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Research Paper

The Mediating Role of Customer Trust in the Relationship Between Service Quality and Customer Loyalty: A Case Study of a Water Refilling Station in Zamboanga del Norte, Philippines

Monalie D. Dela Cruz*, Joseph G. Refugio, Dexter E. Zayas
St. Vincent's College Incorporated, Philippines

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Abstract

Client loyalty is critical to the sustainability of small businesses providing essential services such as water refilling stations, where regular services and customer trust are key to ensuring repeat patronage. The relationship between service quality and loyalty has been well established in banking, hospitality, and e-commerce industries, but less is known about how this relationship unfolds in crucial, health-sensitive service settings when customers are unable to independently verify product safety. This study aims to address this gap by investigating the association between service quality and customer loyalty through customer trust in a water refilling station in President Manuel Roxas, Zamboanga del Norte, Philippines. A survey was conducted with 400 customers based on the SERVQUAL model, trust-commitment theory, and a customer loyalty framework, using a quantitative correlational design. Spearman's rho correlation and Hayes' PROCESS Macro Model 4 were used to analyze the data. The results indicated high levels of perceived service quality (M = 4.11), customer trust (M = 4.13), and customer loyalty (M = 4.08). Responsiveness, trust, and cognitive loyalty were the strongest indicators within their respective domains. The relationship between service quality and loyalty was partially mediated by customer trust, which accounted for 45.5% of the total effect (B = 0.408, p < .001), while the direct effect accounted for the remaining 54.5% (B = 0.489, p < .001). These findings contribute to service marketing theory by showing that in essential, localized service settings, trust is a key relational mechanism connecting perceptions of quality and loyalty. Strengthening operational and trust-building strategies is recommended to sustain customer relationships for small-scale essential service providers

Keywords: *Service Quality, Customer Trust, Customer Loyalty, Consumer Loyalty, Mediation Analysis, Water Service Marketing, Essential Service Industry, Local Service Business, Small-Scale Service Enterprises*

INTRODUCTION

Customer loyalty is a significant driver of growth in service organizations, especially in industries such as water refilling stations where the maintenance of trusted, ongoing connections with customers is crucial for their survival. For towns such as Roxas, Zamboanga del Norte, where households rely heavily on nearby refilling stations as their major source of potable water, trust and service reliability are even more crucial. Service quality and customer trust are well-established antecedents of customer perceptions and behavior in service environments, including customers' evaluations of cleanliness, taste, safety, container sanitation, and staff behavior (Namkung & Jang, 2017). High service quality is associated with customer loyalty, but previous research indicates this relationship is not straightforward; it is in part mediated by customer trust, which refers to customers' confidence in the ability, integrity, and reliability of a service provider (Bricci, Fragata, & Antunes, 2016).

Customer trust is especially vital to turning good service into long-term loyalty in businesses where health and safety are at stake, such as the provision of drinking water (Rather, 2018; Ali et al., 2021). The perception of a continuous high standard builds trust in the provider on

Corresponding author's email: monae.delacruz@gmail.com

the part of the customers, which raises the possibility of the customer purchasing again, recommending, and continuing patronage (Rather & Sharma, 2017). The nexus of service quality, trust, and loyalty has been well-documented in the banking, hospitality, and e-commerce sectors (Kaur et al., 2020; Kim & Park, 2021), but small, essential-service businesses such as water refilling stations have received less focus. This difference is important because essential services differ from discretionary services in ways that could lead to different trust and loyalty formation. Water refilling stations are different marketing environments: customers cannot directly inspect or test water quality, purchases are driven by need rather than choice, and perceived safety, convenience, and reliability of supply replace the experiential or hedonic cues that drive loyalty in industries like hospitality or retail (Magtibay, 2004; Ignacio et al., 2019).

