

-RESEARCH ARTICLE-

AIRLINE PREFERENCE AND CHOICE FACTORS IN THE SOUTH AFRICAN DOMESTIC PASSENGER MARKET: AN EXPLORATORY STUDY

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—Abstract—

For airlines to deliver quality services, they must understand customers' expectations. However, the variations of airline service attribute lists in the available literature suggests a lack of consensus among industry players (airline managers, travel agency managers and airline customers) regarding what constitutes a quality airline service. From a marketing concept point of view, the customer's perspective should inform the design and delivery of airline services. Based on this view, this paper seeks to identify the most important airline service attributes that influence airline preference and choice. A survey is conducted using a questionnaire with fifty-five airline service items. Respondents are asked to rate the importance of these items on a five-point Likert scale. Collected data are subjected to an exploratory factor analysis, which retains ten latent

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factors as airline service attributes. The ten airline service attributes are then ranked using the mean scores and *Airline reliability*; *Booking and check-in services*; *Staff courtesy, competence and responsiveness*; *Luggage handling* and *Cabin features and experiences* were identified as the five most important attributes. The results suggest that airlines need to pay attention and channel resources to these attributes in order to meet customer expectations.

Keywords: Service quality, deregulation/liberalisation, airline preference/choice, exploratory factor analysis (EFA).

1. INTRODUCTION

Since deregulation, the domestic passenger airline business in South Africa has seen tremendous rise in load factors (Haarhoff, 2017). In 1990, nine airlines entered the domestic passenger market, with six joining after 2010 (R.-J. Luke, 2015; Nkululeko, 2020; Paelo, 2015). The national air carrier (South African Airlines) enjoyed some monopoly on the high-density routes before domestic market deregulation, while Comair', Link Airways, and Bop Air were operating on the feeder routes (Mhlanga, 2017). However, after deregulation Slabbert (2015) predicts that South African Airways' (SAA) market share will plummet from over 90% in 1994 to less than 50% today. Whereas, as a result of socio-economic changes, the passenger market has grown in South Africa (Campbell et al., 2012; Mbura, 2020).

This leads us to the main question, what factors influence the travellers' decision to choose specific airline? The recent literature discovers that airline service attributes are the cornerstone of the creation, building and sustenance of relationships between airlines and markets, both existing and potential customers (Abdel Rady, 2018). It is these attributes that collectively determine an airline's service quality (Fuyane, 2020). When intending to fly, customers will evaluate airlines based on how they fare in each service attribute (Chen et al., 2015; Mbura, 2020).

Therefore, the importance of understanding the expected quality levels of these service attributes by customers cannot be overemphasised. Also, it is paramount that airlines understand which of the service attributes are more critical for airline choice decisions. Thus, this paper seeks to establish the most important airline service attributes for the South African domestic passenger market. The paper reviews the literature on airline service quality or choice factors globally but with a particular focus on South African literature. The overarching theme in the literature is to identify the common service attributes, as identified over the years.

2. LITERATURE REVIEW

2.1 The South African Airline Industry

The South African aviation industry's genesis is somewhat convoluted, possibly because of poor documentation of history. For instance, [Stander \(n.d.\)](#) accords it to a civil engineer, John Weston. According to Stander, John Weston was the first in South Africa to build an aeroplane in 1907, which was later shipped to France to fit with an engine. On the other hand, the Department of [Transport \(2013\)](#) states that the South African aviation industry earnestly began in 1913, when citizens were invited to join the South African Aviation Corps (SAACs) and trained officer-aviators and be part of defence forces.

Contrary to the earlier hazy historical views, [Mhlanga et al. \(2016\)](#), supported by the SAA Museum [Society \(n.d.\)](#), provide a more traceable view of when and how it started. They attribute the genesis of the aviation industry to Major Allister Miller, who founded Unions Airways, particularly the passenger market. Union Airways started as a mail transportation business between Cape Town and other major cities before becoming a passenger plane ([Pirie, 2006](#)). Unfortunately, after a series of accidents, the airline was plunged into a financial and operational crisis. As a result, the Union Government took over the airline in 1934, renamed South African Airways ([SAA, 2017](#)), which became the first national passenger airline ([Haarhoff, 2017](#)).

At that time, SAA enjoyed the monopoly as a mode of transport for the elite and wealthy businessmen ([Mhlanga et al., 2016](#)). Later in 1945, two milestones occurred; SAA became one of the forty-four airlines that founded the International Air Transport Association (IATA) which was established in Havana, Cuba ([SAA, 2017](#)) and a new private airline (Comair) was launched, it started its operations in 1946 ([Goldstein, 2001](#)). The entry of Comair brought some prospects of competition into the market. To protect the national carrier (SAA) from the competition, the then government promulgated the Air Services Act, No. 51 of 1949 (known as the International Air Services of 1949), which ensured the right for SAA to service all main domestic routes ahead of private and international airlines ([R. Luke et al., 2013](#); [Mhlanga et al., 2016](#)).

