



Gender Differences in Automotive Service Quality Perceptions: Evidence from Malaysia's National Car Service Sector

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Abstract

This study examines gender differences in perceptions of automotive service quality within Malaysia's national car service sector. The study focuses on two dimensions of service quality: customer service quality and technical quality. A quantitative cross-sectional design was employed using data from 311 customers of Malaysian national car service centres, comprising 132 male and 179 female respondents. Independent-samples t-tests were conducted to determine whether perceptions of the two service quality dimensions differed significantly by gender. Female respondents reported slightly higher mean scores for both customer service quality and technical quality than male respondents. However, the differences were not statistically significant for customer service quality, $t(309) = -1.06$, $p = .292$, or technical quality, $t(309) = -0.55$, $p = .585$. The findings indicate that male and female customers hold broadly comparable perceptions of both aspects of automotive service quality. The study contributes gender-specific evidence from Malaysia's national car sector and suggests that service providers should prioritise consistent customer service and technical performance across customer groups rather than assuming different service quality expectations based solely on gender.

Keywords: Automotive Service Quality, Customer Service Quality, Gender Differences, Malaysia, Technical Quality

Introduction

Service quality is a critical component of customer experience in the automotive after-sales sector because customers rely on service providers not only for accurate vehicle maintenance and repair but also for professional and dependable interactions throughout the service process. The concept of service quality has traditionally been associated with customers' evaluations of service performance across dimensions such as reliability, responsiveness, assurance, empathy, and tangibility (Parasuraman et al., 1988). In addition, Grönroos (1984) distinguished between technical quality, which concerns what customers receive from a service, and functional quality, which concerns how the service is delivered. This distinction is particularly relevant to automotive servicing, where customers evaluate both the technical outcome of vehicle maintenance and their interactions with service personnel.

Recent studies continue to demonstrate the importance of service quality in automotive after-sales settings. Gupta and Raman (2022) showed that customers' after-sales service experiences play an important role in shaping satisfaction in the automobile industry. In Malaysia, Moksini et al. (2023) found that several dimensions of after-sales service quality were significantly associated with the satisfaction of national-car owners. Similarly, Fathulloh and Purnama (2024) demonstrated the relevance of SERVQUAL dimensions in evaluating customer satisfaction with automotive after-sales services. Collectively, these findings reinforce the importance of examining service quality as a multidimensional aspect of the automotive customer experience.

The multidimensional nature of service quality is commonly explained through the SERVQUAL framework, which identifies tangibility, reliability, responsiveness, assurance, and empathy as central dimensions of customers' service evaluations (Parasuraman et al., 1988). In automotive servicing, however, the technical nature of vehicle maintenance introduces an additional consideration. Customers assess both the interpersonal aspects of the service encounter and the technical quality associated with the competence, accuracy, and effectiveness of the service performed. Consequently, automotive service quality cannot be understood solely through general evaluations of customer service; different dimensions may carry different levels of importance in shaping the overall service experience. Previous research in the Malaysian automotive context has similarly demonstrated the relevance of industry-specific service-quality dimensions, including technical quality, in understanding customers' evaluations of after-sales services.

Despite extensive research on service quality, customers should not necessarily be regarded as a homogeneous group. Individual characteristics may influence how service encounters are perceived and evaluated, and gender represents one potentially relevant source of variation. Recent research in the intercity railway sector highlighted gender-specific differences in customers' perceptions of service quality (Changphom et al., 2025). Similarly, Tosun et al. (2024) examined the role of gender in shaping the relationship between destination service quality and consumer responses in the tourism sector. Although these studies were conducted outside the automotive industry, they suggest that gender may be relevant to understanding variations in service-quality perceptions across different service contexts.

