Comparative Analysis of Passenger Satisfaction and Loyalty in South African Full-Service and Low-Cost Airlines

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Abstract

Purpose: This study examines how airline service quality influences passenger satisfaction and loyalty in South Africa's domestic aviation sector, using FlySafair and Airlink to represent low-cost and full-service models. Although international literature has extensively examined service quality, satisfaction, and loyalty within aviation, limited empirical work has comparatively analysed these constructs within the contemporary South African domestic market.

Design/Methodology/Approach: A positivist, quantitative design was adopted, and data were collected through an online survey completed by 405 passengers travelling from Johannesburg to Cape Town or Durban. An adapted AIRQUAL framework guided the analysis, capturing three service quality dimensions: empathy, airline image, and the combined terminal and in-flight physical environments. Descriptive statistics, exploratory factor analysis, correlation tests, and multiple regression were conducted using IBM SPSS Statistics.

Findings: The results indicate that passenger satisfaction is the strongest predictor of loyalty, confirming its central role in translating service quality into behavioural intention. All three AIRQUAL dimensions significantly contributed to satisfaction, although their relative importance differed across airline models.

Originality/Value: Prior local studies have explored airline choice and service preferences; however, few have applied the AIRQUAL framework to test structural relationships across airline business models. The study refines AIRQUAL within the context of a developing country and provides a

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comparative post-pandemic assessment of service quality, satisfaction, and loyalty in South Africa's domestic airline market.

Keywords: AIRQUAL; passenger satisfaction; loyalty; FlySafair; Airlink; South African aviation

Introduction

The air transport industry plays a central role in global economic development, trade, and tourism by connecting markets and populations across regions (IATA 2023; ICAO 2023). Following the COVID-19 pandemic, global passenger traffic rebounded to exceed 4.5 billion travellers in 2023, with long-term growth projections indicating continued expansion (IATA 2023). Industry deregulation and liberalisation have intensified competition, compelling airlines to differentiate themselves through service quality and customer experience rather than relying solely on price competition (Isah et al. 2024; Tshetu et al. 2023). In Africa, passenger volumes have largely recovered to pre-pandemic levels, although structural constraints such as high operating costs, infrastructure limitations, and regulatory fragmentation persist (AFRAA 2024; Samunderu 2023). These conditions heighten the strategic importance of domestic markets, where service quality may provide a sustainable source of competitive advantage (Aigbavboa et al. 2023). South Africa's domestic aviation sector reflects these dynamics, with full-service and low-cost carriers competing on high-volume routes such as Johannesburg to Cape Town and Johannesburg to Durban (ACSA 2024; Isah et al. 2024). FlySafair represents the dominant low-cost carrier model, while Airlink operates as a full-service carrier with strong regional connectivity (Rink 2022; Samunderu 2023). The coexistence of these business models within a shared airport environment provides a relevant context for examining how passengers evaluate airline service quality across differing value propositions; however, the findings are not intended to be representative of all domestic airlines operating in South Africa. Service quality literature consistently demonstrates that perceived service quality influences customer satisfaction, which, in turn, shapes loyalty intentions (Bakır et al. 2024; Mantey and Naidoo 2017; Parasuraman et al. 1988). In aviation, service evaluation is multidimensional, encompassing operational reliability, the physical environment, and relational service elements (Park et al. 2004). The AIRQUAL framework was developed to capture these dimensions within airline-specific contexts (Nadimi et al. 2024). Although AIRQUAL has been applied in several international airline studies, limited research has comparatively examined the relationship between airline service quality, passenger satisfaction, and loyalty within South Africa's domestic aviation market, particularly across different airline business models (Nyatsumba and Pooe 2023).

This represents an important gap in the local aviation literature, as passengers travelling on the same domestic routes may evaluate service quality differently depending on the airline model selected. Against this background, the purpose of this study is to examine how airline service quality influences passenger satisfaction and loyalty among passengers travelling with FlySafair and Airlink from O. R. Tambo International

Airport (Johannesburg) to either Durban or Cape Town. Academically, the study provides context-specific validation of a multidimensional airline service quality model within a developing market, while practically offering insights into how service quality translates into satisfaction and loyalty across contrasting airline business models in a competitive domestic environment.

Literature Review and Theoretical Basis

Evolution of Airline Service Quality

The measurement of airline service quality originates from broader service quality theory, particularly the SERVQUAL framework developed by Parasuraman et al. (1988), which conceptualised service quality across the dimensions of tangibles, reliability, responsiveness, assurance, and empathy. Although SERVQUAL provided a foundational measurement structure, its generic design requires contextual adaptation for complex and operationally intensive industries such as aviation. As shown in Table 1, AIRQUAL was developed by adapting SERVQUAL to reflect airline-specific service characteristics, retaining empathy while expanding the tangibles dimension to include airline and terminal tangibles, and incorporating airline image and personnel service to capture the operational and experiential aspects of air travel (Bari et al. 2001). This adaptation enabled service quality measurement to account for factors such as airport environments, aircraft conditions, and brand perceptions that influence passenger evaluations (Mantey and Naidoo 2017; Rink 2022). Consequently, AIRQUAL represents a shift from generic service quality assessment to an aviation-specific framework that better explains passenger satisfaction and loyalty outcomes (Bakır et al. 2024; Eshaghi et al. 2024). Despite its growing international application, limited empirical research has applied AIRQUAL within African and South African aviation contexts (Aigbavboa et al. 2023), supporting its use in the present study to examine service quality, passenger satisfaction, and loyalty across different airline business models.