In what [Porter \(1980\)](#) refers to as 'raising the bar' to stifle the potential threat of new entrants in his famous five forces model, Section 20 of the Air Services Act does precisely the same. It requires all new entrants interested in main routes to demonstrate that SAA was not servicing the routes adequately. This, according to [Mhlanga \(2017\)](#), was virtually impossible, further heightening SAA's monopoly over high-density main routes. After Comair, two other private airlines (Link Airways and Bop Airways) entered the market in 1978 and 1979, respectively. Like with Comair, these airlines were also relegated to secondary (feeder) routes dictated by Section 20 of the Air Services Act.

Notably, the formation of IATA opened up the South African airline market to the global network. It became the foundation of South Africa's move towards liberalising her skies, although coming as late as 1991 (InterVistas, 2014). Liberalisation paved the way for strategic alliances and more robust connections among South African airlines with other airlines with a view to grow industries such as tourism and leisure following a gradual growth of international trade and travelling sector (Group, 2020). However, regardless of liberalising the airline industry, the South African government (past and current) could not fully let go of its protectionist tendencies towards SAA. According to OECD (2010), protectionism breeds inefficiencies which can be evidenced by the perennial failure (loss running into billions of Rands) of the national carrier (SAA), which currently is off the skies despite numerous bailouts by the Government (Frankson, 2017; Paelo, 2015).

After taking a significant step towards deregulation through the promulgation of the Domestic Air Transport Policy of 1990 (Luke et al., 2013) and subsequently, the Air Services Licensing Act No. 115 (known as the Air Services Licensing 1990), the South African passenger market saw some new entrants and strategic alliances. In the following subsection, an outline of the post-deregulation of the South African domestic market is presented.

2.2 South African Domestic Market Post-deregulation

Following the easing of protectionism towards SAA through the regulatory framework of 1990, SAA was left to compete with an increased number of privately-owned airlines (Luke et al., 2013; Mhlanga, 2017), as shown in Table 1. However, it is worth noting that SAA still enjoyed some unfair advantages stemming from its inherited ownership of aviation infrastructure and services (Mhlanga et al., 2016). To eliminate such advantages, the government formed the Airport Company of South Africa, to which the infrastructure was transferred to level the playing field (Federico, 2013; Mhlanga, 2017).

It is clear from the table above that the domestic aviation industry's opening does not only increase the number of players and passengers but has left an indelible mark on the fortunes of SAA. From an estimated 95% market share for SAA before deregulation Ndlovu, 2001; Steyn et al., (2016) and Olerk cited in Luke and Walters (2013) estimate that it had dropped to between 50% to 55% in 2010. It was further exacerbated by the entry of low-cost carriers such as Kulula and 1time airline airways, which came in 2001 and 2004, respectively (Kulula, 2017). However, it is also worth noting that the increased competitive turbulence due to the deregulation of the market, together with a growing market base with diverse expectations, meant that airlines had to focus on understanding these expectations to calibrate their service architecture. Unfortunately, all this is against the backdrop of low product differentiation among airlines (Abeyratne, 2016; Babić et al., 2017).

Table 1: Summary of SA Domestic Market Airlines¹.

Airline Name	Commencement of Operations	Status
South African Airways (SAA)	1934	As indicated, SAA has received several bailouts but continued to fail. Currently, the airline is under business rescue; there seem to be additional problems making its resurrection doubtful.
Comair Limited	1946	Still operational and operating British Airways flights domestically. More detail on subsection 2.6.2
Link Airways	1978	An alliance between Magnum Airlines, Border Air and City Air, operating as Link Airways, collapses, and the airline was liquidated due to financial problems and was later found successfully bid for and renamed SA Airlink in 1992.
Bop Air	1979	Later became known as Sun Air. Ceased operations (see under Sun Air).
Flitestar	1991	Ceased operations in 1994 due to high costs resulting from a weakening exchange rate and the fact that the aircraft lease agreement was settled in US dollars (Luke & Walters, 2013).
SA Airlink	1992	Formed an alliance with SAA in 1997. Still operational. More detail on subsection 2.6.3
Phoenix Airways	1994	Ceased operations in 1995 due to failure to pay its debts (Paelo & Vilakazi, 2016).
SA Express (SAX)	1994	Another State-owned airline is part of the tripartite alliance with SAA and SA Airlink. Still operational. More detail on subsection 2.6.4
Sun Air	1994	Ceased operations in 1999 when SAA announced that it had taken over the airline and subsequently closed it down.
Nationwide Airlines	1995	Ceased operations in 2008 due to bankruptcy (Paelo & Vilakazi, 2016).