Studies on water service delivery in the Philippine context, such as cooperative-run water systems (Oeria, 2016; Tangaja et al., 2021) and public utilities (Rofiaty & Hidayatinnisa, 2024), reveal similar dynamics where customer satisfaction and loyalty are mainly linked to perceived safety and reliability rather than emotional brand attachment. None of these studies, however, have directly tested customer trust as a mediating mechanism between service quality and loyalty in a small, privately operated water refilling station. It remains an open question whether mediation patterns found in banking, hospitality, and e-commerce generalize to this essential-service, small-business context.

This study aims to fill this gap by investigating the mediating function of customer trust in the link between service quality and customer loyalty at DC Water Refilling Station in Roxas, Zamboanga del Norte. Specifically, it investigates the direct effect of service quality on loyalty and the mediating role of consumer trust. This study also extends service marketing theory by empirically testing well-known quality-trust-loyalty relationships in a localized, health-sensitive essential-service context, and offers practical insights primarily to business owners and water service operators on how to improve service quality, foster trust, and develop long-term customer loyalty. The findings are intended to inform customer retention strategies and service improvement efforts that support the sustainable development of small, localized water refilling businesses.

LITERATURE REVIEW

Service Quality

Customer perceptions and behavior in service businesses have long been known to be significantly influenced by service quality. The SERVQUAL model was introduced by Parasuraman et al. (1988), who identified five dimensions, tangibles, reliability, responsiveness, assurance, and empathy, as the basis for assessing service quality (Berry & Parasuraman, 1991). The SERVQUAL model is one of the most widely applied frameworks for evaluating customer-perceived service delivery. Bitner (1992) also suggested that the physical servicescape (facilities, equipment, and presentation of staff) influences customer perceptions even before a service encounter is completed, highlighting the importance of tangibility as a cue for quality. Effendi et al. (2022) identified digital service quality as a strong predictor of loyalty and retention in a public water utility. Chao et al. (2023) demonstrated that positive consumer perceptions of consistent, high-quality service delivery drove increased loyalty. Likewise, Chayomchai (2021a) found that service quality positively influences the perceived trust of users of technology-based services. Lazaro and dela Cruz (2020) found that service quality strongly affects loyalty in small and medium-sized enterprises, mediated by trust and satisfaction. This finding is particularly pertinent to localized, community-based service settings such as water refilling stations. Lekhawichit et al. (2021) also noted that responsiveness and waiting time are especially relevant quality cues in services in which the speed of service delivery is indicative of operational competence. In addition to its immediate

effect on perceptions, consistent service quality has been related to the longer-term creation of service brand equity (Berry, 2000). This reinforces why the SERVQUAL dimensions used in this study matter beyond a single transaction.

Customer Loyalty

Customer loyalty is the behavioral and attitudinal consequence of service delivery and relationship management. Oliver (1999) defined loyalty as a four-stage process—cognitive, affective, conative, and action, representing both attitudinal preference and visible repeat behavior; from this perspective, genuine loyalty exists only when attitudinal and behavioral elements converge (Dick & Basu, 1994). Trust fully or partially mediates the effect of service quality on loyalty in the fast-food and restaurant sectors, especially where health-sensitive products are concerned (Amjad et al., 2018; Carranza et al., 2018), and a similar pattern was reported by Effendi et al. (2022) in public water utilities. Chung et al. (2020) extended this work by showing that commitment mediates trust–loyalty relationships in sharing-economy services, and Bahadur (2018) showed that employee empathy, the lowest-rated SERVQUAL dimension in essential-service studies, nonetheless meaningfully affects customer satisfaction and loyalty, suggesting that relational, not just functional, service attributes matter for retention. In need-driven, utilitarian service contexts, cognitive and behavioral loyalty have been found to develop more strongly than emotional attachment (Kyurova & Koyundzhiyska-Davidkova, 2021). This pattern has also been observed in e-service settings, where customers' perceptions of quality and trust closely track cognitive and behavioral loyalty (Yum & Yoo, 2023). Similarly, Shrestha (2021) validated service quality as a strong determinant of satisfaction and loyalty across service categories, which further supports the applicability of the present framework to small-scale, essential-service businesses.

