of technological advancement in each country. Malaysia has made significant strides in adopting big data analytics, artificial intelligence (AI), and digital platforms to manage consumer complaints efficiently. MAVCOM has established an integrated digital complaint system that allows passengers to submit, track, and resolve disputes online. This system enhances transparency and accountability while reducing bureaucratic inefficiencies.

Indonesia, while also embracing digital transformation, faces greater challenges in establishing a unified consumer complaint system across its extensive aviation network. Some airlines have introduced online complaint portals, but the responsiveness and efficiency of these platforms vary. The lack of a centralized and standardized digital complaint mechanism often leads to inconsistencies in how consumer grievances are addressed. Additionally, the digital divide, where rural and remote areas have limited access to online services, can hinder consumers from fully utilizing digital complaint platforms.

The effectiveness of consumer protection mechanisms is also influenced by the role of regulatory institutions and the level of consumer awareness. Malaysia's MAVCOM has been proactive in ensuring airline compliance, imposing administrative penalties on carriers that fail to adhere to consumer protection standards. Public awareness campaigns and educational initiatives have helped empower Malaysian consumers to assert their rights when dealing with airline disputes.

In contrast, Indonesia's consumer protection efforts are often fragmented, involving multiple agencies such as the Directorate General of Civil Aviation (DGCA), the Indonesian National Consumer Protection Agency (BPKN), and the

Ministry of Transportation. The overlapping responsibilities of these institutions sometimes result in regulatory gaps and delays in complaint resolution. Moreover, many Indonesian consumers remain unaware of their rights or the legal avenues available to them, making it difficult to hold airlines accountable for service failures.

In Indonesia, dispute resolution mechanisms in the aviation sector refer to Law No. 8 of 1999 on Consumer Protection and Minister of Transportation Regulation No. 89 of 2015, which regulates compensation for passengers in cases of flight delays. Consumers have several complaint channels, either directly to the airline, through the Directorate General of Civil Aviation at the Ministry of Transportation, or via the Consumer Dispute Settlement Agency (BPSK). However, these mechanisms still rely heavily on manual procedures, which are inefficient and may slow down dispute resolution processes.

Some airlines in Indonesia have provided digital platforms for consumer complaints via websites and mobile applications, but their effectiveness remains a challenge. One of the main issues is the low responsiveness of airlines in handling complaints submitted online. Additionally, transparency in dispute resolution remains an issue, as many cases show that consumers do not receive clear information about the status of their complaints or the compensation rights they should be entitled to.

Meanwhile, Malaysia has developed a more integrated digital-based dispute resolution system through MAVCOM, while ACPC 2016 specifically regulates passenger rights, including the obligation for airlines to provide easily accessible online complaint channels that offer legal certainty for consumers. Consumers experiencing issues with airline services can file complaints through MAVCOM's digital platform, which is then verified and processed according to applicable regulations.

One of the advantages of Malaysia's system is the implementation of Electronic Alternative Dispute Resolution (e-ADR), which enables online dispute resolution without requiring physical meetings between consumers and airlines. Alternative Dispute Resolution (ADR) is a method of resolving disputes outside the traditional court system, offering a more flexible, faster, and cost-effective approach. ADR encompasses various techniques such as negotiation, mediation, conciliation, and arbitration, allowing parties to settle conflicts amicably without resorting to litigation.

Thus, Electronic Alternative Dispute Resolution (e-ADR) is an extension of ADR that leverages digital platforms to facilitate dispute resolution processes online. By utilizing e-ADR, consumers can submit complaints, engage in mediation, and even participate in arbitration without the need for physical presence. This digital

approach enhances accessibility, transparency, and efficiency in handling consumer grievances, particularly in industries like aviation, where cross-border disputes and time-sensitive issues are common. The integration of e-ADR in consumer protection frameworks, as seen in Malaysia, demonstrates its effectiveness in streamlining dispute resolution while ensuring fair outcomes for all parties involved.

This approach not only enhances efficiency in dispute resolution but also reduces costs and time for consumers. E-arbitration has significant potential to improve access to justice in Malaysia through cost and time efficiency. However, legal reforms are needed to address challenges related to the legitimacy and enforcement of e-arbitral awards (Labanieh et al., 2024). Additionally, MAVCOM has the authority to impose administrative sanctions on airlines found to be violating consumer protection regulations, thus increasing airline compliance in professionally handling complaints.