¹ At the time of writing this paper, there is no certainty about the South African domestic airlines' market share and viability as they are all navigating unfamiliar market conditions caused by the Covid-19 pandemic.

Atlantic Airways	1995	Ceased operations in October 1995, that is, after three months of operations.
Interlink Airlines	1998	Interlink Airlines went into liquidation and ceased operations in 2010.
Kulula.com	2001	Still operational. More detail on subsection 2.6.5
1time airline	2004	Ceased operations in 2012 when it went bankrupt (Paelo & Vilakazi, 2016).
Mango	2006	Still operational. More detail on subsection 2.6.6
Velvet Airlines	2011	Ceased operations in 2012 when it failed to pay debts (Paelo & Vilakazi, 2016).
Fly Go Air	2012	Ceased operations after just one flight to Nelspruit in 2015 after it was alleged that it was operating illegal (South Africa Travel Online, 2017).
Cemair	2013	Still operational. More detail on subsection 2.6.7
FlySafair	2014	Still operational. More detail on subsection 2.6.8
Skywise	2015	Ceased operation in December 2015. Henama (2015) attributed it shut down to poor economic conditions that led to unprofitability, as stated by Baroux (2015). Skywise's financial cracks showed out early when it failed to settle airport service charges leading to its suspension, first by the Air Traffic Navigation Systems (ATNS) and then by Airports Company of South Africa (ACSA) for a few days before it was restored. This hogged negative publicity to the airline, leading to booked flights cancellations (Slabbert, 2015).
Blue Crane	2015	Ceased operations in February 2017. Its problems became imminent as early as November 2016 when it entered into business rescue. In February 2017, it cancelled its flight under the guise of restructuring operations (Gernetzky, 2017). Since then, the airline has never come back.

Source: Adopted from Fuyane (2020:55-57)

For example, airlines use almost the same aircraft equipment and are all exposed to similar industry dynamics. One way that has been the focal point for airlines is optimising load factors.²

From a marketing perspective, this can be achieved by modelling the marketing mix around the airline service attributes that influence airlines customers to prefer an airline ahead of competitors. Thus, this paper aims to identify airline service attributes deemed to be important by airline customers, hence influencing their airline preference and choice.

2.3 Airline Service Attributes

Achieving higher load factors is essential for an airline's viability. According to Tesfay (2016), six drivers influence airline load factors. These are the industry's production decisions against demand growth, pricing, traffic (passenger) mix, payment policies, commercial success (reputation) and revenue management system (RMS). While some of the drivers identified by Tesfay (2016) occur behind the scenes or are technical, this paper contends that airline load factors can be easily optimised through the configuration of the marketing mix elements that customers often interact with as part of the consumer journey. Such elements are what marketers refer to as airline service attributes. There is extensive literature on airline service attributes that influence airline preferences and choice. Table 2 shows some of the airline service attributes, as identified in the literature, which influence airline preference and choice. From the literature, as seen in studies reviewed in Table 2, scholars use diverse methodological approaches to evaluate airline service quality. It would seem there is an affinity towards the use of one of the classical models of services marketing – the SERVQUAL model (Parasuraman, Zeithaml & Berry, 1985). In this model, airline service attributes are reduced into five dimensions (Lambert et al., 2011; Leong et al., 2015; Mantey et al., 2017; Rezaei et al., 2018). Other models that airline service quality researchers have favoured include the AIRQUAL model (Alotaibi, 2015; Bari et al., 2001) and the IPA–Kano model (Hu et al., 2016; Kano, 1984; Kuo et al., 2012; Martilla et al., 1977).

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Furthermore, there seems to be a lack of consensus on a list of airline service attribute items deemed comprehensive enough to assess airline service quality adequately. As such, some studies use only a few attribute items (Atalay et al., 2019; Hu et al., 2016; Mburu, 2020), thus failing to evaluate airline service quality adequately.

² Load factor is the efficiency measure of an airline (the ratio of passenger-miles to available seat-miles), thus determining airline performance and profitability (Szabo, Makó, Tobisová, Hanák, & Pilát, 2018; Miller, Lapp & Parkinson, 2019).

