

Analysis of Factors Influencing Passenger Loyalty on Aviation Airlines: A Case Study of Zambia Domestic Airlines

Mwilima Sibulwa, Dr. Brian Manchishi

Graduate School of Business: University of Zambia

DOI: <https://dx.doi.org/10.47772/IJRISS.2025.90400241>

Received: 17 April 2025; Accepted: 21 April 2025; Published: 08 May 2025

ABSTRACT

The research examined the factors that affect passenger loyalty in the domestic airline industry in Zambia, specifically focusing on service quality, price, brand image and loyalty programs and how they can affect customer retention in a competing aviation market. Overall, the research is meant to shine a light on how these factors can influence customer retention in a competitive market. The research utilized a convergent parallel mixed-methods design to merge quantitative and qualitative data for further insights into customer retention in a competitive market. Quantitative data were collected using a systematic sampling method. Based on Cochran's formula, a sample size of 384 was calculated for statistical validity. Structured questionnaires were administered at the major airports in Zambia to collect passenger perceptions about the service quality provided by the airlines. The qualitative component applied purposive sampling and included in-depth interviews with 15 passengers to illustrate the diversity of experience. In the data analysis, it was important to distinguish between quantitative and qualitative data. For the quantitative aspects, descriptive and inferential statistics (i.e., Chi-squared and Cramer's V) were used. Qualitative data were analyzed using thematic analysis, categorizing responses into follow-up questions based on the original research questions. This research incorporated three significant theories. Relationship Marketing Theory formed a framework for analyzing how airlines build long-term customer relationships through loyalty programs and personalized services. The SERVQUAL model provided an organized approach in evaluating service quality attributes (i.e., tangibles, reliability, responsiveness, assurance, and empathy). Expectancy-Disconfirmation Theory offered an understanding of how passengers form their views of satisfaction and loyalty as an overall product of expectation at pre-flight and experience satisfaction at post flight. These theories were the basis of how the survey was constructed, examined loyalty programs, and views mattered when analyzing qualitative data in service failure. The results indicated that passengers were generally satisfied with check-in service quality and in-flight service quality; however, service quality remained a primary antecedent.

Key Words: Keywords: Service Quality, Zambia Domestic Airlines, Customer Retention, Brand Image, Passenger Loyalty.

INTRODUCTION AND BACKGROUND

The leading airlines companies are Proflight Zambia, which is the largest airline in Zambia, offering scheduled domestic and regional flights, as well as private charters. while

Zambia Airways, the flag carrier of Zambia, relaunched in 2021 with the help of Ethiopian Airlines. It operates domestic and international flights. lastly, but not the least

various Charter Companies operate charter services, providing flexibility and access to remote areas. These include Corporate Air Charters, Royal Air Charters, Staravia, and Skytrails Limited. The aviation industry plays a significant role in Zambia's economic development through various channels:

To start with, the sector directly employs numerous professionals, including pilots, engineers, cabin crew, and ground staff. It also indirectly supports jobs in related industries such as hospitality, transport, and logistics. On the other hand Air transport provides a fast and efficient way to connect Zambia with regional and

international markets, enabling businesses to reach new customers, deliver products quickly, and explore new opportunities. This is particularly crucial for a landlocked country like Zambia.

The Airlines are vital for Zambia's tourism sector, providing access to the country's attractions, including Victoria Falls and its national parks. Increased air connectivity encourages both domestic and international tourists, generating revenue for hotels, lodges, tour operators, and local businesses. The growth in air travelers in Zambia from 1.2 million in 2008 to 1.8 million in 2019 demonstrates this impact.

Lastly but not the least a well-developed aviation sector enhances investor confidence by providing reliable connectivity, making it easier for businesses and individuals to travel to and from Zambia. The airline industry faces a myriad of challenges, including fluctuating fuel prices, the rise of low-cost carriers, economic downturns, heightened security measures, and stringent government regulations. Despite being a growing market, the sector is characterized by intense competition and low-profit margins. To navigate this challenging landscape, airlines must focus on retaining customers and preventing them from switching to competitors. Understanding the key drivers of customer choice is essential for fostering passenger loyalty, which is crucial for an airline's survival and growth. As the aviation sector has transformed from a symbol of luxury to a highly competitive marketplace, airlines are increasingly pressured to maintain profitability amidst rising operational costs and evolving consumer expectations. This research aims to explore the specific dynamics influencing passenger loyalty within Zambia's domestic aviation sector. While existing studies have addressed passenger loyalty in various contexts, the unique characteristics of the Zambian market necessitate focused investigation.

