RESEARCH NOTE

MIND THE GAP: EXAMINING THE GAP IN INTERNATIONAL PASSENGER EXPECTATIONS AND PERCEPTIONS OF SERVICE QUALITY IN LOW-COST CARRIERS

JACINTA DSILVA,* SREEJITH BALASUBRAMANIAN,† AND CODY MORRIS PARIS†‡

*University of Balamand Dubai, United Arab Emirates
†Middlesex University Dubai, United Arab Emirates
‡School of Tourism and Hospitality, University of Johannesburg, Johannesburg, South Africa

Meeting or exceeding passengers' service quality expectations has become a critical factor for low-cost carriers (LCC). Still, only limited efforts have been made to date to investigate the differences (gap) in LCC passengers' expectations and perceptions. A comprehensive 25-item SERVQUAL framework for LCC was first developed through an extensive literature review and insights obtained from exploratory interviews and focus groups with passengers and industry experts. Using survey data of LCC passengers, the validity and reliability of the framework were first established, and then the differences in the expectations and perceptions were understood. The results indicate that none of the service quality attributes of LCCs have met, let alone exceeded, expectations, and the most significant gaps were found for "reliability" and "responsiveness" dimensions. With the growing global demand for budget travel and new LCCs entering the market, the study provides timely insights for LCCs to narrow the expectation–perception gap and achieve competitive advantage.

Key words: Budget airlines; Gap analysis; Confirmatory factor analysis; Customer satisfaction; Service sector

Introduction

Low-cost carriers (LCC), which account for 31% of the world's total seat capacity, are no-frills, discount, or budget airlines that generally offer lower fares than full-service or traditional airlines (El Haddad, 2019; Statista, 2020). In 2019, the market size of this highly competitive market segment had surpassed $150 billion and was forecasted to exceed $247 billion by 2025 (Statista, 2020). Service

Address correspondence to Dr. Cody Morris Paris, Associate Professor & Deputy Director of Academic Planning & Research, Middlesex University Dubai, PO Box 500697, Knowledge Park. Block 16, Dubai, United Arab Emirates. E-mail: c.paris@mdx.ac.ae

quality is a critical factor in differentiating service and gaining sustainable competitive advantage for airlines, including low-cost ones (El Haddad, 2019; Padkil & Aydin, 2007). It is the conformance to consumer specification and is often understood by examining the consumers' initial service expectation and the actual service realization (Parasuraman et al., 1985).

Narrowing this expectation–perception gap is critical for LCCs since it is a significant determinant of consumer satisfaction, loyalty, retention, and profitability. Unfortunately, only scarce efforts have been made to date to examine the discrepancy or gap in the customer expectations (passenger anticipation of what the service "will be") and perceptions of service quality (passenger experience with the actual services provided) in LCCs. This formed the motivation of this study, which to examine the differences in the expectations and perceptions of service quality by international passengers of global LCCs.

Literature Review

Several studies have stressed that the quality of service given to customers differentiates an airline from its competitors and thus determines market share and ultimately profitability (Ahn & Lee, 2011). However, there is a clear gap in the literature regarding understanding the difference in the expectations and actual experience of the service received by passengers in LCCs. Most studies on service quality in LCCs have tried to assess only the experience with the service (perceptions) and its impact on factors such as customer satisfaction (e.g., Ariffin et al., 2010; Kalaiarasan et al., 2015), customer loyalty (e.g., Curry & Gao, 2012) and repurchase intention (e.g., Rajaguru, 2016; Yang et al., 2012) while others have attempted to compare the service quality perceptions between LCCs and full-service or legacy airlines (e.g., Baker, 2013; Lim & Lee, 2020). We have only come across four studies that examined the expectations–perceptions gap in service quality in LCCs. However, all four studies had a narrow focus, limiting the generalizability of the findings. For instance, Kim et al. (2011) study focused on South Korean domestic LCCs. Similarly, Leong's (2008) study was limited to a single-budget airline based in Singapore. El

Haddad's (2019) study focused only on Easyjet and Ryanair airlines departing from London airports. Finally, Dsilva et al. (2020) examined the expectation–experience gap in service quality in LCCs for only business travelers. These gaps highlight the need for a large-scale empirical investigation to examine the differences in the expectations and perceptions of service quality of multiple LCCs in an international setting.