Table 2: Airline Service Attributes That Influence Airline Choice

Service Attribute/Item	Literature Sources
Airline reputation/image	Mbura (2020); Medina-Muñoz, Medina-Muñoz & Suárez-Cabrera, 2018; Abdel Rady (2018); Campbell & Vigar-Ellis (2012); Buaphiban (2015)
Airline safety	Campbell & Vigar-Ellis (2012); Chen & Chen (2014); Buaphiban (2015); Koo, Caponecchia & Williamson (2015); Luke (2015); Diggines (2010); Lambert & Luiz (2011)
Airline reliability/punctuality	Atalay, Atalay & Isin (2019); Hu & Hsiao (2016); Luke (2015); Campbell & Vigar-Ellis (2012); Fourie & Lubbe (2006); Surovitskikh & Lubbe (2008); Diggines (2010); de Meyer & Mostert (2011); Lambert & Luiz (2011)
Airline ticket prices	Diggines (2010); Campbell & Vigar-Ellis (2012); Luke (2015); Mbura (2020); de Meyer & Mostert (2011)
Customer service	Hu & Hsiao (2016); Atalay, Atalay & Isin (2019); Campbell & Vigar-Ellis (2012); Diggines (2010)
Loyalty programs also known as frequent flier programs (FFPs)	Atalay, Atalay & Isin (2019); Luke (2015); Campbell & Vigar-Ellis (2012); Diggines (2010); Fourie & Lubbe (2006)
Booking and check-in services	de Meyer & Mostert (2011); Fourie & Lubbe (2006); Surovitskikh & Lubbe (2008); Hu & Hsiao (2016); de Jager & van Zyl (2012); Lambert & Luiz (2011); Atalay, Atalay & Isin (2019); Luke (2015)
In-flight services and cabin features Such as IFE ³ Quality of food served, seat comfort, legroom, cabin cleanliness, etc.	Hu & Hsiao (2016); Atalay, Atalay & Isin (2019); Luke (2015); Campbell & Vigar-Ellis (2012); Fourie & Lubbe (2006); Surovitskikh & Lubbe (2008); Diggines (2010); Lambert & Luiz (2011); de Meyer & Mostert (2011)
Luggage handling and safety	Campbell & Vigar-Ellis (2012); Hu & Hsiao (2016); Atalay, Atalay & Isin (2019); de Meyer & Mostert (2011)
Airline personnel quality including courtesy, competence, grooming and responsiveness.	Surovitskikh & Lubbe (2008); Lambert & Luiz (2011); de Meyer & Mostert (2011); Campbell & Vigar-Ellis (2012); Hu & Hsiao (2016); Surovitskikh & Lubbe (2008)

³ IFE stands for in-flight entertainment, including services such as movies screened during the flight or music jacks for individual passengers.

Even those that employ an extensive list of service attribute items (Atalay et al., 2019; Kim et al., 2017; R.-J. Luke, 2015; Mantey et al., 2017) are criticised for insufficiently covering all the airline service elements, those using SERVQUAL.

Even though the existing studies have contributed to the airline service attributes literature, they are individually criticised for failing to evaluate all the facets of airline service quality comprehensively. Thus, to bridge this gap, this paper identifies and integrates an array of airline service attribute items studied in the literature to identify important service attributes which influence airline preference and choice in the South African domestic market.

3. METHODOLOGY

As averred by Kline (2015), the choice of methodological approach is informed by the research objectives and questions of a given study. For this paper, the aim is to identify the most important airline service attributes that influence customer preference and choice of airlines in South Africa. Therefore, the present study is quantitative in nature.

3.1 Survey and Sampling

A survey was conducted to achieve this aim, targeting people who had used or intended to use airlines to travel within South Africa (domestic flights). A hybrid of convenience and snowball sampling techniques was employed to select respondents. This sample size was deemed sufficient, as espoused in Kline (2015), supported by In'nami et al. (2013). They posit that sample size is determined by choice of statistical techniques to be used, the degree to which the statistical and or analytic generalisations can be made.

Accordingly, several rules of thumb for the determination of sample size have been suggested (Kyriazos, 2018; Wolf et al., 2013). Among the many rules, this study adheres to the one supported by scholars such as Tinsley et al. (1987) and Tabachnick (2014). This rule of thumb, also referred to as the $n:p$ rule, bases the determination of the sample on the ratio of the number of people (n) to the number of measured variables (p). A 5 to 10 participants ratio is acceptable (Tabachnick, 2014; Tinsley et al., 1987). Based on the $n:p$ rule, a sample of 324 respondents was found acceptable and has been used to rate the importance of airline service attributes.