Numerous studies have explored the factors influencing passenger loyalty in the aviation industry, revealing a complex interplay of elements that vary across regional and cultural contexts. A prominent theme is Service Quality, which is a critical determinant of passenger loyalty. Key aspects of service quality include on-time performance, baggage handling, in-flight amenities, and customer service interactions. Research consistently indicates that passengers are more likely to remain loyal to airlines that deliver high-quality service consistently (Lee et al., 2019; Zhang & Wang, 2021). This relationship underscores the importance of operational excellence in fostering customer loyalty. Another significant factor is Price. While cost-conscious travelers may exhibit sensitivity to pricing, this does not operate in isolation; other elements such as service quality and convenience also play crucial roles. Airlines that strike a balance between competitive pricing and high service standards can attract and retain a loyal customer base (Kim & Lee, 2018; Park & Park, 2020). This suggests that while price is a vital consideration for passengers, it must be integrated with overall service offerings to enhance loyalty.

The Brand Image of an airline also significantly impacts passenger loyalty. A strong brand image fosters trust and confidence among consumers, which can lead to increased loyalty. Factors contributing to a positive brand image include safety records, reliability, and corporate social responsibility initiatives (Kim & Kim, 2017; Wang & Zhang, 2022). As passengers often associate brand reputation with quality and safety, airlines must actively manage their brand perception to cultivate loyalty. Finally, Loyalty Programs serve as effective tools for enhancing passenger loyalty. Frequent flyer programs and similar initiatives reward travelers with points or miles that can be redeemed for various benefits, thereby incentivizing repeat business. Well-structured loyalty programs create a sense of belonging among frequent customers and can significantly influence their choice of airline (Chen & Chen, 2019; Lee & Lee, 2021). While these factors are broadly applicable across the aviation sector, the specific dynamics within the Zambian domestic market warrant further investigation due to its unique challenges such as limited infrastructure and economic fluctuations. Understanding these factors will provide valuable insights for Zambian airlines aiming to develop effective customer retention strategies.

Problem Statement

We do not know what makes passengers loyal to airlines in Zambia's domestic market.

Ideally, domestic airlines would be able to effectively retain their passengers, fostering a stable and profitable operational environment. However, Zambia's domestic aviation market faces significant challenges which hinder them from retaining passengers, including limited infrastructure and economic volatility, which

severely impact the ability of airlines to achieve this customer loyalty (aviation strategy - ministry of transport and logistics, 2023).

The restricted operational efficiency stemming from infrastructure limitations can negatively affect the passenger experience, hindering the development of loyalty (langmead & baker communications, 2024).

Furthermore, the economic volatility in Zambia leads to fluctuations in passenger demand and necessitates adaptable pricing strategies. This instability makes it difficult to establish the consistent conditions needed for strong customer loyalty (Aviation industry 2025: navigating challenges and seizing opportunities, gminsights.com).

The historical context, marked by the liquidation of the previous national carrier and the ongoing struggles of current domestic carriers like Air Mahogany to maintain consistent operations and achieve profitability, further highlights the difficulty in establishing and maintaining customer loyalty within this volatile market (factors characterizing the underperformance of airlines registered in Zambia: an analysis of the importance of air transport - journal of sustainable development in Africa).

Consequently, there is a critical lack of understanding regarding the precise factors that influence passenger loyalty within the unique context of Zambia's domestic aviation sector. This knowledge gap prevents airlines from implementing targeted strategies to effectively address the preferences and expectations of their customers, thereby hindering the achievement of the ideal situation of strong customer retention. This study aims to fill this research void by investigating the key factors influencing passenger loyalty within the specific context of Zambia's domestic aviation industry.

LITERATURE REVIEW

Previous Studies

Customer Loyalty

Customer loyalty refers to a customer's commitment to repurchase or continue using a brand's products or services consistently in the future, despite situational influences or marketing efforts from competitors (Oliver, 1999). Loyal customers tend to exhibit repeat purchase behavior and promote the brand through word-of-mouth. Research by Dick and Basu (1994) emphasized that customer loyalty is influenced by both attitudinal and behavioral components. Furthermore, customer satisfaction, trust, and perceived value have been identified as important antecedents of loyalty (Anderson & Srinivasan, 2003). In a retail context, loyal customers contribute significantly to profitability due to lower churn rates and higher customer lifetime value.

Brand Image

Brand image is the perception that customers hold about a brand, influenced by their experiences, beliefs, and feelings (Keller, 1993). A strong brand image fosters emotional connections with customers and differentiates the brand from competitors. Research by Nguyen and Leblanc (2001) found that brand image significantly impacts customer loyalty, especially in service industries. When customers perceive a brand positively, they are more likely to remain loyal and recommend the brand to others. In the Zambian retail context, where brand differentiation is growing in importance, building a strong, consistent brand image can be a key driver of loyalty.