Toward an Integrated Framework

The literature reviewed above suggests that, in the case of essential, health-sensitive services, service quality, trust, and loyalty operate as a coherent mechanism rather than as independent constructs. As customers of water refilling stations cannot directly verify the safety or purity of the product they consume, perceived service quality, expressed in terms of clean facilities, dependable delivery, responsive staff, and caring interactions, is the main signal customers rely on to judge whether a provider can be trusted. This belief in reliability and competence engenders customer trust, which in turn minimizes the perceived risk of continued patronage and stimulates loyalty, initially as a rational preference and then as routine repurchase and advocacy. In this context, trust is not merely an add-on to good service but the relational bridge that translates quality perceptions into sustainable behavioral loyalty, especially in situations where consumers rely on reputation and consistency rather than direct verification (Bricci et al., 2016; Rather, 2018).

Mediation Analysis

Mediation analysis is commonly used to test the degree to which an intervening variable explains the association between an independent variable and a dependent variable. Although Baron and Kenny (1986) proposed an early framework for testing mediation using sequential regression, recent methodological work has identified important limitations of this approach, including its reliance on the assumption that indirect effects are normally distributed (Zhao et al., 2010). To overcome this constraint, Preacher and Hayes (2008) proposed the use of bootstrapping. Bootstrapping is a resampling-based method that produces bias-corrected confidence intervals without assuming normality. It is particularly appropriate for small and medium sample sizes. Hayes (2018) extended this methodology to develop the PROCESS macro, which runs bootstrapping

on a set of prespecified models. In this study, Model 4 was used to estimate a simple mediation model in which an independent variable has both a direct and an indirect effect (through a single mediator) on a dependent variable. This method has been extensively employed in the service quality and customer behavior literature to investigate trust as a mediating variable between service quality and loyalty (Carranza et al., 2018; Chao et al., 2023; Ibrahim et al., 2019).

Synthesis

The literature on utility, hospitality, food service, and financial service contexts consistently highlights the interdependence of service quality, customer trust, and customer loyalty. Trust is the psychological mechanism that converts quality perceptions into long-term loyalty. However, most of this evidence comes from banking, hospitality, and e-commerce contexts, and few studies have examined this mechanism in small, essential, health-sensitive service businesses such as water refilling stations (Effendi et al., 2022; Oeria, 2016; Tangaja et al., 2021). This study adds to the existing literature by exploring the mediating effect of customer trust on the relationship between service quality and customer loyalty at the DC Water Refilling Station in Roxas, Zamboanga del Norte, thus providing context-specific evidence to a body of literature that has so far been situated in larger-scale or non-essential service industries.

METHODOLOGY

Research Design

This study employed a quantitative correlational design to evaluate the mediating influence of customer trust on the relationship between service quality and customer loyalty at the DC Water Refilling Station in Roxas, Zamboanga del Norte. Descriptive statistics were initially used to describe service quality, customer trust, and customer loyalty, and Spearman's rho correlation was then used to test the strength and direction of the associations among the three variables because the data were ordinal and obtained through a five-point Likert scale (Hauke & Kossowski, 2011). The hypothesized mediation was then investigated using Hayes's PROCESS macro (Model 4) with bootstrapping (Hayes, 2018; Preacher & Hayes, 2008), which estimates the direct and indirect effects of service quality on customer loyalty through customer trust.

Population and Sampling

The population of the study comprised all consumers of the DC Water Refilling Station in Pres. Manuel Roxas, Zamboanga del Norte, who had used its services for at least three consecutive months. These consumers were assumed to be in a position to provide knowledgeable and accurate feedback about their impressions of service quality, trust/commitment, and loyalty. The list of eligible consumers was generated from the customer logbook and delivery order records of the DC Water Refilling Station, which the station keeps on a regular basis to monitor repeat customers and container refill activities. From these records, clients who had used the services of the station for at least three consecutive months were selected, resulting in 400 qualifying customers who served as the respondents of this study.