Another significant difference between Indonesia and Malaysia lies in information transparency and the accessibility of complaint mechanisms. ACPC 2016 mandates that airlines in Malaysia provide clear information regarding complaint procedures, passenger rights, and estimated dispute resolution times. In contrast, in Indonesia, information about complaint procedures is often not transparently conveyed by airlines, making it difficult for consumers to follow up on their complaints.

Regarding supervision, MAVCOM actively monitors incoming complaints and ensures that airlines respond within a specified timeframe. In Indonesia, although the Ministry of Transportation has a monitoring mechanism, its implementation is still suboptimal. The lack of strict enforcement of sanctions against airlines that fail to adequately respond to consumer complaints is one of the main obstacles to the effectiveness of the dispute resolution system.

Furthermore, Malaysia has adopted artificial intelligence (AI)-based technology and big data analytics in its consumer complaint system, enabling faster and more accurate identification of issue patterns. This technological advancement allows regulatory bodies to analyze large volumes of consumer complaints, identify recurring issues, and implement proactive measures to address systemic problems in the aviation sector. AI-driven systems can categorize complaints, predict potential disputes, and provide automated responses or recommendations, reducing the time required for manual case assessments. Additionally, big data analytics enhances decision-making by offering insights into consumer behavior, airline service performance, and regulatory compliance trends. However, while AI and big data offer significant advantages in improving consumer protection mechanisms, their implementation must consider ethical concerns such as data

privacy, transparency, and the potential risks of algorithmic bias. Therefore, a balanced approach is necessary to ensure that AI-driven dispute resolution systems remain fair, accessible, and aligned with consumer rights protection principles.

As a result, consumer protection policies can be adjusted more responsively to market needs. In Indonesia, data-based systems like this are still in the early stages of development and thus cannot yet be optimally utilized for decision-making in regulation and aviation industry oversight. However, the adoption of AI in this sector must consider human rights implications, including privacy and fair access. Therefore, the implementation of AI in dispute resolution mechanisms must be designed with ethical and justice principles in mind to ensure that consumer rights remain protected without causing discrimination or privacy violations (Ahmad et al., 2025).

Based on the comparison above, it can be concluded that Malaysia has been more advanced in integrating digital technology into its dispute resolution system between consumers and LCC airlines compared to Indonesia. To improve the effectiveness of the system in Indonesia, efforts are needed to strengthen regulations requiring airlines to provide more transparent and responsive complaint systems. Additionally, enhancing digital infrastructure and implementing stricter sanctions on airlines that neglect consumer complaints are crucial steps in strengthening consumer rights protection in the low-cost aviation sector.

4. Conclusion

This study shows that consumer protection in the low-cost carrier (LCC) business in Indonesia and Malaysia follows different policy approaches, impacting the effectiveness of regulatory implementation and dispute resolution mechanisms. Malaysia has established a more advanced consumer protection system through the Aviation Consumer Protection Code 2016 (ACPC 2016) and oversight by the Malaysian Aviation Commission (MAVCOM). The presence of digital complaint platforms and an e-ADR (Electronic Alternative Dispute Resolution) mechanism has enhanced efficiency and transparency in handling consumer complaints. In contrast, Indonesia still faces challenges in implementing consumer protection policies, including a lack of transparency in LCC ticket pricing, limited access to consumer rights, and the underdevelopment of digital dispute resolution mechanisms. Although Indonesia has enacted the Consumer Protection Act No. 8 of 1999 and Minister of Transportation Regulation No. 89 of 2015, regulatory enforcement remains insufficient in ensuring airline compliance with consumer protection standards. Regarding dispute resolution, Malaysia has adopted a digital system that allows consumers to file complaints online, ensuring faster and more

transparent resolutions. Meanwhile, Indonesia still relies on manual procedures that are less efficient and often fail to provide legal certainty for consumers. To enhance consumer protection in the LCC sector, Indonesia needs to develop a more integrated digital dispute resolution mechanism, strengthen airline oversight, and align policies with digital technology advancements as implemented in Malaysia.

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