Price

Price plays a critical role in customer decision-making and loyalty. Perceived price fairness—the customer's perception that the price paid is justified in relation to value—has a direct impact on satisfaction and loyalty (Xia, Monroe & Cox, 2004). Customers are more likely to remain loyal when they believe they are getting good value for their money. Research by Martins and Monroe (1994) supports the idea that fair and transparent pricing enhances trust and repeat patronage. In markets like Zambia, where price sensitivity is relatively high, retailers that maintain fair pricing can foster long-term loyalty.

Loyalty Program

Loyalty programs are structured marketing strategies designed to reward and encourage repeat purchases. Such programs can take the form of points, discounts, exclusive offers, or membership benefits. According to Yi and Jeon (2003), effective loyalty programs increase customer retention and lifetime value. Omar et al. (2011) found that loyalty schemes improve customer satisfaction by enhancing perceived value and encouraging engagement. In a competitive retail environment, especially in urban centers like Lusaka, loyalty programs can serve as a strategic tool to build long-lasting relationships with customers.

Service Quality

Service quality is defined as the customer's perception of how well a service meets or exceeds their expectations. The SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (1988) outlines five key dimensions: reliability, assurance, tangibles, empathy, and responsiveness. Numerous studies have shown that service quality directly affects customer satisfaction and loyalty (Cronin & Taylor, 1992). For instance, Zeithaml et al. (1996) emphasized that consistent service delivery improves customer trust and loyalty. In the Zambian retail sector, where service inconsistency can be a challenge, improving service quality is essential to retaining customers.

Global and Regional Insights

Recent studies have expanded our understanding of customer loyalty in the airline industry, particularly within low-cost carriers (LCCs) in Southeast Asia. These findings offer valuable parallels for Zambia's domestic aviation market.

- **Service Quality and Customer Satisfaction:** Research by Samosir et al. (2024) indicates that service quality, along with facilities and pricing, significantly influences customer satisfaction in Indonesia's aviation sector during the COVID-19 pandemic. This suggests that enhancing service quality can lead to increased customer loyalty. [Growing Science+1](#)[Growing Science+1](#)
- **Complaint Handling and Service Recovery:** Arin et al. (2024) found that effective complaint handling positively affects customer loyalty at Lion Air Indonesia, whereas service recovery did not show a significant correlation. This underscores the importance of addressing customer complaints promptly to maintain loyalty. [Atlantis Press](#)
- **Marketing Technology and Customer Loyalty:** Violin et al. (2022) explored the impact of marketing technology, service quality, and the low-cost carrier model on customer loyalty at Lion Air. Their findings suggest that marketing technology and the LCC model positively influence customer loyalty, while service quality had a less significant effect. [Journal of Management Science](#)
- **Brand Awareness and Loyalty Programs:** Nengsih et al. (2023) examined the influence of brand awareness and brand image on brand loyalty among Lion Air's Passport Club members in Jakarta. The study concluded that both brand awareness and brand image significantly impact brand loyalty, highlighting the effectiveness of loyalty programs in fostering customer retention. [research.e-greenation.org](#)

Zambian Context

While specific studies on customer loyalty in Zambia's domestic aviation sector are limited, recent developments provide context:

- **Passenger Growth:** According to Zambia Airports Corporation Limited (2024), the aviation industry experienced a historic peak of over 2 million passengers in 2023, surpassing pre-COVID-19 levels. This growth indicates a recovering and expanding market, presenting opportunities for airlines to cultivate customer loyalty. [zacl.co.zm](#)
- **Marketing Strategies:** Lungo (2024) analyzed Zambia Airports Corporation Limited's marketing strategies and their impact on revenue generation. The study suggests that a more integrated marketing

approach focusing on innovation and customer-centricity is essential for sustainable growth and competitiveness. dspace.unza.zm

These insights from regional studies and Zambia's aviation developments underscore the multifaceted nature of customer loyalty. Factors such as service quality, effective complaint handling, marketing strategies, and brand image play pivotal roles. For Zambia's domestic airlines, adopting tailored strategies that consider these elements could enhance customer loyalty and drive sustainable growth.

The existing literature on airline customer loyalty identifies several key factors that influence consumer behavior, including price, satisfaction, perceived value, and trust. However, much of this research primarily focuses on international airline travel, which may not fully capture the unique dynamics of the Zambian domestic aviation industry. The Zambian market presents distinct challenges and opportunities that require a tailored approach to understanding customer loyalty. For instance, local airlines like Pro-flight Zambia have developed specific strategies to cater to the needs of Zambian travelers, yet these strategies may not align with findings from studies conducted in more established markets. Therefore, it is essential to explore the particular factors that drive customer loyalty within the Zambian domestic aviation market.

Identifying the specific challenges faced by Zambian airlines in fostering customer loyalty is crucial for developing effective strategies. Factors such as service quality perception, market competition from low-cost carriers, and cultural nuances significantly influence consumer preferences and loyalty behaviors. For example, while international studies often emphasize the importance of service quality as a primary driver of loyalty, Zambian consumers may prioritize different aspects such as pricing or convenience due to varying economic conditions and travel habits. Additionally, understanding how local cultural factors affect consumer behavior can provide valuable insights into loyalty models that differ between leisure and business travelers (Ratanavaraha, 2022).