Methodology

A survey-based research methodology was adopted in this study. The survey instrument was developed based on the original dimensions of SERVQUAL (Parasuraman et al., 1988), the most widely used model for service quality in airlines, including LCCs (Hasan et al., 2019). The 25-item instrument covering the various service quality dimensions—namely, tangibility, reliability, assurance, empathy, and responsiveness—was developed based on the exhaustive review of service quality literature in the airline industry and insights obtained from eight exploratory interviews and one focus group with passengers, and 12 expert interviews with senior executives of LCC airlines. These measurement items were then organized in the form of a survey questionnaire to capture both expectations and perceptions. For example, to capture expectations, the question was framed as "The facilities inside the aircraft should be good," while capturing perceptions it was framed as "The facilities inside the aircraft are good." A 5-point Likert scale ranging from *strongly agree* (5) to *strongly disagree* (1) was used to capture LCC passengers' expectations and perceptions.

A purposive sampling procedure was used to collect the data. The target sample population was passengers who had traveled in an LCC at least once in the past year. The survey was conducted from the Dubai Airport Terminal 2, one of the world's busiest airports by international passenger traffic and a leading hub for LCCs. One of the authors personally administered the paper-based survey in the English language to passengers who were waiting to board their flight in the departure lounge. The researcher's proficiency in multiple languages, including Arabic, helped translate the survey for a few participants who had difficulty with English. Also,

Table 1

Respondents' Demographic Profile

Respondents' Characteristics	Frequency (%)
Gender	
Male	362 (70.2%)
Female	154 (29.8%)
Age	
18–24	149 (28.9%)
25–34	198 (38.4%)
35–44	86 (16.7%)
45–54	48 (9.3%)
55 and above	35 (6.8%)
Annual income in AED	
Less than 15,000	88 (17.0%)
15,001–25,000	82 (15.9%)
25,001–35,000	38 (7.4%)
35,001–45,000	75 (14.1%)
45,000 or above	154 (29.8%)
None	79 (15.3%)
Employment status	
Employed	404 (78.3%)
Not employed (home-maker, student, retired, etc.)	112 (21.7%)
Reason for travel	
Leisure	325 (67.0%)
Nonleisure (business, education, medical, etc.)	191 (33.0%)

the administrative nature of the survey ensured the researcher was immediately available to answer any query respondents had with the survey. The respondents were asked to rate their service quality expectations first, followed by their perception (experience) of traveling with LCCs in the past year. To encourage participation, respondents were given pens and diaries as an incentive. Overall, 540 passengers from 66 countries traveling in 15 LCCs participated in the survey conducted over 5 days. Of these responses, 24 incomplete ones were removed, leaving 516 valid responses for analysis. The demographic details of the survey participants are shown in Table 1.

Analysis and Findings

We first checked for any potential issues of common method bias (CMB) using the Harman's single factor test (Podsakoff et al., 2003). The exploratory factor analysis, constraining all items to one factor, revealed that the total variance was only 37% and 42% for expectations and perceptions, respectively (<50%), demonstrating that CMB was not an issue