These findings provide a basis for examining whether male and female customers differ in their perceptions of automotive service quality. Gender may be particularly relevant in automotive service environments because customers encounter a combination of technically complex services and interpersonal interactions. Vehicle servicing involves credence attributes that customers may find difficult to evaluate fully even after the service has been completed. As a result, customers may rely on multiple cues, including employees' explanations, responsiveness, assurance, reliability, physical facilities, and perceptions of technical competence when evaluating the service experience. Earlier automotive research has also indicated that gender can be associated with differences in service-related evaluations and retention behaviour, although the evidence is not uniform across service contexts. This makes it important to examine gender differences empirically rather than assuming that male and female customers evaluate automotive service quality in the same manner.

The issue is especially relevant in Malaysia, where research on automotive after-sales services has predominantly examined service quality in relation to outcomes such as customer satisfaction, brand image, and customer loyalty. For instance, Moksini et al. (2023) investigated the relationships between responsiveness, empathy, assurance, reliability, and satisfaction among Malaysian national-car owners. Previous research using the present automotive context has likewise examined service quality and brand image as predictors of customer loyalty and subsequently demonstrated the mediating role of brand image in the relationship between post-sales service quality and loyalty (Rahman & Saidin, 2025). However, considerably less attention has been directed towards whether male and female customers differ in their perceptions of broader customer service quality and technical quality within the automotive after-sales context.

Accordingly, this study shifts attention from the conventional outcome-oriented approach by examining whether male and female customers differ in their perceptions of two broader dimensions of automotive service quality: customer service quality and technical quality. Specifically, the study investigates whether gender is associated with differences in customers' evaluations of the service-delivery experience and the technical aspects of automotive servicing within Malaysia's national car service sector. By distinguishing between these two aspects of service quality, the study seeks to provide a more focused understanding of whether gender represents a meaningful basis for differences in automotive service evaluations. The findings may contribute to service-quality research while providing automotive service managers with evidence for determining whether service strategies should be broadly standardised or differentiated according to gender.

Literature Review

Service Quality in Automotive After-Sales Services

Automotive after-sales service differs from many conventional service settings because it combines customer-facing interactions with technically specialised work. Customers may not always possess sufficient technical knowledge to directly evaluate mechanical procedures; therefore, their overall service perceptions can be influenced by both the technical outcome and the manner in which the service is delivered. Grönroos (1984) conceptualised these aspects as technical quality and functional quality, while Parasuraman et al. (1988) emphasised customers' perceptions of service delivery through the SERVQUAL framework. Research within the automotive sector supports the importance of both dimensions of the service experience. Mohamad Sheriff et al. (2020), using an automotive after-sales service context, highlighted the relevance of service-quality attributes in explaining customer satisfaction. Research involving Malaysian national carmakers has similarly demonstrated the importance of industry-specific after-sales service quality (Saidin et al., 2022). More recently, Moksini et al. (2023) reported that responsiveness, assurance, and empathy were significantly associated with satisfaction among Malaysian national-car owners. International evidence also indicates that automotive after-sales service quality remains an important determinant of customers' post-purchase evaluations (Fathulloh & Purnama, 2024; Nguyễn & Lương, 2024).

The present study therefore focuses on two broader aspects of automotive service quality: customer service quality and technical quality. Customer service quality represents customers' evaluations of their service interactions and the service-delivery process, whereas

technical quality reflects their assessment of the technical aspects of vehicle servicing. This distinction enables the study to examine whether male and female customers evaluate these two aspects of automotive service differently.

Gender and Service Quality Perceptions

Gender has received considerable attention in service research because differences in expectations, information processing, risk perceptions, and service experiences may influence how customers evaluate service encounters. However, empirical findings regarding gender differences are not always consistent across service settings. This suggests that the influence of gender may depend on the characteristics of the service and the particular dimensions of quality being evaluated.

Recent evidence supports the value of examining gender rather than assuming that service-quality perceptions are identical across customer groups. Champahom et al. (2025), for example, examined gender-specific differences in service-quality perceptions in the intercity railway context and demonstrated that gender can provide meaningful insights into customers' evaluations of service attributes. Tosun et al. (2024) likewise showed that gender can play a role in shaping relationships involving perceived service quality within a tourism service context. Although these studies were conducted outside the automotive industry, they indicate that gender remains a potentially relevant factor in understanding how customers perceive service quality.