A quantitative research approach was employed. Data was collected from 200 respondents who were passengers of Lion Air in Indonesia. The data collection method involved the use of questionnaires. The specific mode of administration was online platforms. The study utilized a quantitative research method. This involves collecting numerical data through questionnaires and employing statistical analysis to identify relationships and the impact of various factors on airline loyalty.

The underlying research philosophy is likely positivism. This assumes an objective reality that can be measured and analyzed to establish cause-and-effect relationships between identified factors and passenger loyalty towards Lion Air. The primary data collection technique was the use of questionnaires. These structured instruments would have contained questions designed to measure passengers' perceptions and attitudes towards various aspects of Lion Air's services, their satisfaction levels, and their reported or intended loyalty behaviors (e.g., repeat purchase intention, willingness to recommend).

The study found that service quality, price fairness, and trust had a significant positive effect on customer satisfaction. Furthermore, customer satisfaction was found to have a significant positive effect on customer loyalty. This suggests an indirect relationship where service quality, price fairness, and trust influence loyalty by first enhancing customer satisfaction.

The study addresses a potential gap by focusing specifically on Lion Air and the Indonesian market. Given the unique characteristics of the Indonesian airline industry and its customer base, research conducted in other regions might not be directly applicable. By examining the interplay of service quality, price fairness, trust, and satisfaction in driving loyalty towards a specific low-cost carrier like Lion Air, the study contributes to a more nuanced understanding of loyalty drivers in this segment. Previous research might have been more general or focused on full-service carriers.

The study's quantitative approach, while providing valuable statistical insights, might present a gap for future research that could employ qualitative methods to explore the underlying reasons and experiences that shape passenger perceptions and loyalty towards Lion Air in more depth. Depending on the existing literature on

Indonesian airline loyalty, this study might fill a gap by specifically quantifying the impact of trust and price fairness alongside the more commonly studied service quality and satisfaction.

In summary, the research by Utomo and Salim provides valuable guidance into the factors influencing loyalty among Lion Air passengers in Indonesia. It highlights the crucial role of service quality, price fairness, and trust in driving customer satisfaction, which in turn significantly impacts loyalty. The study contributes to a more context-specific understanding of airline loyalty in the Indonesian market, particularly for a low-cost carrier like Lion Air. It also suggests potential avenues for future research to explore these relationships in greater detail.

Empirical Review

Following the examination of broader literature on airline customer loyalty, this section will delve into specific empirical studies that provide valuable insights into the dynamics of loyalty in emerging markets and the influence of key factors. A particularly relevant recent contribution is the work of Utomo and Salim (2024), which investigates the factors influencing airline loyalty behavior among passengers of Lion Air in Indonesia.

Utomo and Salim's (2024) study offers a pertinent lens through which to understand loyalty drivers in an emerging market context, sharing similarities with the Zambian aviation sector in terms of potential growth and competitive pressures. Their research specifically focuses on the impact of service quality and price fairness – core elements of the pricing strategies discussed in this review – alongside trust, on customer satisfaction, and subsequently, on customer loyalty. This aligns directly with the key factors identified as central to fostering loyalty in the broader literature.

Methodological Comparison:

The methodology employed by Utomo and Salim (2024) utilized a quantitative approach, collecting data from 200 Lion Air passengers in Indonesia through questionnaires. This reliance on structured data and statistical analysis is a common method in loyalty research, allowing for the identification of significant relationships between variables. When compared to the study by Xue and Yang (2024), which also used a quantitative approach with a larger sample size (500 passengers) focusing on the budget airline sector more generally, we can observe a trend towards empirical investigation in specific market segments within emerging economies. The focus on a single airline, Lion Air, provides a more granular understanding of loyalty drivers within a particular organizational context, which can complement broader studies examining the overall budget airline landscape.

Significant Positive Effect of Service Quality,

The findings of Utomo and Salim (2024) revealed a significant positive effect of service quality, price fairness, and trust on customer satisfaction. Crucially, they found that customer satisfaction, in turn, had a significant positive impact on customer loyalty, suggesting an indirect pathway of influence. This contrasts with the finding by Xue and Yang (2024), which indicated a limited direct impact of overall passenger satisfaction on loyalty, while specific service dimensions did predict loyalty. This divergence highlights the potential nuances in the satisfaction-loyalty relationship, possibly influenced by the specific market context (Indonesia vs. a broader budget airline sample) and the specific airline under investigation (Lion Air vs. a general budget airline context). It underscores the importance of considering the specificities of the operating environment and customer base when analyzing loyalty drivers.