Census sampling was used in this study since the total number of qualified clients was manageable. This means that all 400 clients who met the inclusion criteria, being 18 years old and above, being regular users of the DC Water Refilling Station in Pres. Manuel Roxas, Zamboanga del Norte, for a minimum of three months, and having adequate experience to provide genuine insights, were included as respondents. Census sampling provides complete coverage of the target population and captures the opinions of all eligible customers rather than those of a random selection.

Creswell and Creswell (2018) state that census sampling is appropriate when the population is small and accessible, such that the entire population may be surveyed, which increases representativeness and eliminates sampling error. Nanjundeswaraswamy and Divakar (2021) also supported this, stating that the census method is most ideal when the population size is small, since it ensures exact and precise data coverage of the entire population.

Profile of Respondents

The demographic profile of respondents in terms of sex was examined to ensure balanced representation in the study. The distribution of respondents by sex is presented in Table 1.

Table 1. Demographic Profile of Respondents (Sex)

Sex	**Frequency**	**Percentage**
Male	200	50%
Female	200	50%
Total	**400**	**100%**

Table 1 shows that the respondents are evenly distributed in terms of sex, with 200 males (50%) and 200 females (50%) making up the total sample of 400 respondents. This balanced representation ensures that the information acquired on service quality, customer trust, and customer loyalty is not biased toward any specific sex, thereby improving the validity and generalizability of the study's conclusions.

Although the survey instrument (Appendix A) also collected respondent age, this variable was excluded from the demographic profile on the recommendation of the panel, and the demographic analysis was therefore limited to sex distribution.

Research Instrument

The instrument was not developed from scratch; it was adapted from three previously validated sources: the SERVQUAL scale (Parasuraman et al., 1988) for service quality, the trust–commitment instrument by Mosavi and Ghaedi (2012) for customer trust, and the loyalty scale by Bobâlcă et al. (2012), based on Oliver's (1999) cognitive–affective–conative–action model, for customer loyalty. The adaptation process involved rephrasing items to fit the context of a water refilling station (e.g., replacing references to hotel staff or bank transactions with water delivery, container handling, and vending machine service) while retaining the original number of items and response format for each construct. The instrument was divided into four sections: Section A collected the demographic data of the respondents (name [optional], sex, and age); Section B measured perceived service quality across the five SERVQUAL dimensions; Section C measured customer trust and commitment; and Section D measured customer loyalty across four dimensions, all rated on a five-point Likert scale. The complete survey instrument is presented in Appendix A.

Validation and Reliability

Content validity was established by five expert validators in marketing, service management, and research methodology, who rated the relevance of each item on a four-point scale. The average rating of the instrument was 3.72, and the content validity index was 0.93, which is greater than the cutoff point of 0.80 suggested by Polit and Beck (2006) and Lynn (1986). Internal

consistency reliability was then tested by piloting the questionnaire on respondents outside the main sample. The entire instrument had a Cronbach's alpha of 0.972, a split-half (odd–even) correlation of 0.954, and a Spearman–Brown prophecy coefficient of 0.977, all of which indicate excellent internal consistency for the instrument as a whole (Corder & Foreman, 2014; Field, 2018). Construct-level reliability was also examined to determine the internal consistency of each subscale separately. Cronbach's alpha was 0.942 for service quality (19 items), 0.905 for customer trust (9 items), and 0.911 for customer loyalty (10 items). All three values exceed the 0.90 threshold recommended by George and Mallery (2019), indicating excellent internal consistency for each construct individually, in addition to the instrument as a whole.

Data Collection Procedure

Following expert validation and pilot reliability testing, structured questionnaires were personally administered by the researcher to the 400 eligible customers of the DC Water Refilling Station. Completed questionnaires were coded and tabulated for statistical analysis.