Table 1: Summary of key studies on the evolution of airline service quality

Authors (year)	Framework	Context	Main contribution
Parasuraman et al. (1988)	SERVQUAL	International	Established the five-dimensional SERVQUAL model, which includes tangibles, reliability, responsiveness, assurance, and empathy. Provided the conceptual foundation for later aviation-specific frameworks, such as AIRQUAL.
Bari et al. (2001)	AIRQUAL	International	Developed AIRQUAL by adapting SERVQUAL to airline contexts. Captured airline-specific dimensions such as airline tangibles, terminal tangibles, personnel service, empathy, and airline image, linking

Authors (year)	Framework	Context	Main contribution
			service delivery directly to passenger satisfaction and loyalty.
Mantey and Naidoo (2017)	AIRQUAL	South Africa	Applied AIRQUAL dimensions to domestic airline passengers and found that airline image and empathy were the strongest predictors of loyalty, especially among frequent business travellers.
Park et al. (2020)	AIRQUAL	International	Applied AIRQUAL to a large dataset of online airline reviews and demonstrated that service attributes influence passenger satisfaction asymmetrically: certain features enhance satisfaction when present, while their absence causes notable dissatisfaction.
Aigbavboa et al. (2023)	AIRQUAL	Africa	Highlighted the limited application of AIRQUAL in African airline studies and emphasised the need for a comprehensive approach to understanding passenger satisfaction and loyalty.
Isah et al. (2024)	AIRQUAL	International	Integrated AIRQUAL with brand perception constructs and established that perceived service quality affects loyalty both directly and indirectly.
Bakır et al. (2024)	AIRQUAL	International	Tested AIRQUAL using the expectation confirmation framework, demonstrating that passenger satisfaction depends on perceived service performance relative to expectations.
Eshaghi et al. (2024)	SERVQUAL–AIRQUAL comparison	International	Compared studies applying both models and confirmed the consistent influence of airline service quality on passenger satisfaction and loyalty across regional and cultural contexts.

Understanding Passenger Satisfaction Through Airline Service Quality

Passenger satisfaction reflects an overall evaluation of whether service performance meets or exceeds expectations and represents a central outcome of perceived service quality (Hamid et al. 2021; Khudhair et al. 2021). Expectation confirmation theory explains satisfaction as the result of comparing perceived performance with prior expectations, where confirmation increases satisfaction and disconfirmation generates dissatisfaction (Parasuraman et al. 1988; Ramasamy et al. 2024). In aviation, satisfaction develops across multiple service touchpoints, including booking, check-in, boarding, and in-flight interactions, incorporating both tangible and relational service components (Saayman and Li 2023). Empirical studies consistently demonstrate that perceived service quality significantly predicts satisfaction, which in turn influences

loyalty intentions (Bakır et al. 2024; Eshaghi et al. 2024). Satisfaction often mediates the relationship between service quality and loyalty, strengthening repurchase intention and recommendation behaviour (Isah et al. 2024; Leon and Dixon 2023). Loyalty is therefore conceptualised as a behavioural consequence of sustained service performance, reinforced by trust, perceived value, and consistent delivery (Badrillah et al. 2022). This structural pathway establishes service quality as an antecedent of satisfaction and satisfaction as a precursor to loyalty, forming the theoretical model underpinning airline service research.

Service Quality, Passenger Satisfaction, and Loyalty in South African Airlines

Within South Africa, research has examined passenger behaviour and airline choice across full-service and low-cost business models (Nyatsumba and Pooe 2023; Samunderu 2023). Luke (2015) identified price sensitivity, schedule convenience, and service reliability as key determinants of airline selection, demonstrating that passengers evaluate carriers based on both cost and operational dependability. Diggines (2017) situated passenger behaviour within the broader domestic aviation structure, arguing that competitive conditions, route networks, and regulatory frameworks shape service expectations and strategic positioning across airline models. Rink (2022) highlighted the sociocultural expansion of low-cost aviation in Southern Africa, showing that increased accessibility has reshaped perceptions of flying and altered how service quality is evaluated within low-cost contexts. These studies confirm that passengers assess full-service and low-cost airlines through differentiated expectation structures shaped by affordability, reliability, and perceived value. However, South African research has largely focused on market dynamics and airline choice rather than empirically testing how perceived service quality translates into passenger satisfaction and loyalty using structured frameworks such as AIRQUAL. Comparative analysis of service quality perceptions and their behavioural consequences across full-service and low-cost airlines operating within the same domestic airport environment remains limited (Diggines 2017; Luke 2015; Nyatsumba and Pooe 2023). This gap underscores the need for structural modelling of service quality, satisfaction, and loyalty within South Africa's domestic aviation market.