3.2 Research Instrument and Analytical Technique

Respondents were asked to complete a questionnaire with 55 airline service items, among other pertinent items, for example, demographics. The airline service items were drawn from existing literature and measured using a five-point Likert scale to measure (rate) the importance of the service items ranging from not important at all (1) to very important (5). An exploratory factor analysis (EFA) was performed using the Maximum Likelihood Extraction (MLE) with a Promax rotation technique to reduce the service into manageable factors. As a statistical technique, EFA has been widely used to

determine some underlying latent factors from a multi-item scale measuring a construct, including in the social sciences (Hair, 2019; Orçan, 2018).

It is based on the interrelatedness (correlation) of the observed variables and transforms them into a few and meaningful factors (Hadi et al., 2016); hence it is regarded as a data reduction technique. According to Hair (2019), the EFA is an appropriate tool when a theory is absent, or new scales are being developed. This was the case for this study, where the desire was grouping the sufficiently intercorrelated service items representative factor (airline service attributes).

According to Pallant (2013), the suitability of data for EFA must be checked as a rule of thumb. Two considerations need to be considered: the sample size and the strength of the relationship between indicators. The suitability of the sample size can be assessed using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (Kaiser, 1974). The acceptable minimum value for the KMO MSA is .50 (Field, 2000). To assess the strength of the relationship among variables, the Bartlett's test of sphericity (Bartlett, 1954), a measure of multivariate normality of set of distribution (Hadi et al., 2016), is used, and its *alpha* value must be significant ($< .05$). A factor exclusion (suppression level) cut off of .45 suggested by Liu et al. (2019) was preferred to reduce clutter from cross-loadings.

4. RESULTS AND FINDINGS

Data collected is cleaned and analysed using IBM's Statistical Product and Service Solutions (SPSS) Version 26. The results thereof are divided into four subsections below.

4.1 Sample Characteristics

Sample information is vital for outlining the source of data for the study. It allows us to trace any peculiarities of the data, which shape further analysis (Johnson, 2014) and help the author make observations (Kaushik et al., 2014). Table 3 below summarises sample characteristics in terms of gender, ethnic group, age group, occupation, income bracket and educational level of respondents.

4.2 Airline Preference

Before asking respondents to rate the importance of the numerous airline service items, we sought to determine their most preferred airline when travelling within South Africa. The results, presented in Table 4, show that the negative publicity around South African Airways and its subsidiaries (before it was placed on judicial management) did not deter people from preferring it when flying within South Africa. About half the respondents indicate that they prefer SAA and its subsidiaries (SA Express) at 32.2% and 18.1%, respectively, and 13.4% preferred Mango Airlines, a low-cost carrier wholly owned by SAA.

Table 3: Sample Characteristics

Gender	Male	55%
	Female	44%
	Prefer not to say	1%
Ethnic group	Black	54%
	Coloured	5%
	White	19%
	Indian	22%
Age group	18 - 30 years	32%
	31 - 40 years	36%
	41 - 50 years	15%
	51 - 60 years	15%
	60 years and above	2%
	18 - 30 years	32%
Occupation	Employed	78%
	Self-employed	13%
	Retired	0.7%
	Other	8.3%
Income bracket	1 to 200 000 Rands	34%
	201 000 to R400 000 Rands	19%
	401 000 to 600 000 Rands	21%
	601 000 to 800 000 Rands	12%
	801 000 to 1 000 000 Rands	7%
	Above 1 000 000 Rands	7%
Education level	School leaving certificate, e.g., NSC	8%
	Certificate	8%
	Diploma	17%
	Bachelor's Degree/Advanced Diploma	18%
	Bachelors (Hons) Degree/PGDip	22%
	Master's Degree	18%
	Doctorate	9%

Other than the service quality perspective, such results can be ascribed to consumer ethnocentrism towards state-owned airlines. According to [Pentz et al. \(2014\)](#), consumer ethnocentrism is "the tendency of consumers to exhibit a positive or favourable predisposition towards products originating from their own country, while avoiding products imported from other countries." In South Africa, it can be assumed that

individuals have an affinity towards the state-owned SAA and its subsidiaries and regard other airlines as not so local.

The recent political sentiments have further exacerbated this against what has become known as the 'White Monopoly Capital'. This narrative has turned, especially most black people, against private businesses owned by white people. It bears to note that this is just an assumption, which necessitates efforts for future research. However, with the current misfortunes befalling the state-owned airlines', their future seems uncertain.