Statistical Treatment

The demographic profile of the respondents was described using frequencies and percentages, as presented in Table 1. The rating data were collected on a five-point Likert scale, and weighted means were computed to describe perceived service quality, customer trust, and customer loyalty. To ensure a consistent basis for interpretation across all variables, the following standardized scale was applied uniformly to all constructs and dimensions:

Table 2. Standardized Likert Scale Interpretation

Mean Range	Verbal Interpretation	Description
4.21 – 5.00	Very High	Respondents consistently perceive the indicator very positively.
3.41 – 4.20	High	Respondents generally perceive the indicator positively.
2.61 – 3.40	Moderate	Respondents perceive the indicator with some reservations.
1.81 – 2.60	Low	Respondents generally perceive the indicator negatively.
1.00 – 1.80	Very Low	Respondents consistently perceive the indicator very negatively.

This standardized scale replaces the varied descriptive labels used across tables in earlier drafts (e.g., "Efficient," "Good Caring," "Positive Cognitive Belief") to ensure a single, consistent basis of interpretation for all variables in this study.

Spearman's rho correlation was used to assess the significance and strength of the relationships among service quality, customer trust, and customer loyalty, as it is suitable for ordinal Likert-scale data and does not assume normality (Dancey & Reidy, 2017; Hauke & Kossowski, 2011). The mediating effect of customer trust was tested using Hayes's (2018) PROCESS macro (Model 4). To examine the significance of the indirect effect (a × b), bootstrapping (5,000 resamples) with bias-corrected 95% confidence intervals was used. An indirect effect was considered statistically significant if the confidence interval did not include zero. All correlations and the mediation model were assessed at the .05 level of significance.

Ethical Considerations

Informed consent was obtained from all participants prior to data collection, and respondent data were treated confidentially and used solely for academic purposes.

FINDINGS AND DISCUSSION

This section presents the results based on data from 400 customers of the DC Water Refilling Station in the Municipality of President Manuel Roxas, Zamboanga del Norte.

Levels of Service Quality, Customer Trust, and Customer Loyalty

Table 3. Summary of Perceived Service Quality

Dimension	N	Mean	SD	Interpretation
Tangibility	400	4.13	0.56	High
Reliability	400	4.12	0.65	High
Responsiveness	400	4.16	0.52	High
Assurance	400	4.1	0.63	High
Empathy	400	4.07	0.59	High
Overall	**400**	**4.11**	**0.47**	**High**

Among the five dimensions, responsiveness received the highest rating (M = 4.16, SD = 0.52), followed by tangibility (M = 4.13, SD = 0.56) and reliability (M = 4.12, SD = 0.65). Assurance (M = 4.10, SD = 0.63) and empathy (M = 4.07, SD = 0.59) received comparatively lower, though still positive, ratings. Overall, perceived service quality was rated high (M = 4.11, SD = 0.47).

Table 4. Summary of Customer Trust Level

Dimension	N	Mean	SD	Interpretation
Commitment	400	4.07	0.62	High
Trust	400	4.18	0.6	High
Overall	**400**	**4.13**	**0.61**	**High**

Trust (M = 4.18, SD = 0.60) was rated slightly higher than commitment (M = 4.07, SD = 0.62), with an overall customer trust mean of 4.13 (SD = 0.61), interpreted as high.

Table 5. Summary of Customer Loyalty Level

Dimension	N	Mean	SD	Interpretation
Cognitive	400	4.16	0.72	High
Affective	400	3.99	0.71	High
Conative	400	4.05	0.74	High
Action	400	4.13	0.65	High
Overall	**400**	**4.08**	**0.7**	**High**

Cognitive loyalty recorded the highest mean (M = 4.16, SD = 0.72), followed by action loyalty (M = 4.13, SD = 0.65), conative loyalty (M = 4.05, SD = 0.74), and affective loyalty (M = 3.99, SD = 0.71). Overall customer loyalty was rated high (M = 4.08, SD = 0.70).