Research Problem

South Africa's domestic aviation industry continues to grow, yet limited research explores how service quality influences passenger satisfaction and loyalty across different airline models. While global studies confirm that service quality plays a decisive role in shaping passenger satisfaction and long-term loyalty (Bakır et al. 2024; Eshaghi et al. 2024; Roy and Adhikari 2024), these insights may not fully reflect the operational and behavioural realities of South African passengers. Local conditions, including pricing pressures and diverse traveller expectations, create distinct experiences that differ from those found in larger international markets (Isah et al. 2024). On South Africa's main domestic corridors linking Johannesburg, Cape Town, and Durban, full-service and low-cost airlines compete directly for the same passengers

on the same routes (ACSA 2024). Airlines such as Airlink and FlySafair offer contrasting service propositions based on different business models, yet passengers frequently compare their service experiences when making travel decisions. It remains unclear whether the quality of service experienced by price-sensitive passengers differs meaningfully from that offered to passengers choosing full-service options, and how these perceptions influence satisfaction and loyalty outcomes. Although existing South African research has examined airline competitiveness and passenger preferences, many studies treat service quality, passenger satisfaction, and loyalty as separate constructs rather than as interrelated factors that shape repeat travel behaviour (Nyatsumba and Pooe 2023; Saayman and Li 2023; Samunderu 2023). This limits airlines' ability to use service quality insights to guide retention strategies in an increasingly competitive domestic market. By analysing the relationship between airline service quality, passenger satisfaction, and loyalty for FlySafair and Airlink, this study addresses this gap and provides evidence relevant to airlines competing within South Africa's domestic aviation environment.

Figure 1 illustrates the conceptual framework underpinning the study, showing the proposed relationship between airline service quality, passenger satisfaction and passenger loyalty. The framework provides a visual representation of the key constructs examined in addressing the research problem within South Africa's domestic aviation context.



Figure 1: Conceptual framework

The following research questions were formulated based on the above description of the research problem:

- What are the key service quality drivers of passenger satisfaction and loyalty for full-service and low-cost airline models in the South African domestic air transport market?
- How do passenger perceptions of service quality differ between full-service and low-cost carriers in South Africa?
- What factors have the greatest influence on a passenger's choice of airline model in the domestic market?
- How can domestic airlines enhance their service strategies to encourage passenger retention and recover market share?

Research Design and Methodology

This study adopted a quantitative, cross-sectional, explanatory design to examine the relationship between airline service quality, passenger satisfaction, and loyalty within South Africa's domestic aviation market. A cross-sectional design is appropriate when data are collected at a single point in time to test relationships between variables rather than changes over time (Creswell and Creswell 2022; Saunders et al. 2023). The research was grounded in a positivist philosophy, which supports objective measurement and statistical hypothesis testing, and followed a deductive approach informed by established service quality theory (Saunders et al. 2023). The AIRQUAL framework provides the conceptual foundation for measuring airline service quality through the dimensions of airline tangibles, terminal tangibles, personnel services, empathy, and airline image (Bari et al. 2001). A survey strategy was employed to collect structured numerical data using a self-administered online questionnaire distributed through Google Forms, as survey research enables efficient data collection from larger populations and supports statistical generalisation (Bryman et al. 2021; Saunders et al. 2023).

The study focused on passengers travelling on major domestic routes linking Johannesburg to either Cape Town or Durban (Samunderu 2023), specifically individuals who had flown with FlySafair or Airlink within the six-month period preceding data collection (January 29 to July 29, 2025). Passenger data were collected between July 29 and August 29, 2025, with the individual passenger serving as the unit of analysis (Babbie 2020). Using a 95% confidence level and a 5% margin of error, the minimum required sample size was calculated to be approximately 384 respondents and rounded to 400 to strengthen statistical reliability (Creswell and Creswell 2022). A total of 405 valid responses were obtained. Data were exported into IBM SPSS Version 30 for analysis, where descriptive statistics were used to summarise demographic characteristics and perception trends (Creswell and Creswell 2022).

The AIRQUAL model is an established framework for measuring airline service quality (Bari et al. 2001; Mantey and Naidoo 2017), but it has not been extensively validated within the South African domestic aviation context, where passenger expectations, airport infrastructure, and contrasting low-cost and full-service business models may influence the perception of service quality dimensions (Nyatsumba and Pooe 2023; Samunderu 2023). Consequently, exploratory factor analysis (EFA) was conducted to assess construct validity and determine whether the AIRQUAL dimensions aligned with the South African context, whereas confirmatory factor analysis (CFA) is typically used to confirm an established factor structure (Field 2024; Hair et al. 2019). Sampling adequacy was evaluated using the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity (Field 2024; Pallant 2020). The EFA results indicated that the South African data converged into three factors rather than the original five AIRQUAL dimensions, supporting the exploratory approach.