Implications for the Zambian Market:

The insights from Utomo and Salim's (2024) study offer valuable considerations for airlines operating in the emerging Zambian market. While the specific market dynamics, cultural factors, and consumer preferences may differ, the fundamental importance of service quality, ensuring price fairness in the eyes of the customer, and building trust are likely to be universally relevant in fostering customer satisfaction and, ultimately,

loyalty. Zambian airlines can draw lessons from the Indonesian experience regarding the interconnectedness of these factors and the potential for satisfaction to act as a mediator for loyalty.

Limitations and Future Research Avenues

Utomo and Salim (2024) acknowledged the limitations inherent in a purely quantitative approach, which may not fully capture the depth and complexity of passenger experiences and perceptions. This limitation presents a clear avenue for future research, particularly in the Zambian context. Qualitative studies, such as in-depth interviews or focus groups with Zambian airline passengers, could provide richer insights into the underlying reasons and motivations behind their loyalty (or lack thereof). Exploring the specific drivers of trust and perceptions of price fairness within the Zambian cultural and economic landscape would be particularly valuable.

Identifying Gaps and Research Significance:

The study by Utomo and Salim (2024) contributes significantly to the understanding of airline loyalty in an emerging market. However, its specific focus on the Indonesian market and Lion Air highlights potential gaps that research on Zambian airlines can address. For instance:

Cultural Specificity: Are the specific dimensions of service quality, price fairness, and trust that drive satisfaction and loyalty the same in the Zambian cultural context? How do local values and norms influence these relationships?

Competitive Dynamics in Zambia: How do the specific competitive pressures within the Zambian aviation sector moderate the relationships identified by Utomo and Salim?

Impact of Unique Zambian Challenges: How do factors unique to the Zambian aviation industry (e.g., infrastructure limitations, regulatory environment) influence passenger perceptions and loyalty drivers?

By closely analyzing and synthesizing the findings of Utomo and Salim (2024) within the broader context of the literature reviewed, and by considering its limitations and the specific context of the Zambian aviation industry, this literature review establishes a strong argument for the relevance and significance of further research on customer loyalty within Zambia's evolving aviation sector. It underscores the need to investigate whether the relationships identified in other emerging markets hold true in the Zambian context and to uncover any unique factors that may be at play.

The other research was done by Maethika Chanarpas (2021), is a literature review focused on customer loyalty in the airline industry. Unlike the previous studies that presented empirical research, this work synthesizes existing research on the topic to provide a comprehensive overview of the factors, theories, and findings related to airline customer loyalty. The primary goal was to review and synthesize existing academic literature concerning customer loyalty within the airline industry. It likely aimed to identify key factors that have been found to influence airline customer loyalty across various studies. The review probably explored different theoretical frameworks used to understand customer loyalty in this context. It may have also examined the consequences of customer loyalty for airlines and identified gaps or areas for future research.

Theoretical Frameworks – ServQual Model

Originated by Parasuraman, Zeithaml, and Berry in 1988, the SERVQUAL model is a widely used framework for assessing service quality based on five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. This model posits that the gap between customers' expectations and their perceptions of actual service delivery determines their overall satisfaction and loyalty (Parasuraman et al., 1988). Recent studies have applied the SERVQUAL model to various industries, including aviation, to evaluate how service quality impacts customer satisfaction and loyalty. For instance, a study by Uzir et al. (2021) demonstrated that high service quality significantly enhances customer satisfaction and loyalty in the airline sector, emphasizing the importance of meeting or exceeding customer expectations.

Relationship Marketing Theory

Developed by Berry in 1995, Relationship Marketing Theory focuses on building long-term relationships between businesses and customers through personalized communication and engagement strategies. This theory suggests that fostering strong relationships leads to increased customer loyalty and retention (Berry, 1995). In the context of airlines, this theory can help explain how effective communication and customer engagement initiatives contribute to passenger loyalty. Recent research by Saglam and El Montaser (2021) highlighted the importance of relationship marketing in enhancing customer commitment and satisfaction within service industries, including airlines.

Expectancy-Disconfirmation Theory

The Expectancy-Disconfirmation Theory, primarily attributed to Oliver (1980), posits that customer satisfaction is determined by the comparison between expected performance and perceived performance of a service. If a service meets or exceeds expectations (positive disconfirmation), customers are likely to feel satisfied; conversely, if it falls short (negative disconfirmation), dissatisfaction occurs. This theory is particularly relevant for understanding how Zambian airlines can enhance passenger loyalty by managing customer expectations effectively. Recent applications of this theory in various contexts have shown its relevance in predicting customer satisfaction outcomes (Kim & Kim, 2021; Tsuji et al., 2021), reinforcing its applicability to the airline industry.

Conceptual Framework

A conceptual framework is a visual or narrative representation that outlines the key concepts, variables, and their expected relationships within a research study, serving as a roadmap for understanding and organizing the research problem.