Relationships Among Service Quality, Customer Trust, and Customer Loyalty

Table 6. Correlations Among Service Quality, Customer Trust, and Customer Loyalty (Spearman's Rho)

Variable Pair	rho	df	p
Service Quality – Customer Trust	.743***	398	< .001
Service Quality – Customer Loyalty	.733***	398	< .001
Customer Trust – Customer Loyalty	.710***	398	< .001

*Note. *** p < .001.*

Service quality showed a strong, statistically significant positive correlation with customer trust, $rs(398) = .743$, $p < .001$, and with customer loyalty, $rs(398) = .733$, $p < .001$. Customer trust, in turn, was strongly and positively correlated with customer loyalty, $rs(398) = .710$, $p < .001$. On this basis, the null hypotheses of no relationship between service quality and customer trust (H01), between service quality and customer loyalty (H02), and between customer trust and customer loyalty (H03) were all rejected at the .05 level of significance.

Mediating Role of Customer Trust

Table 7. Mediation Analysis Using Hayes's PROCESS Macro (Model 4)

Path	B	SE	Z	p	95% CI
Service Quality → Customer Trust (a)	0.855	0.038	22.5	< .001	[0.781, 0.930]
Customer Trust → Customer Loyalty (b)	0.477	0.05	9.47	< .001	[0.378, 0.576]
Service Quality → Customer Loyalty (c′, direct)	0.489	0.058	8.49	< .001	[0.376, 0.602]
Indirect Effect (a × b)	0.408	0.047	8.73	< .001	[0.316, 0.499]
Total Effect (c = c′ + a×b)	**0.897**	—	—	< .001	—

The indirect effect was estimated using bootstrapping with 5,000 bootstrap samples; 95% bias-corrected confidence intervals are reported. The total effect was computed as the sum of the direct effect (c' = 0.489) and the indirect effect ($a \times b$ = 0.408).

The findings show that customer trust partially mediates the association between service quality and customer loyalty. Service quality was a significant predictor of customer trust (B = 0.855, SE = 0.038, Z = 22.50, $p < .001$), and customer trust was a significant predictor of customer loyalty (B = 0.477, SE = 0.050, Z = 9.47, $p < .001$). The indirect effect of service quality on customer loyalty via customer trust was statistically significant, as the bootstrap confidence interval did not include zero (B = 0.408, SE = 0.047, 95% CI [0.316, 0.499]).

The percentage of the total effect explained by the indirect (mediated) pathway was computed using the formula % mediated = (indirect effect ÷ total effect) × 100. The total effect is

the sum of the direct effect (0.489) and the indirect effect (0.408), which equals 0.897. The indirect effect therefore accounts for 0.408 ÷ 0.897 = 45.5% of the total effect, and the direct effect accounts for the remaining 0.489 ÷ 0.897 = 54.5%. This shows that customer trust accounts for 45.5% of the overall relationship between service quality and customer loyalty.

The null hypothesis of no mediation by customer trust in the relationship between service quality and customer loyalty (H04) was rejected, as the 95% bootstrapped confidence interval of the indirect effect did not include zero. The results suggest partial rather than full mediation, as the direct effect of service quality on loyalty remained considerable in the presence of customer trust.

Discussion

The discussion that follows interprets the findings in light of the cross-sectional design of the present study, in which all variables were measured at a single point in time; consistent with this design, the analysis evaluates associations among service quality, trust, and loyalty rather than causal relationships.

Service Quality

The overall service quality of the DC Water Refilling Station was perceived positively by customers (M = 4.11, SD = 0.47), with all five SERVQUAL dimensions falling into the high range. Responsiveness was the top-ranked dimension, suggesting that customers were particularly attentive to the speed of service and the willingness of personnel to handle complaints in the context of a necessity-based product. Similarly, the high ratings for tangibility and reliability suggest that customers perceived the station's facilities, equipment, and consistency of delivery as meeting or exceeding expectations. These results are consistent with evidence that responsiveness and waiting time are salient quality cues that signal operational competence (Lekhawichit et al., 2021) and with findings from a Philippine water cooperative context that functional dimensions such as reliability and responsiveness are central to retention (Tangaja et al., 2021).