Ethical Considerations

The study adhered to the ethical standards of the University of Johannesburg, with formal clearance obtained from the Research Ethics Committee of the Department of Transport and Supply Chain Management (TSCMREC) (reference number: 2025-TSCM008BM) prior to data collection. Permission was obtained from the participating airlines to reference the organisations in the study and report the findings, while the research remained independent and was based solely on passenger perceptions rather than confidential organisational or operational information. An online survey method was employed for its accessibility and efficiency in reaching respondents across multiple provinces. Participation remained voluntary, informed consent was obtained electronically, and no personally identifiable information was collected to ensure anonymity (Saunders et al. 2023). All data were securely stored and analysed in aggregate form, in line with institutional data management policies and the ethical principles of confidentiality and responsible research practice (Saunders et al. 2023).

Results

Passenger Flight Information

Passenger data were collected over the period July 29–August 29, 2025, focusing on domestic travellers flying on the Johannesburg–Cape Town and Johannesburg–Durban routes using either Airlink or FlySafair. Respondents reflected on actual flight experiences, allowing the study to capture both frequent and infrequent travel perspectives, which is important as exposure to airline services may influence perceptions of service quality (Badrillah et al. 2022).

Table 2: Passenger flight characteristics

Category	Variable	Respondents (*n*)	Percentage (%)
Travel frequency	Daily	11	2.7
	Weekly	18	4.4
	Fortnightly	12	3.0
	Monthly	50	12.3
	Occasional	255	63.0
	Rarely	59	14.6
Travel purpose	Holiday	169	41.7
	Personal/private business	73	18.1
	Visiting friends/relatives	66	16.3
	Work-related	58	14.3
	Educational/study	28	6.9
	Other	11	2.7
Cabin class	Economy	349	86.2
	Business	56	13.8

Category	Variable	Respondents (*n*)	Percentage (%)
Route	Johannesburg–Cape Town	238	58.8
	Johannesburg–Durban	167	41.2
Airline	FlySafair	215	53.1
	Airlink	190	46.9

Table 2 presents a consolidated profile of respondents' air travel behaviour, including travel frequency, purpose, cabin class, route choice, and airline preference ($N = 405$), providing a comprehensive overview of the sample characteristics used for subsequent analysis. The table shows that 58.8% of respondents travelled between Johannesburg and Cape Town, while 41.2% travelled between Johannesburg and Durban, reflecting South Africa's primary high-frequency domestic corridors, both serviced by full-service and low-cost carriers (ACSA 2024). The concentration on shared competitive routes strengthens the comparative validity of the study, as passengers evaluated airlines within equivalent operational environments rather than structurally distinct contexts (Samunderu 2023). In terms of airline choice, 53.1% of respondents travelled with FlySafair and 46.9% with Airlink, providing a relatively balanced distribution that supports a direct comparison between low-cost and full-service models. Because both airlines operate on the same routes, airline selection reflects active consumer choice rather than geographic constraint, reinforcing the behavioural relevance of subsequent service quality, passenger satisfaction, and loyalty assessments (Bari et al. 2001; Bryman et al. 2021).

Reliability and Descriptive Analysis: Service Quality

Table 3 confirms strong internal consistency across the AIRQUAL dimensions, with Cronbach's alpha values ranging from 0.798 to 0.865, and 0.935 for the overall AIRQUAL scale. These coefficients exceed accepted thresholds, supporting measurement stability (Pallant 2020). The overall mean for airline service quality is 3.99 (SD = 0.532), indicating generally positive passenger evaluations. However, consistent differences emerge among airline models. Airlink records a higher overall service quality mean (4.16) compared to FlySafair (3.83). The largest gaps appear in "airline image" (4.31~Airlink vs 3.84~FlySafair) and "airline tangibles" (4.29 ~ Airlink vs 3.83 ~ FlySafair), while "empathy" also shows notable divergence (3.97 ~ Airlink vs 3.62 ~ FlySafair). Standard deviations remain below 1.0, indicating moderate dispersion and supporting suitability for multivariate modelling (Field 2024). The pattern suggests a stronger perceived performance alignment within the full-service context.

Table 3: Descriptive analysis (AIRQUAL dimensions)

Descriptive statistics	**Overall**		**FlySafair**		**Airlink**	
Statistic	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
SQAT01: Cabin cleanliness	4.15	.710	4.01	.755	4.31	.620
SQAT02: Seat comfort	3.94	.912	3.60	.961	4.34	.660
SQAT03: In-flight facilities	3.87	.866	3.68	.817	4.09	.871
SQAT04: Brand presentation	4.18	.696	4.02	.637	4.36	.719
SQAT05: Cabin ambience	4.08	.824	3.82	.874	4.36	.658
Airline tangibles (SQAT)	**4.04**	**.600**	**3.83**	**.570**	**4.29**	**.533**
Cronbach's alpha (SQAT)	**.798**		**.737**		**.806**	
SQTT01: Check-in visibility	4.16	.751	4.08	.735	4.25	.761
SQTT02: Clean facilities	4.07	.783	4.00	.812	4.15	.744
SQTT03: Gate access	4.11	.766	4.03	.767	4.21	.754
SQTT04: Airport signage	4.09	.745	4.04	.754	4.14	.732
SQTT05: Lounge standards	3.81	.931	3.70	.914	3.93	.937
Terminal tangibles (SQTT)	**4.05**	**.611**	**3.97**	**.603**	**4.14**	**.610**
Cronbach's alpha (SQTT)	**.824**		**.811**		**.832**	
SQPS01: Staff courtesy	4.00	.843	3.87	.804	4.14	.864
SQPS02: Response speed	4.06	.773	3.84	.777	4.32	.686
SQPS03: Communication clarity	4.00	.822	3.99	.817	4.02	.829