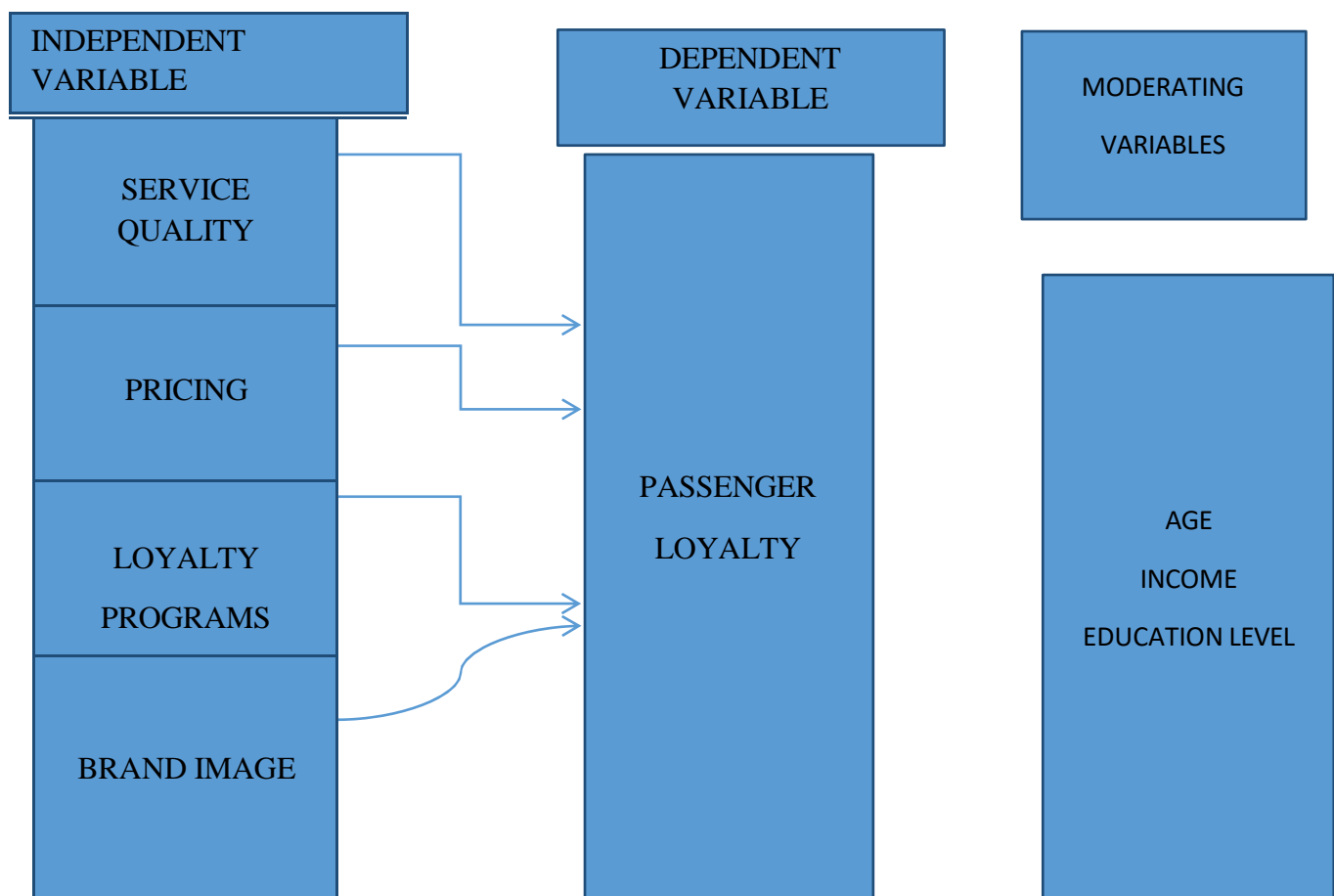


Figure 2.0: Source (Authors), 2024

RESEARCH METHODOLOGY AND DESIGN

Mixed-Methods Design (Convergent Parallel Design), both qualitative and quantitative data were collected concurrently (or nearly so) and then analyzed separately. The findings from both strands were then integrated during the interpretation phase to provide a more complete picture. Semi-structured interviews were used, allowing for flexibility while ensuring that key topics were covered.

The target population for this study comprises domestic airline passengers in Zambia, specifically those who have traveled within the country in the past year. This group is essential for understanding the factors influencing passenger loyalty in the Zambian domestic aviation market. The sampling frame will include individuals who have used services from various local airlines, such as Pro-flight Zambia and Mahogany Air, as well as those traveling to key destinations like Lusaka, Ndola, and Livingstone. To ensure a representative sample, the study employed stratified sampling techniques, considering demographic factors such as age, income level, and travel frequency. This approach helped capture diverse perspectives on passenger loyalty and satisfaction, allowing for a more nuanced analysis of the factors that drive loyalty among different segments of the population. Additionally, qualitative data was gathered from key stakeholders in the aviation sector, including airline executives and industry experts, to provide further insights into the challenges and opportunities faced by Zambian airlines in fostering customer loyalty.