Assurance and empathy, while still rated favorably, had comparatively lower values. This pattern aligns with past research showing that empathy is a meaningful predictor of customer satisfaction and loyalty, although it is generally rated lower than operational dimensions (Bahadur, 2018). It indicates that the DC Water Refilling Station can improve by enhancing the relational, people-oriented aspects of service, building on its already strong operational performance. Given the health-sensitive nature of water, even slight improvements in staff confidence and empathy could potentially strengthen the perceived safety, and thus the trust, that consumers have in the supplier, although this study did not directly examine that possibility.

Customer Trust

Overall customer trust was assessed as high (M = 4.13, SD = 0.61), with trust (M = 4.18) rated somewhat higher than commitment (M = 4.07). This pattern is consistent with commitment–trust theory (Morgan & Hunt, 1994) and with social exchange accounts of trust as the product of consistently positive exchanges (Blau, 1964). Customers seem to evaluate the DC Water Refilling Station as honest and dependable before expressing a stronger sense of ongoing attachment to it. This cognitive form of trust is particularly crucial in the water delivery context, since consumers cannot directly verify the purity or safety of the water. In this context, confidence in the provider substitutes for the ability to inspect the product directly. The somewhat lower, but still positive, commitment ratings may reflect the more transactional nature of water refilling compared with relationship-intensive services, in line with the view that trust and commitment jointly, rather than independently, shape the strength of service quality–loyalty relationships (Moreira & Silva, 2015).

Customer Loyalty

Customer loyalty was evaluated as high overall (M = 4.08, SD = 0.70), with cognitive loyalty ranked highest, followed by action, conative, and affective loyalty. This ordering does not contradict Oliver's (1999) four-stage loyalty model, which describes a developmental sequence rather than a ranking of mean scores at one point in time. Instead, it suggests that customers of this water refilling station have progressed through the cognitive-to-action loyalty sequence, while emotional attachment develops somewhat more slowly. This is in line with previous evidence that, in need-driven, utilitarian service contexts, cognitive and behavioral loyalty tend to be stronger than emotional attachment (Kyurova & Koyundzhiyska-Davidkova, 2021). It is also consistent with the view that genuine loyalty is best observed when attitudinal and behavioral elements converge (Dick & Basu, 1994), which appears to be the case here, since all four dimensions remained within the high range.

Factors other than service quality and trust also merit consideration. In a small municipality with few registered water refilling providers, some of the observed loyalty may be due to convenience and limited competition rather than active relational preference. Similarly, since water purchases are repetitive and routine, habitual buying patterns could contribute to some of the high action and conative loyalty scores independent of trust. The current design cannot distinguish between these potential explanations and the trust-based mechanism investigated here, and future research incorporating competitor comparisons or habit-strength measures might help clarify their relative contribution.

Relationships and Mediation

The correlation results showed strong and statistically significant relationships among service quality, customer trust, and customer loyalty. The mediation analysis showed that customer trust partially mediates the relationship between service quality and customer loyalty, explaining an estimated 45.5% of the total effect, while the direct effect of service quality on loyalty explained the remaining 54.5%. Although service quality was a strong predictor of trust in this study, it should not be regarded as the sole antecedent of trust. Other unmeasured variables, such as price fairness, perceived value, or prior experience, may also contribute to trust formation but were outside the scope of this study. The results provide statistical evidence consistent with the partial mediation of customer trust, in line with similar mediation patterns reported in essential service environments (Harun & Herlina, 2022), banking services (Windarti et al., 2020), and health-related services such as water provision, where service quality has been shown to enhance trust, which subsequently supports loyalty and commitment (Utami et al., 2024a).