SQPS04: Issue handling	3.88	.847	3.84	.850	3.93	.842
SQPS05: Service delivery	4.01	.834	3.87	.798	4.16	.848
Personnel service (SQPS)	**3.99**	**.656**	**3.88**	**.651**	**4.11**	**.641**
Cronbach's alpha (SQPS)	**.856**		**.863**		**.845**	
SQE001: Needs understanding	3.77	.905	3.58	.866	3.99	.900
SQE002: Special assistance	3.82	.942	3.62	.943	4.05	.889
SQE003: Personal care	3.79	.953	3.55	.955	4.06	.880
SQE004: Genuine interaction	3.92	.836	3.70	.889	4.16	.697
SQE005: Post-flight contact	3.63	1.134	3.67	.998	3.59	1.272
Empathy (SQE)	**3.79**	**.762**	**3.62**	**.744**	**3.97**	**.742**
Cronbach's alpha (SQE)	**.854**		**.858**		**.843**	
SQAI01: Safety trust	4.18	.718	3.93	.673	4.46	.663
SQAI02: Market leadership	4.02	.908	3.83	.872	4.23	.902
SQAI03: Brand reputation	4.09	.818	3.90	.834	4.31	.744
SQAI04: Value perception	3.91	.975	3.71	1.023	4.14	.864
SQAI05: Recommendation intent	4.09	.879	3.83	.898	4.39	.754
Airline image (SQAI)	**4.06**	**.700**	**3.84**	**.690**	**4.31**	**.615**
Cronbach's alpha (SQAI)	**.865**		**.856**		**.837**	
Airline service quality	**3.99**	**.532**	**3.83**	**.500**	**4.16**	**.512**
Cronbach's alpha (AIRQUAL)	**.935**		**.922**		**.936**	

Reliability and Descriptive Analysis: Passenger Satisfaction and Loyalty

As shown in Table 4, "satisfaction" (Cronbach's $\alpha = 0.879$) and "loyalty" (Cronbach's $\alpha = 0.898$) demonstrate strong reliability (Babbie 2020). Overall, "satisfaction" has a mean of 4.04 (SD = 0.689), and "loyalty" has a mean of 4.00 (SD = 0.811), reflecting favourable passenger evaluations (Pallant 2020). Airlink passengers report higher satisfaction (4.31, SD = 0.592) compared to FlySafair passengers (3.80, SD = 0.682). Loyalty follows a similar pattern, with means of 4.38 (SD = 0.672) for Airlink and 3.67 (SD = 0.875) for FlySafair. Differences are particularly pronounced in price resistance and loyalty commitment, suggesting stronger behavioural attachment among full-service passengers (Rink 2022; Saayman and Li 2023). These descriptive differences provide preliminary evidence that service perceptions and loyalty responses vary across business models (Diggines 2017; Luke 2015; Nyatsumba and Pooe 2023).

Table 4: Descriptive analysis (passenger satisfaction and loyalty)

Descriptive statistics	**Overall**		**FlySafair**		**Airlink**	
Statistic	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
SATCS01: Expectation fulfilment	4.02	.764	3.81	.795	4.27	.648
SATCS02: Journey satisfaction	4.18	.666	4.03	.633	4.35	.663
SATCS03: Price worthiness	3.92	.993	3.67	1.031	4.20	.868
SATCS04: Overall rating	4.11	.750	3.88	.758	4.37	.651
SATCS05: Comparative performance	3.96	.975	3.62	.983	4.35	.808
Satisfaction (SATCS)	**4.04**	**.689**	**3.80**	**.682**	**4.31**	**.592**
Cronbach's alpha (SATCS)	**.879**		**.860**		**.867**	
LOYLO01: Repurchase intention	4.22	.768	3.97	.811	4.51	.598
LOYLO02: Recommendation intention	4.17	.764	3.91	.740	4.47	.680
LOYLO03: Airline preference	3.99	.954	3.71	.934	4.30	.879
LOYLO04: Price resistance	3.70	1.188	3.22	1.155	4.25	.974
LOYLO05: Loyalty commitment	3.92	1.066	3.53	1.067	4.36	.878
Loyalty (LOYLO)	**4.00**	**.811**	**3.67**	**0.779**	**4.38**	**.672**
Cronbach's alpha (loyalty)	**.898**		**.875**		**.883**	

Factor Analysis

EFA using principal component analysis with varimax rotation was employed to reduce the AIRQUAL, passenger satisfaction, and loyalty items into underlying factors for subsequent analysis (Hair et al. 2019; Pallant 2020). The suitability of the data was confirmed using the KMO measure and Bartlett's Test of sphericity (Table 5), with high KMO values observed across constructs (AIRQUAL = 0.923; passenger satisfaction = 0.882; loyalty = 0.860) and statistically significant Bartlett's tests ($p < .001$), indicating that the data were appropriate for factor analysis (Field 2024; Pallant 2020).