In 2023, Zambia Airports Corporation Limited served 2,056,312 general passengers which is the highest number of passengers recorded by the Corporation since its inception in 1989. This represents an increase of 24% when compared to 1,653,077 passengers recorded in 2022 (Zambia Airports Corporation, 2024).

Sample Size Formula:

$$n = (N * Z^2 * p * (1 - p)) / (E^2 * (N - 1) + Z^2 * p * (1 - p))$$

Where:

n = required sample size

N = population size (in this case, 2,056,312)

Z = Z-value (for a 95% confidence level, $Z \approx 1.96$)

p = estimated proportion of an attribute present in the population (if unknown, use 0.5 for maximum variability)

E = margin of error (expressed as a decimal; e.g., 0.05 for 5%)

Parameters;

Population size (N) = 2,056,312

Desired confidence level: 95% ($Z \approx 1.96$)

Estimated proportion (p) = 0.5

Margin of error (E) = 0.05

Adding the Values into the Formula:

$$n = (2,056,312 * (1.96)^2 * 0.5 * (1 - 0.5)) / ((0.05)^2 * (2,056,312 - 1) + (1.96)^2 * 0.5 * (1 - 0.5))$$

Calculating the Components:

Z^2 and $p(1-p)$:

$$Z^2 = (1.96)^2 = 3.8416$$

$$p(1-p) = 0.5 * (1 - 0.5) = 0.25$$

Calculate the Numerator:

$$\text{Numerator} = N * Z^2 * p(1-p) = 2,056,312 * 3.8416 * 0.25$$

$$= 2,056,312 * 3.8416 * 0.25 \approx 1,973,124.40$$

Calculating the Denominator:

$$\text{Denominator} = E^2 * (N - 1) + Z^2 * p(1-p)$$

$$E^2 = (0.05)^2 = 0.0025$$

$$E^2 * (N - 1) = 0.0025 * (2,056,312 - 1) \approx 5,140.78$$

$$Z^2 * p(1-p) = 3.8416 * 0.25 \approx 0.9604$$

Combining these:

$$\text{Denominator} \approx 5,140.78 + 0.9604 \approx 5,141.74$$

Final Calculation of Sample Size:

$$n = 1,973,124.40 / 5,141.74 \approx 384$$

The calculated sample size for the quantitative phase of this study is approximately 384 participants based on a target population of 2,056,312 general passengers served by Zambia Airports Corporation Limited in 2023.

FINDINGS

To assess the demographic and behavioral factors that influence passenger travel patterns and airline preferences within the competitive Zambian domestic route environment.

Participants Occupation

Table 4.1: Source (Authors) 2024

Occupation		Frequency (n)	Percent (%)
Valid	Teacher	50	14.9
	Accountant	12	3.6
	Administrative Officer	3	.9
	Entrepreneur	19	5.7
	Engineer	42	12.5
	Artist	1	.3
	Athlete	5	1.5
	Medical Personnel	66	19.6

	In Aviation	17	5.1
	Student	3	.9
	Lecturer	6	1.8
	Banker	4	1.2
	Defense Officer	11	3.3
	Retired	1	.3
	Sales Agent	6	1.8
	Driver	2	.6
	Farmer	2	.6
	Manager	7	2.1
	Journalist	4	1.2
	Director	1	.3
	Legal Practitioner	48	14.3
	General worker	2	.6
	Analyst	2	.6
	Politician	1	.3
	Receptionist	1	.3
	Planner	2	.6
	Unemployed	2	.6
	Pastor	1	.3
	Firefighter	1	.3
	None	1	.3
	Fuel Attendant	1	.3
	Real Estate Agent	2	.6
	Procurement Officer	1	.3
	Revenue Collector	1	.3
	Insurance Underwriter	1	.3
	Total	329	97.9
Missing	System	7	2.1
Total		336	100.0

The Table above shows that occupational distribution in Zambia's domestic airlines is diverse. The largest group consisted of medical personnel (19.6%), followed by teachers (14.9%) and legal practitioners (14.3%). Engineers made up 12.5% of the respondents, while entrepreneurs accounted for 5.7%, and those working in aviation represented 5.1%. Other notable occupations included accountants (3.6%), defense officers (3.3%), and managers (2.1%). Lecturers and sales agents each contributed 1.8%, while athletes made up 1.5%, and bankers and journalists accounted for 1.2% each. Administrative officers and students represented 0.9% each. Smaller occupational groups included drivers, farmers, general workers, analysts, planners, and real estate agents, each contributing 0.6% to the total. Less represented professions (0.3% each) included artists, retired individuals, directors, politicians, receptionists, pastors, firefighters, unemployed individuals, fuel attendants, procurement officers, revenue collectors, and insurance underwriters. Seven respondents (2.1%) did not specify their occupation.