Table 4: Airline Preference in the South African Domestic Market

Airline	Freq.	Valid %	Cumulative %
South African Airways (SAA)	96	32.2	32.2
SA Express	54	18.1	50.3
British Airways operated by Comair	42	14.1	64.4
Kulula	37	12.4	76.8
SA Airlink	8	2.7	79.5
Mango Airlines	40	13.4	93.0
Safair	19	6.4	99.3
Cemair	1	0.3	99.7
Other	1	0.3	100.0
Total	298	100.0	

4.3 Airline Service Attributes

As indicated under Section 4.2, a factor analysis (Maximum Likelihood) is conducted to reduce the 55 airline service items into a few manageable airline service attributes. The results of the EFA are presented in [Table 5](#). Before conducting the factor analysis, we draw from Child's (2006) suggestion that data must be checked for multivariate normality. A Mahalanobis technique is used to check for normality. In that process, 26 cases are identified as outliers and were eliminated from the analysis, leaving a final sample size of 298 respondents.

The descriptive results of the EFA are as follows; a KMO Measure of Sampling Adequacy (MSA) of .85 and Bartlett's Test of Sphericity $< .001$. Such results indicate that the data set is suitable for factor analysis. The KMO MSA value is well above the .50 acceptable threshold for EFA to be an appropriate analytical technique ([Hair, 2019](#); [Williams et al., 2010](#); [Yong et al., 2013](#)). A significant Bartlett's Test of Sphericity indicates that all correlations within the correlation matrix are significant; hence, the model is not an identity matrix ([Hair, 2019](#); [Pallant, 2013](#)).

As shown in [Table 5](#), ten latent factors of airline service quality are retained using the Kaiser criterion (eigenvalue > 1 rule) and the cumulative percent of variance extracted. These factors are labelled as ‘*Booking and check-in*’ (EV= 10.32, var = 19.80%), ‘*Loyalty programs and ancillary pricing*’ (EV = 5.10, var = 10.12%), ‘*Safety*’ (EV = 3.07, var = 7.47%), ‘*Airline reputation*’ (EV = 2.14, var = 5.98%), ‘*Cabin features and experiences*’ (EV = 1.76, var = 3.25%), ‘*Staff competence, courtesy and responsiveness*’ (EV = 1.62, var = 3%), ‘*Luggage handling*’ (EV = 1.57, var = 2.52%), ‘*Ticket savings*’ (EV = 1.21, var = 3.06%), ‘*Onboard services*’ (EV = 1.19, var = 1.73%) and ‘*Airline reliability*’ (EV = 1.06, var = 1.54%). The cumulative percentage of variance indicates that the extracted factors explain 58.08% of the airline service quality, which is acceptable within the social sciences where information is often less precise (Hair *et al.*, 2019).

4.4 Importance of Airline Service Attributes

The following research question, "*Which are the most important airline service attributes that influence customer preference and choice of airlines in South Africa?*" was formulated to operationalise the aim of the study (outlined in Section 4). This question is answered by ranking the airline service attributes identified during the EFA (see [Table 5](#)) using the mean scores. Attributes with the highest mean scores are considered the most important (Chen *et al.*, 2015; Mbura, 2020). Therefore, they are deemed to have a more substantial influence on airline preference and choice of a domestic airline.

The results in [Table 6](#) show that respondent rates *Airline reliability* as the most important attribute, followed by *Booking and check-in*, *Staff competence, courtesy and responsiveness*, *Luggage handling*, and *Cabin features and experiences*, all with mean scores greater than 4. *Airline reputation* is rated as the least important, followed by *on-board services*. In the following paragraphs, these results are discussed and compared to previous studies, particularly those conducted in the context of South Africa. The discussion will be structured as follows: the five most important attributes will be discussed first, followed by the least important attributes, and the remaining attributes.

CABFE5					.643								
CABFE1					.626								
CABFE2					.588								
CCR1					.851					1.62	3.00	49.13	
CCR2					.826								
CCR4					.505								
LUG3						.796				1.57	2.52	51.65	
LUG4						.665							
LUG2						.524							
TP5							.720			1.21	3.06	54.71	
TP2							.594						
TP4							.504						
ONBSERV4								.975		1.19	1.73	56.44	
ONBSERV5								.551					
REL5									.541	1.06	1.54	58.08	
REL1									.524				
REL4									.460				

Table 6: Importance Ranking of Airline Service Attributes

Extracted factors	Importance Score (Mean)	# Of items	Alpha
Airline reliability (AREP)	4.22	3	.62
Booking and check-in (BKNGCI)	4.18	7	.89
Staff competence, courtesy and responsiveness (CCR)	4.17	3	.83
Luggage handling (LUG)	4.15	3	.74
Cabin features and experiences (CABFE)	4.09	5	.85
Safety (SAF)	3.99	5	.85
Ticket savings (TP)	3.62	3	.71
Loyalty programs and ancillary pricing (LOYPROAP)	3.45	6	.85
On-board services	3.44	2	.77
Airline reputation	3.32	5	.86

4.5 Airline Reliability on Airline Choice and Preference

The importance of a reliable airline service cannot be overemphasised. Previous studies on airline service quality have highlighted its importance and role in influencing airline preference and choice. Airline reliability is more about averting customer inconvenience by performing as per promises made to customers (Rahim, 2016). From the EFA, the aspects of airline reliability (punctuality, rate of flight cancellations and timely communication of scheduled flight changes) are found to have factor loadings $>.40$, indicating a considerable variance explained by the three items on airline reliability.