Gender in the Automotive Service Context

The automotive service context provides a particularly useful setting for examining gender because customers simultaneously encounter technical and interpersonal components of service delivery. Previous Malaysian automotive studies have established the importance of after-sales service quality for customer outcomes (Moksin et al., 2023; Rahman & Saidin, 2021; Saidin et al., 2022). More recently, Rahman and Saidin (2025) demonstrated that customer service quality and technical quality were important components of the post-sales service experience in Malaysia's automotive sector.

Nevertheless, relatively limited attention has been directed towards whether male and female customers differ in their perceptions of customer service quality and technical quality within the automotive after-sales sector. Previous studies have predominantly examined the relationships between service quality and customer outcomes, particularly customer satisfaction and loyalty, rather than directly comparing service quality perceptions across gender groups (Moksin et al., 2023; Nguyễn & Lương, 2024; Rahman & Saidin, 2025). The present study addresses this research gap by comparing male and female customers' perceptions of customer service quality and technical quality within Malaysia's national car service sector.

Research Hypothesis

Given that previous studies provide mixed evidence regarding gender differences in service-quality evaluations, the present study examines whether male and female customers differ in their perceptions of customer service quality and technical quality.

H1: There are significant differences between male and female customers in their perceptions of automotive service quality.

Theoretical Framework

This study draws on the service quality perspectives of Grönroos (1984) and Parasuraman et al. (1988) to explain how customers evaluate automotive service experiences. Grönroos (1984) distinguishes between technical quality and functional quality. Technical quality refers to what customers receive as the outcome of a service, whereas functional quality concerns how the service is delivered. This distinction is particularly relevant to automotive after-sales services because customers evaluate both the technical performance of vehicle maintenance and repair and their interactions with service personnel.

The SERVQUAL framework developed by Parasuraman et al. (1988) further explains the customer-facing aspects of service delivery through dimensions such as reliability, responsiveness, assurance, empathy, and tangibility. In the present study, these individual dimensions are not examined separately. Instead, the analysis focuses on the broader customer service quality measure available in the dataset, representing customers' evaluations of the service-delivery experience. Technical quality is examined separately to capture customers' perceptions of the technical aspects of automotive servicing. This approach is consistent with the characteristics of automotive after-sales services, where both service interactions and technical performance contribute to customers' overall evaluations of service quality.

Previous research in the Malaysian automotive context supports the relevance of examining customer service quality and technical quality as important components of the post-sales service experience (Rahman & Saidin, 2025). Building on this perspective, the present study introduces gender as the grouping variable to determine whether male and female customers differ in their perceptions of these two aspects of automotive service quality. Gender is not assumed to produce inherently higher or lower service-quality evaluations; rather, it provides a basis for empirically examining whether perceptions differ between customer groups.

Accordingly, the theoretical framework proposes that gender may be associated with differences in customers' perceptions of customer service quality and technical quality, as illustrated in Figure 1.

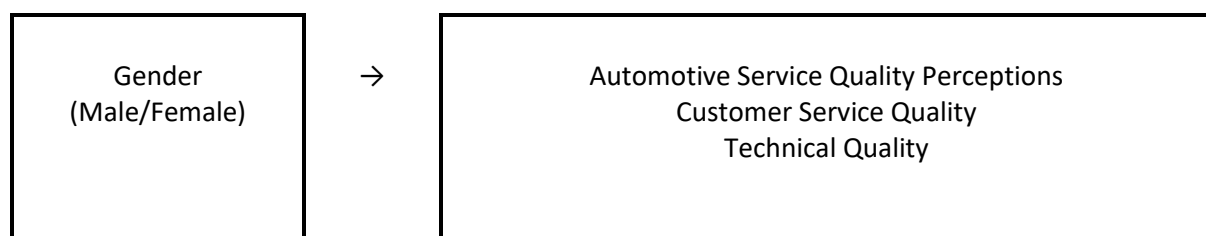


Figure 1 Conceptual Framework of the Study

Methodology

Research Design

This study employed a quantitative, cross-sectional research design to examine gender differences in customers' perceptions of automotive service quality. A survey approach was

used to obtain customers' evaluations of different aspects of their experiences with national car service centres in Malaysia. The unit of analysis was the individual customer who had experience using authorised automotive service centres.