Table 5: KMO and Bartlett's test (AIRQUAL dimensions)

KMO and Bartlett's test (AIRQUAL dimensions)		**Overall**	**FlySafair**	**Airlink**
KMO measure of sampling adequacy		.923	.883	.886
Bartlett's test of sphericity	Approx. chi-square	5706.468	2979.280	2996.863
	df	300	300	300
	Sig.	< .001	< .001	< .001

Principal component analysis was conducted on the combined AIRQUAL scale to determine whether the original service quality dimensions remained distinct or whether passengers cognitively grouped them into broader evaluative categories. Principal component analysis reduces a large set of correlated variables into fewer underlying components, allowing the identification of dominant perception structures (Field 2024; Pallant 2020).

As presented in Table 6, five components initially produced eigenvalues greater than one, explaining 64.600% of the total variance before rotation. The first component alone accounted for 40.074% of the variance (eigenvalue = 10.018), indicating a strong general service quality factor. Although the Kaiser criterion (eigenvalue > 1) is frequently used to determine factor retention, it has been shown to overestimate the number of components (Hair et al. 2019).

Table 6: Total variance explained (AIRQUAL combined)

Component	Initial eigenvalues		Rotation sums of squared loadings			
Total	**% of variance**	**Cumulative %**	**Total**	**% of variance**	**Cumulative %**	
1	10.018	40.074	40.074	3.528	14.112	14.112
2	2.053	8.212	48.285	3.439	13.755	27.867
3	1.835	7.340	55.626	3.157	12.626	40.493
4	1.199	4.797	60.422	3.032	12.130	52.623
5	1.044	4.178	64.600	2.994	11.977	64.600
6	.922	3.689	68.289			
7	.782	3.130	71.419			
8	.723	2.892	74.311			
9	634	2.537	76.848			
10	.586	2.343	79.191			
11	.546	2.182	81.373			
12	.509	2.034	83.407			
13	.467	1.866	85.273			
14	.452	1.808	87.081			
15	.420	1.679	88.760			
16	.390	1.561	90.321			
17	.351	1.404	91.725			
18	.324	1.296	93.021			
19	.321	1.282	94.303			
20	.302	1.209	95.512			
21	.265	1.058	96.570			
22	.241	.964	97.534			
23	.222	.887	98.421			
24	.214	.857	99.278			
25	.180	.722	100.000			

Note: Extraction method: Principal component analysis.

To address this limitation, a parallel analysis was conducted to compare the observed eigenvalues with those generated from random data, which is regarded as a more accurate retention method (Field 2024; Pallant 2020). Only the first three eigenvalues (shown in Table 7) exceeded their simulated values, while the fourth and fifth did not. The results, therefore, support the retention of three components rather than five.

Table 7: Comparison between eigenvalues

Factors	Real eigenvalue	Simulated eigenvalue	Retain
1	10.018	1.4885	Yes
2	2.053	1.4102	Yes
3	1.835	1.3513	Yes
4	1.199	1.3015	No
5	1.044	1.2579	No

Following rotation, the three retained components collectively explained 64.6% of the cumulative variance. Rotation redistributes explained variance to improve interpretability and clarify the factor structure (Hair et al. 2019).

The rotated component matrix (Table 8) reveals a clear structural grouping, with strong loadings and minimal cross-loadings. Component 1 loads on "empathy" items (0.672–0.748), component 2 on "airline image" items (0.598–0.778), and component 3 on "terminal tangibles" and selected "airline tangibles" items (0.708–0.827). Loadings above 0.50 are considered practically significant in social science research (Hair et al. 2019), supporting construct clarity and discriminant validity.

These findings indicate that, within this sample, passengers cognitively consolidate the original AIRQUAL dimensions into three broader evaluative domains. This dimensional compression aligns with research suggesting that consumers often process service attributes holistically rather than as isolated technical dimensions (Khudhair et al. 2021).

Table 8: Rotated component matrix

	Component 1	Component 2	Component 3
SQE001	.748		
SQE002	.730		
SQE005	.692		
SQE003	.683		
SQE004	.672		
SQAI03		.778	
SQAI02		.728	
SQAI01		.696	
SQAI05		.656	
SQAI04		.598	
SQTT03			.827

	Component 1	Component 2	Component 3
SQTT04			.809
SQTT01			.777
SQTT02			.767
SQAT03			.708

Based on the rotated component matrix and parallel analysis, three refined service quality factors were retained, namely "empathy" and "personalised attention" (component 1), "airline image" and "perceived value" (component 2), and "terminal and in-flight physical environment" (component 3). These factors respectively capture personalised service interactions, brand-related perceptions, and the overall physical travel environment, representing a streamlined AIRQUAL structure for subsequent analysis (Bari et al. 2001; Field 2024).