The results of this study on airline reliability are somehow similar to the findings by De Jager et al. (2012). However, a bit of caution has to be exercised as the authors' airline reliability construct (labelled as *Timeliness of flight*) also included *Speed of check-in* and *Direct service to a destination* which definition does not describe airline reliability. Campbell et al. (2012) found airline reliability to be the second most important service attribute among business and leisure passengers. On the contrary, Diggines' (2010) study does not find airline reliability to be that significant, with only 11.52% of 381 full-service carriers' passengers and 9.1% of 351 low-cost carriers' passengers indicating airline reliability as the most important reason for selecting an airline.

4.6 Airline Booking and Check-in on Airline Choice and Preference

The second most important attribute (Airline booking and check-in) focuses on both the manual (airline service desk) and self-service technology services. It consists of items such as easiness and efficiency of booking, user-friendly online booking and check-in services, mobile booking and check-in, secure online payment processes, reservation

flexibility, self-service kiosks and facilities for people living with disabilities. All the items' factor loadings are $>.40$ recommended by Hair (2019).

Previous studies have also assessed the importance of airline booking and check-in services. For example, in De Jager et al. (2012) study, this service attribute (labelled as *Convenience of booking*) was also ranked as the second most important attribute by the South African sample and the third most important attribute by the Malaysian sample. Campbell et al. (2012) only focus on online booking, and it is found to be the third least important service dimension. This is understandable in that online booking and check-in service was not that popular in 2012. However, of late, there has been more emphasis on self-service technologies for booking and check-in because of its advantages, both, to the airline and customers (Gures et al., 2018). They provide tech-innovative passengers with airline booking and check-in perceived ease of use (Lin et al., 2018).

4.7 Airline Staff on Airline Choice and Preference

Employees are touted as any organisation's prime asset and can make or break the organisation; thus, many organisations go to extra lengths to appraise and manage it (Delcourt et al., 2017; Nafei, 2015). Several studies have assessed the influence of this attribute on airline choice. For example, Milioti et al. (2015) and Chen et al. (2015) found the staff factor to be the fourth most important service attribute.

Respondents were asked to rate the importance of some airline staff-related items focusing on staff competence, courtesy and responsiveness. From the EFA, the items that sufficiently describe the effect of airline staff on airline choice and preference are *staff courteousness and friendliness*, *staff knowledge/competence* and *staff empathy and customer care*. In their study, De Jager et al. (2012) restrict their assessment of airline staff's influence on airline preference and choice to *Cabin crew*, leaving out other ground service staff such as those at check-in points. It (cabin crew) is found to be lowest rated service dimension. Also, in Campbell et al. (2012), the *Efficiency of employees* ranked as the seventh most important airline service attribute.

4.8 Luggage Handling on Airline Choice and Preference

The fact that luggage handling is among the top five most important airline service attributes in this study is not surprising following many reports on luggage loss or damage. The three observed variables that significantly describe luggage handling construct loaded significantly; *Luggage security loaded highly* (.796), followed by *Luggage tracking and notification technology* (.665) and *Free luggage allowance* (.524). This explains why airlines have adopted luggage tracking and theft prevention technologies. Unfortunately, as Muruganatham et al. (2020) state, it is challenging to manage luggage as it is handled by several players that include airlines, airport and ground handling personnel.

Notwithstanding the increase in complaints about luggage handling by airlines, resulting in luggage theft, loss or delay and damage, previous studies seem to overlook this important service attribute. On the basis of several studies on airline service quality factors in South Africa, we found only two studies seem to have given full attention to luggage handling. [Kim et al. \(2017\)](#) found it (labelled as included *good system of handling luggage or damage*) to be the most important (labelled as included *Safely/carefully handled baggage*) while [Campbell et al. \(2012\)](#) found it (labelled as included *Safely/carefully handled baggage*) to be the third most important attribute, after airline safety and reliability. From an EFA by [De Jager et al. \(2012\)](#), luggage handling loaded significantly as *On-time luggage delivery on arrival* item, which is retained under the Timeliness of flight factor. Findings do not reveal the centrality and importance of the luggage handling attribute.