The present study represents a distinct analysis of an existing dataset that has previously been used to investigate relationships among post-sales service quality, brand image, and customer loyalty (Rahman & Saidin, 2025). Whereas the previous study focused on predicting customer loyalty and examining the mediating role of brand image, the present study addresses a different research question by examining whether male and female customers differ in their perceptions of customer service quality and technical quality.

Sample and Data Collection

The respondents were owners of Malaysian national cars who had experience obtaining maintenance or repair services from Proton and Perodua service centres. Participants were working adults enrolled as part-time students at the School of Distance Education, Universiti Sains Malaysia, and had experience using authorised service centres across Malaysia. Participation in the survey was voluntary.

A total of 385 questionnaires were distributed. After incomplete responses were excluded, 311 usable questionnaires were retained for analysis. Of the 311 respondents, 132 (42.4%) were male and 179 (57.6%) were female. The sample therefore provides sufficient representation of both groups for examining gender-based differences in service-quality perceptions.

Measurement

Service quality was assessed using measures adapted to the automotive service context. The present analysis focuses on two broader dimensions: customer service quality and technical quality. Customer service quality was measured using 17 items reflecting customers' evaluations of the service-delivery experience, while technical quality was measured using five items assessing the technical aspects of automotive servicing. All items were measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Internal consistency was high for both measures, with Cronbach's alpha values of .969 for customer service quality and .939 for technical quality.

Data Analysis

Data were analysed using GNU PSPP. Descriptive statistics, including means and standard deviations, were calculated separately for male and female respondents for customer service quality and technical quality. Independent-samples t-tests were then conducted to determine whether male and female respondents differed significantly in their perceptions of the two service-quality dimensions. Levene's test was used to assess the assumption of homogeneity of variance. Statistical significance was evaluated at the .05 level.

Results

Respondent Profile

A total of 311 usable responses were included in the analysis. Of these respondents, 132 (42.4%) were male and 179 (57.6%) were female. The largest age group was 26–35 years (62.7%), followed by respondents aged 36–45 years (20.6%) and 17–25 years (15.1%). Only

1.6% of the respondents were aged 46–55 years. In terms of educational background, 62.1% held a diploma, 31.5% had completed the Malaysian Certificate of Education (Sijil Pelajaran Malaysia [SPM]) or Malaysian Higher School Certificate (Sijil Tinggi Persekolahan Malaysia [STPM]), and 6.4% held a degree.

Table 1

Demographic Profile of Respondents

Characteristic	Category	n	%
Gender	Male	132	42.4
	Female	179	57.6
Age	17 – 25 years	47	15.1
	26 – 35 years	195	62.7
	36 – 45 years	64	20.6
	46 – 55 years	5	1.6
Education	SPM/STPM	98	31.5
	Diploma	193	62.1
	Degree	20	6.4

Gender Differences in Service Quality Perceptions

Independent-samples t-tests were conducted to examine whether male and female respondents differed in their perceptions of customer service quality and technical quality. Table 2 presents the descriptive statistics and results of the gender comparisons.

Table 2

Service Quality Perceptions by Gender

Service Quality Measure	Male Mean n=132	SD	Female Mean n=179	SD	t	df	p
Customer Service Quality	86.97	17.14	88.99	16.37	-1.06	309	0.292
Technical Quality	26.48	5.58	26.83	5.34	-0.55	309	0.585

Note. Equal variances were assumed because Levene's tests were non-significant for customer service quality ($p = .558$) and technical quality ($p = .533$).