in this study. Next, we assessed the structural validity of the five-factor model separately for expectations and perceptions using confirmatory factor analysis (see Figs. 1 and 2). The model fit statistics in the acceptance range (Bagozzi & Yi, 1988) suggested that the data fit the measurement model reasonably well for both expectations ($\chi^2/df = 3.27$, GFI = 0.88; CFI = 0.91; TLI = 0.89; RMSEA = 0.06) and perceptions ($\chi^2/df = 2.36$, GFI = 0.92; CFI = 0.95; TLI = 0.94; RMSEA = 0.05). Also, as seen in Figures 1 and 2, the confirmatory factor loadings for most items (except one for expectations) were either equal or above the recommended threshold of 0.5 and significant at $p < 0.001$, demonstrating strong convergent validity (Kline, 2005). The one item, "The crew on board should provide timely inflight services to passengers," that failed to load was still retained as the loading was still above the minimum threshold of 0.4 (Maskey et al., 2018). Although the average variance extracted (AVE) of the constructs was below the recommended value of 0.50 in most cases for both expectations and perceptions, the convergent validity of the construct is still considered adequate given that the composite reliability (CR) is greater than AVE, and that AVE was still above the minimum threshold of 0.40 (Fornell & Larcker, 1981). Next, to check for discriminant validity, the maximum shared variance (MSV) and average shared variance (ASV) were computed. Ideally, the values of MSV and ASV should be lower than AVE to establish discriminant validity (Alumran et al., 2014). However, as seen in Table 2, this assumption was not met in some cases, likely due to the overlap in SERVQUAL dimensions due to the multifaceted nature of the services offered (Prayag, 2007). Still, the intercorrelation between the constructs for both expectations and perceptions was less than the suggested threshold of 0.85 (Kline, 2005), indicating acceptable discriminant validity. Finally, Cronbach's alpha (α) and CR scores (see Table 2) were significantly greater than the 0.7, indicating good reliability of constructs (Nunnally & Bernstein, 1994).

Next, a paired sample t test was conducted to assess the mean score difference in passenger expectations and perceptions at the construct and item levels. As seen in Table 2, the findings show that LCCs' customer perceptions are significantly lower than their expectations at the construct
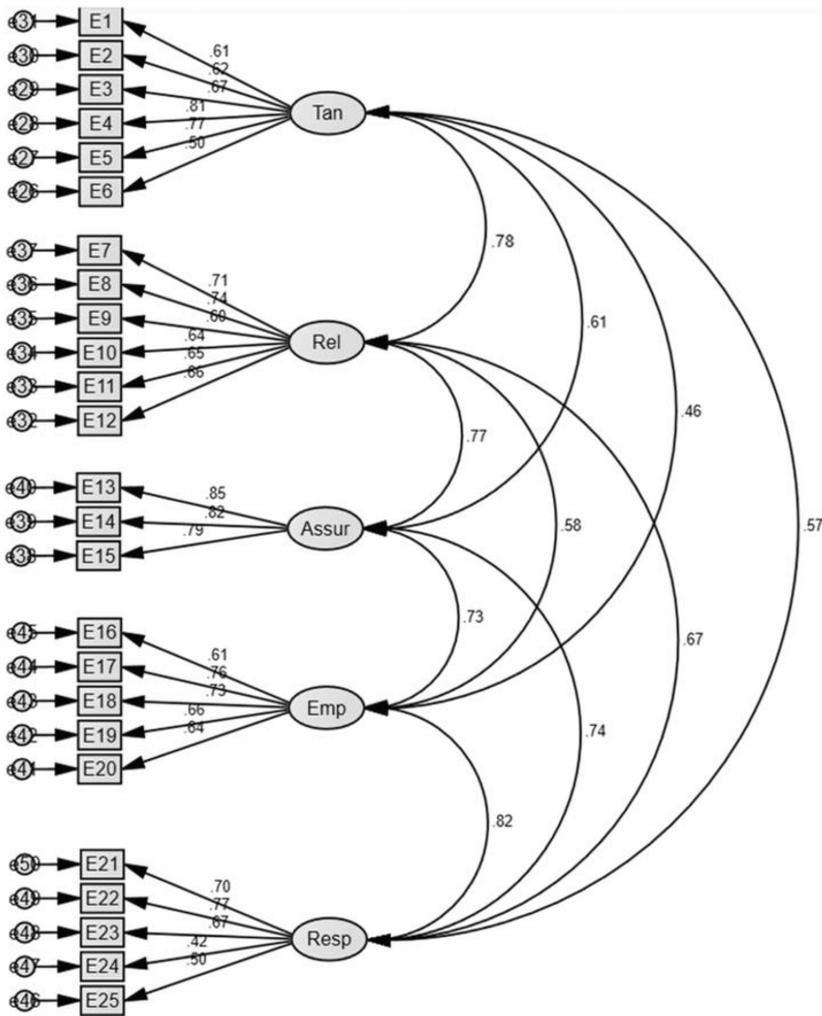
Figure 1. Confirmatory factor analysis for expectations (E).