4.9 Cabin Features and Experiences on Airline Choice and Preferences

Previous studies on airline service quality show mixed ratings of what this study refers to as the cabin features and experiences on airline choice and preferences. Most of the studies fail to evaluate a full suite of variables that describe cabin features except for [De Jager et al. \(2012\)](#) and [De Jager et al. \(2012\)](#). These two studies included various variables such as seat comfort, cabin cleanliness, cabin ventilation and overhead storage space, albeit combined with some on-board services such as quality of food into a latent factor labelled as cabin services cape (food and cabin crew). In other studies, only seat comfort is included for rating purposes. [R.-J. Luke \(2015\)](#) finds that the seat comfort variable is amongst the least important service attributes that influence airline choice. In [Diggins \(2010\)](#), 15.77% FSC and 11% LCC identifies it as the most important reason for selecting an airline, while in [Fourie et al. \(2006\)](#), both LCC and FSC customers rate it as the most important service offered by airlines. In [Lambert et al. \(2011\)](#), both Airline Managers (AMs) and Travel Industry Managers (TIMs) rate *Comfort and cleanliness of seats* as highly important to customers. [Mburu \(2020\)](#) evaluate the importance of Space on board and legroom and found it to be the second least important airline choice attribute.

4.10 Airline Reputation on Airline Choice and Preferences

Marketing literature identifies brand image and reputation as a source of sustainable competitive advantage and as influential to consumer behaviour ([Grönroos, 2015](#)). Notwithstanding such, it would appear that previous studies on service quality in the South African airline market have not paid attention to the importance or influence of airline reputation on airline preference and choice. An extensive literature review demonstrates that only a few studies assess the importance of airline image and reputation as an airline choice attribute.

Similar to the findings of this study insofar as the importance of airline reputation as a choice factor is concerned is [Mburu \(2020\)](#) study, wherein airline reputation is rated the

third least important service attribute. Elsewhere, [Chen et al. \(2015\)](#) found that Taiwan and Chinese passengers rank airline reputation at 18th out of 22 airline choice factors, indicating that it is not that important. However, in other studies, airline reputation has been reported to positively influence customer choice regarding airlines, for example, in [Buaphiban \(2015\)](#), [Jeng \(2016\)](#), [Mbura \(2020\)](#), [Farooq et al. \(2018\)](#), among many others.

5. CONCLUSION

This study's primary purpose has been to identify those airline service attributes that significantly influence airline preference and choice of South African domestic airlines. The study identifies several attributes from existing literature. Fifty-five items (statements) are formulated to describe the identified attributes, which are then factor analysed, retaining ten latent factors (service attributes). The study gives airline managers insight into the service attributes that airlines need to pay attention to in their marketing mix through the importance ratings of these service attributes.

On the basis of the findings of this study, it is suggested that airlines pay close attention and deploy more effort to the five most important service attributes needed to meet customers' expectations. For instance, the importance placed on airline reliability is understandable as many people use air transport for business travels to attend scheduled meetings. As such, any default by the airline from the scheduled flight times might seriously affect passengers. The importance of booking and check-in services could allude to the adoption of ICT as the backbone of the service industry. It will be important that airline optimise their ICT resources to meet customer expectations, particularly those of the Gen-Z and millennials. Despite the emphasis on automation, customers still regard airline staff as a critical element of airline service quality. This suggests that airlines need to invest more in their human resources, especially the frontline staff.

6. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

However, with the disparate and somehow contradictory findings of different studies on airline service quality attributes, it will be necessary for airline managers and scholars to desist from using these findings conclusively. Instead, this study recommends that further research be undertaken to make the findings more useful and practically valuable. For example, a cross-cutting exploratory evaluation of airline service quality attributes described by the South African airlines' customers, airline managers and airline travel agencies. This will allow for the compilation of a comprehensive list of attributes that can be used to evaluate airline service quality in South Africa and possibly in other markets.

7. IMPLICATIONS OF THE STUDY

The findings of this study contribute to existing literature on the importance ratings of airline service attributes. It bears to note that knowledge pertaining to the most important

service attributes is critical for continuous service quality improvement. As Mantey et al. (2017) notes, airline managers have to take heed of passenger expectations by modelling their marketing mix around these most important service attributes. For example, as airline reliability is shown to be the most important service attribute, it suggests that airlines must pay more effort and attention to ensure airline punctuality and avert cancellations. Where flight delays or rescheduling and flight cancellations are inevitable, timely communication of such will mitigate the inconvenience caused to airline customers.

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