Levene's test indicated that the assumption of homogeneity of variance was satisfied for both customer service quality, $F = 0.34$, $p = .558$, and technical quality, $F = 0.39$, $p = .533$. Therefore, the equal-variances-assumed results were interpreted.

As shown in Table 2, female respondents reported a slightly higher mean score for customer service quality ($M = 88.99$, $SD = 16.37$) than male respondents ($M = 86.97$, $SD = 17.14$). However, the difference was not statistically significant, $t(309) = -1.06$, $p = .292$. Similarly, female respondents reported a slightly higher mean score for technical quality ($M = 26.83$, $SD = 5.34$) than male respondents ($M = 26.48$, $SD = 5.58$), but the difference was also not statistically significant, $t(309) = -0.55$, $p = .585$.

Overall, the findings indicate that male and female respondents held broadly comparable perceptions of both customer service quality and technical quality. Accordingly, H1, which proposed significant gender differences in perceptions of automotive service quality, was not supported.

Discussion

This study examined whether male and female customers differed in their perceptions of customer service quality and technical quality within Malaysia's national car service sector. The findings revealed no statistically significant gender differences in either dimension. Although female respondents reported slightly higher mean scores for both customer service quality and technical quality, the differences were small and statistically non-significant. Therefore, H1 was not supported, indicating that male and female customers generally evaluated both dimensions of automotive service quality in similar ways.

The finding for customer service quality indicates that gender did not substantially differentiate customers' perceptions of the service-delivery process. This is noteworthy because interpersonal aspects of service, including responsiveness, communication, assurance, and customer care, can influence how customers evaluate their interactions with service providers. Previous Malaysian automotive research has demonstrated the importance of these service attributes. Moksini et al. (2023), for example, found that responsiveness, assurance, and empathy were significantly associated with satisfaction among Malaysian national-car owners. Similarly, Saidin et al. (2022) highlighted the importance of industry-specific after-sales service quality among customers of Malaysian national carmakers. The present findings extend this literature by showing that evaluations of the broader customer service experience were comparable between male and female respondents.

A similar pattern was observed for technical quality. Female respondents reported a marginally higher mean score than male respondents, but the difference was not statistically significant. Technical quality is particularly important in automotive servicing because customers expect accurate diagnosis, appropriate maintenance, and satisfactory vehicle performance following the service encounter. The distinction between the outcome of a service and the manner in which it is delivered is consistent with Grönroos's (1984) conceptualisation of technical and functional quality. More recent automotive research has similarly emphasised the importance of service performance and after-sales experiences in customers' evaluations of automotive services (Fathulloh & Purnama, 2024; Gupta & Raman, 2022). The present results suggest that perceptions of this technical component were not substantially differentiated by gender.

The findings are also relevant when considered alongside recent research examining gender in other service environments. Champahom et al. (2025) demonstrated that gender can provide useful insights into differences in service-quality perceptions in an intercity railway setting, while Tosun et al. (2024) identified a role for gender in relationships involving perceived service quality in the tourism context. The results of the present study differ in showing no significant gender differences in the two automotive service-quality domains examined. This difference highlights the context-dependent nature of gender effects in service evaluation. Gender-related differences identified in one service environment should therefore not automatically be generalised to another.

One possible explanation for the absence of significant differences is the relatively standardised nature of automotive after-sales service. Customers using authorised service centres are generally exposed to established procedures for vehicle inspection, maintenance, repair, customer communication, and service completion. When service procedures and expected outcomes are relatively standardised, customers may evaluate service primarily according to whether expected service standards are achieved rather than according to gender-specific expectations. This interpretation is consistent with automotive studies showing that service-quality attributes themselves remain central to customer evaluations of after-sales services (Fathulloh & Purnama, 2024; Moksini et al., 2023; Nguyễn & Lương, 2024).