and item level. For all the 25 items, the customer expectations had a mean score greater than 4.00 on a 5-point scale, indicating that these attributes are essential for enhancing LCCs' service quality. Customer expectations of "reliability" (mean = 4.53) emerged as the most important dimension. These results imply a shift in customer expectations from previous studies on LCCs that have reported "responsiveness" as the most important service quality dimension (Padkil & Aydin, 2007). Also, customer expectations of tangibility (mean = 4.43), which emerged as the second most important dimension, was earlier reported as the least essential dimension for service quality for airlines

(Sultan & Simpson, 2000). It appears that LCCs are aware of the increasing importance of tangibility as it received the second best mean score for customer perception of services received (mean = 3.95). LCCs are also doing relatively well in providing "assurance" (mean = 3.97) to customers as it received the highest mean score for perception across all dimensions. "Empathy" received the lowest mean score for perceptions (mean = 3.71), which could well be because LCCs may not be prioritizing empathy as it emerged as the least important dimension in customer expectations (mean = 4.27). Unfortunately, "reliability" showed the largest gap in the passengers' relative expectations
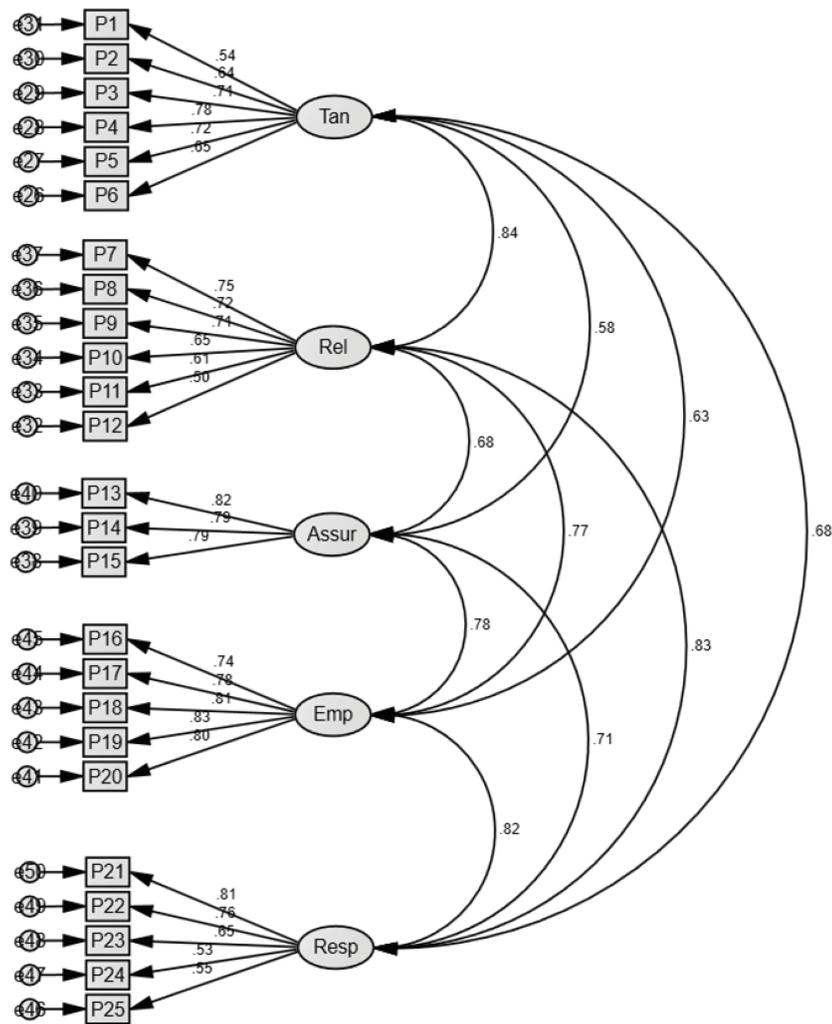
Figure 2. Confirmatory factor analysis for perceptions (P).