To evaluate the impact of drivers (service quality, pricing, and brand image) on Age Category and Satisfaction with Check-in Procedures

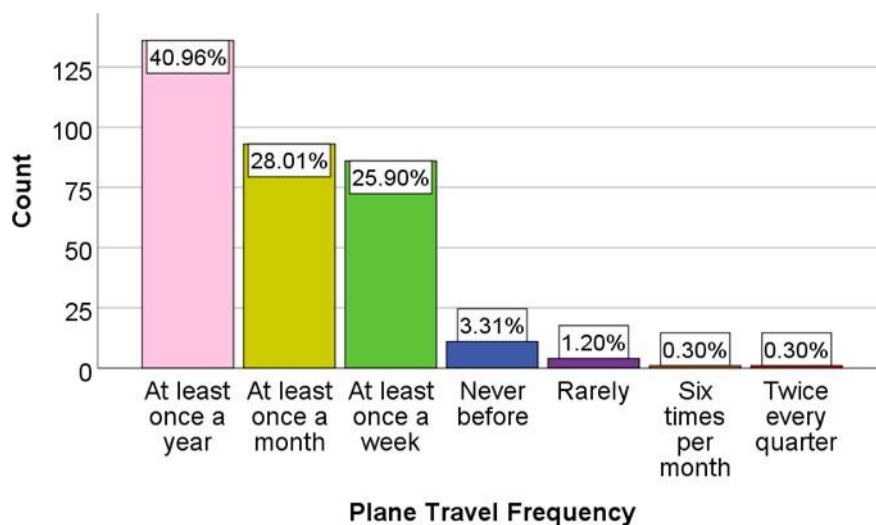


Figure 4.2: Source (Authors), 2024

The figure above showed the data on plane travel frequency and most respondents indicated that they fly at least once a year (41.0%), followed by those who travel at least once a month (28.0%) and once a week (25.9%). A small segment (3.3%) had never flown, presenting a potential growth opportunity. Infrequent travelers, included those who fly rarely, six times per month, or twice every quarter, make up a minimal portion of the sample.

To determine the role of loyalty programs and customer experience in fostering passenger retention and repeat patronage of Zambian domestic airlines.

The responses to the question about benefits expected from an airline loyalty program reflected a strong desire for various incentives centered around discounts, free flights, and exclusive offers. A significant number of respondents expressed interest in receiving discounts on flights, with many emphasizing the importance of special promotions, reduced fares, and discounted prices for loyal members.

What are the key factors that influence passenger loyalty in the aviation industry? This study confirms the importance of service quality, pricing, customer experience, and loyalty programs in influencing passenger loyalty within the Zambian context. Additionally, demographic factors like age and income play a significant role in travel behavior and loyalty program participation.

Why do the identified factors (customer experience, demographic characteristics, pricing, service quality, and behavioral patterns) influence passenger loyalty within Zambia's domestic aviation market? As discussed through the lens of the theoretical frameworks, customer experience influences loyalty through satisfaction and relationship building. Demographic factors like age and income shape travel needs,

affordability, and program engagement. Pricing is a fundamental consideration for value-conscious Zambian travelers. Service quality, when meeting or exceeding expectations, fosters satisfaction and trust. Behavioral patterns, such as switching due to negative experiences, demonstrate the sensitivity of loyalty to service failures.

How do loyalty programs implemented by domestic Zambian airlines affect passenger behavior and contribute to repeat business? The study suggests that loyalty programs have a significant impact on the behavior of older and higher-income passengers, encouraging repeat patronage. The expected benefits indicate that tangible rewards are key motivators. However, the overall effectiveness of these programs is likely contingent on consistent and reliable service delivery. The challenges faced by Zambian airlines in maintaining operational efficiency due to infrastructure limitations and economic volatility (as highlighted in the problem statement and supported by the limited use of smaller domestic carriers) might hinder their ability to offer consistently attractive loyalty benefits and thus fully leverage these programs for repeat business across all passenger segments.

CONCLUSION

The findings of this study provide valuable context-specific insights into the factors influencing passenger loyalty within Zambia's domestic aviation market. While global drivers of loyalty are relevant, their manifestation and impact are shaped by the unique challenges and opportunities present in this emerging market. The study highlights the importance of consistent service quality, competitive pricing, positive customer experiences, and targeted loyalty programs in fostering passenger retention. However, the vulnerability of loyalty to negative experiences and the potential limitations imposed by the operational environment underscore the need for Zambian domestic airlines to prioritize service reliability and customer-centric strategies to cultivate lasting passenger loyalty.

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