The findings also extend previous research conducted using the Malaysian national-car context. Earlier studies have primarily examined how service quality relates to outcomes such as customer satisfaction, brand image, and loyalty (Moksini et al., 2023; Rahman & Saidin, 2021; Saidin et al., 2022). Rahman and Saidin (2025) further examined customer service quality and technical quality in relation to customer loyalty and brand image. In contrast, the present study focuses specifically on gender as the basis for comparing perceptions of customer service quality and technical quality. The results therefore provide a different perspective by demonstrating that, within the present sample, these two dimensions of service quality were perceived similarly by male and female customers.

From a managerial perspective, the findings suggest that automotive service providers should be cautious about assuming that male and female customers require fundamentally different service-quality approaches. Since no significant gender differences were identified, service centres may benefit more from maintaining consistently high standards of customer service and technical performance for all customers. Staff should provide clear communication, responsive assistance, courteous interaction, and dependable service regardless of customer gender, while technical personnel should maintain consistent standards in vehicle inspection, maintenance, diagnosis, and repair. This emphasis on consistent service delivery is supported by previous automotive research demonstrating the importance of after-sales service quality in shaping favourable customer evaluations (Fathulloh & Purnama, 2024; Moksini et al., 2023; Saidin et al., 2022).

However, the absence of significant gender differences should not be interpreted as evidence that gender is irrelevant to all aspects of automotive consumer behaviour. The present study examined only customer service quality and technical quality. Gender differences may potentially emerge in other aspects of the service experience, such as price sensitivity, communication preferences, digital service usage, perceived risk, trust, or behavioural intentions. Furthermore, other characteristics such as age, income, vehicle ownership experience, frequency of service visits, and type of service required may provide additional explanations for variations in customers' service perceptions. Future research could examine these factors individually or in combination with gender to provide a more nuanced understanding of customer heterogeneity in the automotive after-sales sector.

Practical Implications

The findings have practical implications for Malaysia's national car service sector. Since male and female customers reported comparable perceptions of customer service and technical quality, service centres should prioritise consistent service delivery across customer groups

rather than assuming different quality expectations solely on the basis of gender. Staff training should emphasise professional communication, responsiveness, reliability, and customer care for all customers, while technical personnel should continue to maintain consistent standards in vehicle diagnosis, maintenance, and repair.

The results also suggest that resources devoted to customer segmentation may be more effectively directed towards characteristics that are directly related to service needs and behaviours, such as vehicle age, type of maintenance required, frequency of service visits, digital service preferences, or previous service experiences. This could enable service providers to personalise the customer experience without relying on broad demographic assumptions.

Limitations and Future Research

Several limitations should be acknowledged. First, the study employed a cross-sectional design; therefore, the findings represent customer perceptions at a particular point in time and should not be interpreted as demonstrating causal relationships. Second, the study focused on customers of Malaysia's national car service sector, which may limit the generalisability of the findings to international automotive brands or independent service providers. Third, gender was examined as a binary grouping variable based on the categories available in the original dataset.

In addition, the present study examined two broader dimensions of service quality: customer service quality and technical quality. Future research could employ instruments specifically designed to examine gender differences across individual service-quality dimensions such as responsiveness, assurance, empathy, reliability, and tangibility. Longitudinal studies and research involving different automotive brands and service-provider types could also provide a more comprehensive understanding of whether demographic differences in service quality perceptions remain stable across service contexts.

Conclusion

This study examined gender differences in automotive service quality perceptions within Malaysia's national car service sector. The findings showed that female respondents reported slightly higher perceptions of both customer service quality and technical quality than male respondents; however, neither difference was statistically significant. The results therefore indicate that male and female customers generally perceive these two aspects of automotive service quality in similar ways.

The study contributes to the automotive service-quality literature by providing empirical evidence that gender may not necessarily constitute a meaningful basis for differentiating customers' evaluations of customer-facing and technical service quality. For automotive service providers, the findings reinforce the importance of maintaining consistent service standards across customer groups rather than assuming substantial gender-based differences in service expectations. Future research should extend this analysis by examining additional demographic, behavioural, and service-related characteristics that may provide a more nuanced explanation of variation in customers' automotive service experiences.

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