To assess whether these newly extracted factors vary across different airline business models, independent-samples t-tests were conducted to compare responses between low-cost (airline code = "FlySafair") and full-service (airline code = "Airlink") passengers. The *t*-tests examined mean differences across the three derived service quality dimensions. Mean comparisons in Table 9 show that Airlink records higher scores across all three extracted factors. This finding supports the construct validity of the new factor structure and highlights the operational distinctions between low-cost and full-service airline experiences (Field 2024; Saunders et al. 2023). The three-factor solution, therefore, enhances parsimony while maintaining conceptual clarity and confirms that service quality perceptions differ structurally between airline models.

Table 9: Mean comparison

Component	Airline	N	Mean	Std. deviation	Std. error mean
1	FlySafair	215	3.6260	.74412	.05075
	Airlink	190	3.9716	.74225	.05385
2	FlySafair	215	3.8391	.69063	.04710
	Airlink	190	4.3074	.61502	.04462
3	FlySafair	215	3.9656	.57138	.03897
	Airlink	190	4.1684	.59116	.04289

Regression Analysis

Multiple regression analysis was performed to determine whether the refined AIRQUAL factors and passenger satisfaction jointly predict loyalty (Pallant 2020). The analysis builds on the earlier consolidation of the original AIRQUAL dimensions into three empirically supported factors, namely empathy and personalised attention, airline image and perceived value, and terminal and in-flight physical environment, reflecting

context-specific perception patterns while remaining theoretically grounded in AIRQUAL (Bari et al. 2001).

The regression model is specified as:

$$Loyalty = \beta_0 + \beta_1(AIRQUAL_1) + \beta_2(AIRQUAL_2) + \beta_3(AIRQUAL_3) + \cdots + \beta_k\,(Satisfaction) + \beta_m(Airline\ Model) + \varepsilon$$

In this model, "loyalty" represents the dependent variable, while β_0 denotes the intercept, reflecting the baseline level of loyalty when all predictors are held constant. The coefficients β_1 to β_3 represent the effects of the three AIRQUAL factors, namely "empathy" and "personalised attention," "airline image" and "perceived value," and "terminal and in-flight physical environment," while β_k captures the effect of passenger satisfaction and β_m represents the influence of the airline model. Each coefficient indicates the expected change in loyalty associated with a one-unit increase in the respective predictor, holding all other variables constant. The error term ε accounts for unexplained variation in loyalty not captured by the model (Aljandali 2016).

Standardised coefficients in Table 10 show that "passenger satisfaction" is the strongest predictor of "loyalty" in the overall model ($\beta = 0.437$). Among service quality dimensions, component 2 representing "airline image" has the strongest effect ($\beta = 0.354$), while component 1 shows a smaller positive effect ($\beta = 0.121$) and component 3 demonstrates limited influence ($\beta = 0.049$). Airline model remains a significant predictor ($\beta = 0.271$), indicating structural differences between carriers. When analysed separately, the variable "satisfaction" dominates the FlySafair model ($\beta = 0.557$), whereas component 2 exerts the strongest influence in the Airlink model ($\beta = 0.532$). Component 3 shows a negative influence for Airlink ($\beta = -0.096$), suggesting that certain tangible elements may play a less decisive role in loyalty formation within the full-service context.

Table 10: Standardised coefficients beta

Coefficients	Overall	FlySafair	Airlink
Constant *ß*	.015	−.331	.676
Component 1: Empathy and personalised attention	.121	.141	.148
Component 2: Airline image and perceived value	.354	.212	.532
Component 3: Terminal and in-flight physical environment	.049	.140	−.096
Passenger satisfaction	.437	.557	.284
Sig (*p*-value)	< .001	< .001	< .001

Table 11 indicates that the overall model is statistically significant ($p < .001$), with $R^2 = 0.653$, meaning that 65.3% of the variance in "loyalty" is explained by the predictors. The model remains robust when analysed separately for FlySafair ($R^2 = 0.592$) and Airlink ($R^2 = 0.581$). Durbin–Watson values between 1.949 and 1.963 indicate independence of errors.