and perceptions ($\delta = 0.64$, $p < 0.001$), followed by "responsiveness" ($\delta = 0.60$, $p < 0.001$). Overall, the relatively lower perception score (<4.00) vis-à-vis expectations (>4.00) for all five dimensions is a concern for LCCs.

At the item level, customer expectations and perceptions were highest for "the safety of the aircraft" (mean = 4.61 and 4.12, respectively) and "modern aircrafts" (mean = 4.59 and 4.11, respectively). This shows that LCCs are aware of the passengers' tangible expectations and are making an effort to meet these expectations, though there is a considerable gap. The highest gap in expectations and perceptions were witnessed for "sincere effort in solving customer problems/complaints" ($\delta = 0.90$, $p < 0.001$) and "priority to on-time performance" ($\delta = 0.89$, $p < 0.001$). On the other hand, although statistically significant, the lowest gap was witnessed for "employees should all appear professionally dressed" ($\delta = 0.20$, $p < 0.001$), and "crew on-board should provide timely inflight services" ($\delta = 0.31$ $p < 0.001$).

Conclusion

The evidence from previous studies shows that competition based on price is harmful in the long term because if full-service airlines slightly reduced

Table 2

Survey Results

Items	Mean (E)	Mean (P)	*t* Value
Tangibility: α = 0.817 (E), 0.829 (P); CR = 0.830 (E), 0.834 (P); AVE = 0.451 (E), 0.459 (P); MSV = 0.608 (E), 0.706 (P); ASV = 0.379 (E), 0.475 (P)	**4.43**	**3.95**	**13.91***
LCCs should have modern aircrafts	4.59	4.11	11.75*
The physical facilities inside the aircraft should be good	4.19	3.62	13.40*
LCCs should give clear information to its passengers regarding policies, timings, offers, and any changes made.	4.44	3.78	11.89*
LCCs should pay careful attention to the safety of the aircraft.	4.61	4.12	11.13*
LCC should maintain a required level of hygiene (cleanliness) in the aircraft	4.54	4.02	11.04*
Employees should all appear professionally dressed	4.32	4.12	4.15*
Reliability: α = 0.828 (E), 0.817 (P); CR = 0.840 (E), 0.822 (P); AVE = 0.466 (E), 0.438 (P); MSV = 0.608 (E), 0.706 (P); ASV = 0.497 (E), 0.612 (P)	**4.53**	**3.89**	**18.03***
LCC's should keep up to their promise	4.53	3.74	16.19*
The passengers should feel safe and secure when dealing with the airline and its staff	4.57	4.04	11.98*
LCC should give priority to on-time performance.	4.55	3.66	15.92*
The staff of the airline should perform their tasks correctly.	4.46	4.06	10.75*
The website of the airline should provide accurate information	4.52	3.88	13.77*
The luggage should be received on time without any delays	4.55	3.97	13.12*
Assurance: α = 0.859 (E), 0.844 (P); CR = 0.861 (E), 0.842 (P); AVE = 0.673 (E), 0.640 (P); MSV = 0.593 (E), 0.608 (P); ASV = 0.511 (E), 0.478 (P)	**4.43**	**3.97**	**11.88***
Employees should be friendly and accessible to assist customers.	4.43	4.00	10.08*
The employees of the airline should inspire confidence in the customers.	4.38	3.91	10.91*
The employees should be polite and courteous at all times.	4.47	3.99	10.94*
Empathy: α = 0.807 (E), 0.893 (P); CR = 0.812 (E), 0.894 (P); AVE = 0.466 (E), 0.628 (P); MSV = 0.593 (E), 0.672 (P); ASV = 0.438 (E), 0.568 (P)	**4.27**	**3.71**	**12.99***
LCC should frequently communicate with passengers in case of any problems or delays.	4.49	3.68	16.93*
The employees should develop trust in their passengers.	4.27	3.73	11.94*
The staff should have a positive attitude towards their customers.	4.43	3.84	13.18*
The employees should give personal attention to each of their passengers.	4.10	3.69	8.30*
Employees should know what the needs of their individual customers are.	4.07	3.59	9.61*
Responsiveness: α = 0.735 (E), 0.793 (P); CR = 0.755 (E), 0.792 (P); AVE = 0.392 (E), 0.448 (P); MSV = 0.672 (E), 0.689 (P); ASV = 0.498 (E), 0.582 (P)	**4.33**	**3.73**	**16.14***
LCC should show a sincere effort in solving customer problem or complaint	4.48	3.58	18.66*
LCC employees should possess the required skill and knowledge to answer customer questions	4.37	3.72	14.86*
LCC should give preference to special needs passengers like the elderly, disabled, or family with infants.	4.47	3.90	12.67*
The crew on board should provide timely inflight services to passengers	3.90	3.56	6.52*
LCCs should be of value for money compared to full-service airlines.	4.42	3.86	11.06*