Given the cross-sectional nature of the data, these findings position trust as a relational mechanism through which service quality relates to customer loyalty, rather than as a guarantee of enduring customer loyalty. Overall, the findings suggest that good operational performance. particularly responsiveness, tangibility, and reliability, is related to loyalty both directly and indirectly through the trust it builds, emphasizing the importance of managing both the functional and relational aspects of service in critical, health-relevant service settings such as water refilling stations.

CONCLUSIONS

The study was conducted to determine the interrelationships among perceived service quality, customer trust, and customer loyalty at the DC Water Refilling Station in Roxas, Zamboanga del Norte. Customers rated service quality highly, particularly its responsiveness, tangibility, and reliability, and these impressions were related to high levels of customer trust. Trust, in turn, was

strongly related to customer loyalty, implying that customers' confidence in the service provider's reliability, honesty, and dedication forms the foundation for their continued patronage.

The findings offer context-specific, rather than strictly causal, evidence that customer trust mediates part of the link between service quality and customer loyalty in this small, essential-service context. Due to the cross-sectional, single-site methodology, these results should be considered initial empirical evidence rather than a generalizable model of water refilling stations as a category. In terms of managerial implications, customer trust is best understood here as a relational dimension that operators can purposefully develop rather than as a proven causal component of customer retention. This highlights the need to address both the operational and relational elements of service delivery in order to sustain repeat consumption and long-term client engagement.

The results provide initial empirical evidence that the combined effect of improved service quality and customer trust can support customer loyalty at this water refilling station, with statistical evidence consistent with the function of customer trust as a partial mediating mechanism. Although managerial implications are emphasized here, broader generalization, including any policy implications, will depend on replication across additional water refilling suppliers, as the data were drawn from a single site. Water refilling service providers can build confidence and client loyalty through timeliness, reliability, and tangible quality, and through investment in relational elements of service such as assurance and empathy. These insights can inform management practice, guide service improvement efforts, and provide a starting point for further study in comparable small-scale essential-service settings.

Practical Recommendations

Based on these findings, the DC Water Refilling Station and similar small-scale water refilling businesses may consider (a) maintaining responsive, reliable, and well-presented service through consistent delivery schedules, prompt responses to customer concerns, and well-maintained equipment and facilities; (b) strengthening trust-building practices through open communication, transparent handling of complaints, and consistent product quality assurance; (c) investing in relational and interpersonal training for staff to improve assurance and empathy, given that these were the comparatively lower-rated dimensions of service quality; and (d) establishing a regular system for collecting and reviewing customer feedback to guide continuous service improvement.

LIMITATIONS AND FURTHER RESEARCH

The study was conducted among the clients of a single water refilling station in Roxas, Zamboanga del Norte, which limits the generalizability of the findings to other geographic areas, providers, or operating circumstances. The cross-sectional, single-site design means that the relationships revealed here should be viewed as associations observed at a specific point in time rather than as evidence of how service quality, trust, and loyalty evolve over a longer period. Self-reported survey data may also be subject to social desirability bias or subjective interpretation. The study was based on quantitative indicators only and did not include a qualitative component that might have captured the effect of individual staff interactions or particular service experiences on trust and loyalty. The study also did not evaluate other factors influencing consumer loyalty, such as pricing, competition, and demographic differences.

Future research could extend this model by incorporating additional marketing variables such as customer satisfaction, perceived value, brand image, price fairness, perceived safety, and digital engagement, any of which may help explain loyalty beyond service quality and trust alone.

Multi-site and longitudinal studies, in particular, would provide stronger evidence of how customer trust and loyalty develop over time and across different water refilling operators. As small service businesses increasingly adopt digital payment and ordering tools, research into online and mobile-based customer engagement (Chayomchai, 2021b; Kaur et al., 2020) could also clarify whether trust formation in this sector is shifting alongside broader digital adoption.

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