Table 11: Model summary

Model	Overall	FlySafair	Airlink
R	.808a	.769a	.762a
R^2	.653	.592	.581
Adjusted R^2	.649	.584	.572
Std. error of the estimate	.48086	.50224	.43961
Durbin–Watson	1.949	1.963	1.956
Sig. F change	< .001	< .001	< .001

Discussion

The findings demonstrate that airline service quality plays a significant role in shaping passenger satisfaction and loyalty within South Africa's domestic aviation market. Descriptive results indicate generally positive service perceptions, with overall airline service quality recording a mean score of 3.99, while passenger satisfaction and loyalty recorded means of 4.04 and 4.00, respectively, suggesting favourable passenger evaluations of airline services. However, clear differences emerged between airline models, as Airlink recorded a higher service quality mean of 4.16 than FlySafair, which had a mean of 3.83, particularly in airline image and tangible service elements, confirming stronger perceived performance within the full-service model. Factor

analysis identified three core service quality dimensions, namely "empathy" and "personalised attention," "airline image" and "perceived value," and "terminal and in-flight physical environment," which collectively explained 64.6% of total variance and reflect how passengers cognitively evaluate airline services. Addressing the research questions, the results show that service quality perceptions differ across airline models, with full-service passengers placing greater emphasis on brand-related and experiential attributes, while low-cost passengers focus more on value and reliability. Regression analysis further indicates that passenger satisfaction is the strongest predictor of loyalty ($\beta = 0.437$), followed by airline image ($\beta = 0.354$), although their influence varies by airline type. Loyalty among FlySafair passengers is primarily driven by satisfaction, whereas Airlink passengers respond more strongly to perceived service quality, particularly the airline's image. These findings confirm that passenger satisfaction remains the central mechanism linking service quality to loyalty, while also demonstrating that the strength and nature of this relationship are shaped by the airline business model, with important implications for service strategy and passenger retention.

Limitations of the Study

Although the study provides valuable insights into airline service quality and passenger behaviour, several limitations should be acknowledged. The research adopted a cross-sectional quantitative design, which captures passenger perceptions at a single point in time and therefore cannot account for changes in service evaluations over time or across repeated travel experiences. Data were collected from passengers travelling specifically between Johannesburg and Cape Town or Durban, which are South Africa's main domestic routes. While this strengthens comparability between airlines, it may limit the generalisability of the findings to other routes or regional aviation markets. Furthermore, the study was confined to passengers travelling with FlySafair and Airlink; therefore, the findings should be interpreted within the context of these airlines and routes rather than as representative of the broader airline industry or all airline service models operating in South Africa.

Recommendations

The findings suggest that passenger satisfaction is the primary mechanism through which service quality influences loyalty across South Africa's domestic aviation market. Therefore, airlines should prioritise strategies that enhance satisfaction as the strongest driver of retention. Service improvements should focus on key quality dimensions identified in the study, particularly empathy and personalised attention, as well as airline image and perceived value. These improvements can be achieved through strengthened staff training, effective service communication, and customer-oriented interactions to enhance relational service experiences. For low-cost carriers such as FlySafair, improving operational reliability, communication during disruptions, and service efficiency remain critical, as loyalty in this segment is primarily satisfaction-driven. In

contrast, full-service carriers such as Airlink should maintain strong brand positioning and high-quality tangible service elements, including the cabin environment and staff professionalism, as these factors exert a greater influence on loyalty outcomes. Across both models, airlines should ensure consistent operational standards and maintain high-quality terminal and in-flight environments while embedding effective service recovery processes and continuously monitoring service quality dimensions to sustain positive passenger perceptions.

From a research perspective, future studies should adopt longitudinal and mixed-method approaches, expand sampling across additional domestic routes and airline carriers, and examine the influence of demographic characteristics, such as gender and age, on passengers' perceptions of airline service quality, satisfaction, and loyalty. Future research could also incorporate emerging dimensions such as digital service quality and sustainability, while advanced analytical techniques such as structural equation modelling may provide deeper insight into the relationships between airline service quality, passenger satisfaction and loyalty within evolving aviation contexts.

Contribution of the Study

This study contributes to the literature by providing empirical evidence on the relationship between airline service quality, passenger satisfaction, and loyalty within South Africa's domestic aviation market. By applying and refining the AIRQUAL framework in a developing country context, the research demonstrates that passengers group service attributes into three broader perceptual dimensions rather than the original five AIRQUAL constructs. The study also provides practical insights through a comparative analysis of full-service and low-cost airlines operating on the same domestic routes, highlighting differences in how service quality influences loyalty across airline models.

Conclusion

This study examined how airline service quality influences passenger satisfaction and loyalty within South Africa's domestic aviation market, using FlySafair and Airlink as examples of low-cost and full-service models. The findings show that passenger satisfaction is the strongest predictor of loyalty, and that it is shaped by three refined AIRQUAL factors, namely empathy and personalised attention, airline image and perceived value, and terminal and in-flight physical environment. These factors matter across both airline types, although their relative importance differs; low-cost passengers prioritise reliability and value for money, while full-service passengers emphasise comfort, communication, and brand consistency. While the study is constrained by its cross-sectional design, focus on two major routes, and reliance on self-reported survey data, it contributes empirical evidence to an under-researched context and confirms that service quality remains a strategic lever for improving passenger retention. The results highlight that airlines can strengthen passenger loyalty by aligning service

improvements with the quality attributes that most strongly influence passenger satisfaction, while also supporting the identification of specific market segments to inform more targeted service strategies and enhance competitiveness within South Africa's evolving domestic aviation sector.

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