Note. E, expectations; P, perceptions; α = Cronbach's alpha coefficient; CR = composite reliability.
*Significant at $p < 0.001$.

their fares, passengers would be willing to switch to them (Kim et al., 2011). Several full-service airlines have begun to compete with LCCs with a lower or equal price policy (Kim et al., 2011). Therefore, the long-term survival of LCCs is dependent on the quality of service provided. LCCs must first understand customer expectations and then meet or exceed these expectations.

The study implications are manifold. For practitioners, more profound knowledge of the differences in LCC passengers' expectations and perceptions is crucial for designing and prioritizing effective strategies for improving the service quality. The results indicate that none of the services offered by LCCs have met, let alone exceeded, passengers' expectations. Hence, narrowing the gap is critical as meeting or exceeding expectations is a significant determinant of consumer satisfaction, loyalty, retention, and profitability. With the growing global demand for budget travel and new LCCs entering the market, the study is timely for LCCs to develop differentiation, positioning, and branding strategies. For instance, both leisure and business passengers are likely to reduce their budget (or upper

limits) on fares due to financial distress imposed by COVID-19 and therefore present an opportunity for LCCs to lure away a significant proportion of travelers from full-service airlines. The findings also have implications for managers of traditional full-service airlines as they need to assess whether the services they provide need to be redesigned to protect their market share from LCCs. Also, the validated survey instrument used in this study can be applied to examine the changing customer expectations and perceptions from LCCs amid the COVID-19 outbreak. Further, the survey could be deployed as a continuous improvement tool by LCCs.

In terms of research implications, the study addresses a gap in the literature by examining the expectations–perceptions gap in LCCs in an international setting covering 15 airlines and 66 nationalities using a relatively large sample size. The carefully derived and validated survey instrument and measurement model could be used by researchers to conduct future investigations. However, the study has some limitations. The respondents were asked to reflect on their perceptions of LCCs in the past year, and hence their ability to recall their experience could cause measurement error. Also, the substantial heterogeneity among LCCs regarding timing, flight duration, and routes could cause bias in passenger expectations and perceptions. Finally, the findings only show differences in expectations and perceptions and do not explain or predict how the expectation–perception gap will influence their future intention to choose LCCs. Future studies could address these limitations, such as having a dependent or outcome variable such as "intention to travel with LCCs again."

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