

Impact of Service Quality on Brand Loyalty: Moderating Role of Personality Traits

Omair Nadeem,
Excel Marketing Services, Islamabad, Pakistan
Email: omair.nadeem00@gmail.com

ABSTRACT

The research explores how service quality affects brand loyalty in Pakistan's fast-food restaurants while studying how personality traits influence these relationships. The research used SERVQUAL to gather survey responses from 300 fast-food customers at major chains before applying PLS-SEM for relationship validation and predictive power assessment. The research demonstrates that service quality acts as a key positive factor which drives brand loyalty because it maintains customer dedication in competitive service markets. The way people respond to service encounters depends on their personality characteristics. Customers who are conscientious base their loyalty decisions on service reliability and accuracy. The loyalty of agreeable customers increased when they received empathetic and fair treatment from staff while extraverted customers demonstrated stronger loyalty when they experienced responsive and assured service because they value social connections. The research adds value to marketing knowledge by uniting psychological elements with service quality assessments in Pakistan's fast-food market. Organizations should create customized training programs and service recovery systems and innovative solutions which match different personality types to build stronger customer loyalty and market competitiveness.

Keywords: Service Quality, Brand Loyalty, Personality Traits, SERVQUAL

conflict of Interest: N/A

Funding Acknowledgment: No funding was received for this research

Copyright: The Authors



licensed under a Creative Commons Attribution 4.0 International License.

1. INTRODUCTION

The fast-food industry operates as one of Pakistan's fastest-growing service sectors which continues to expand at a rapid pace. Fast food sales have shown substantial growth during the last ten years because urban expansion occurred and employment rates rose and consumers started choosing different eating options. The fast-food market in Pakistan features both international chains like McDonald's and KFC and Pizza Hut and Domino's and local brands including OPTP and Savour Foods and Fri-Chiks and Broadway Pizza. Organizations need to focus on service excellence because operational efficiency no longer serves as a market differentiation.

The service experience determines customer satisfaction more than the actual product in service-based industries which include fast food. Customers want their orders to arrive quickly while they expect staff members to be friendly and the dining area to be clean and for the restaurant to maintain consistent service standards. The delivery of incorrect orders together with delayed service times will drive customers to leave the business. Service quality stands as the main factor which creates brand loyalty because it helps organizations sustain ongoing revenue streams and win back lost customers during market battles against competitors (Khan, Noon & Khan 2024).

Businesses identify brand loyalty as their most valuable asset which exists beyond physical resources. The extended financial benefits of loyal customers result in lower marketing costs and better customer retention and positive customer recommendations (Aaker, 1991; Rosenberg & Czepiel, 1984). The fast-food industry requires strong customer loyalty because customers can easily switch to different restaurants since they have numerous available options. Customer loyalty development patterns show different patterns between individual consumers. Research indicates that psychological elements including personality traits affect how people experience service quality and their reactions to service interactions (Piacentini & Mailer, 2004; Goldsmith & Foxall, 2002).

The Five-Factor Model of personality consists of five dimensions which include openness and conscientiousness and extraversion and agreeableness and neuroticism to explain individual consumer behavior patterns (Costa & McCrae, 1992; Costa & McCrae, 2008). Customers who value reliability and consistency in their service experiences tend to be conscientious while extraverted customers prefer interactive service environments and agreeable customers value empathetic

communication and neurotic customers show extreme sensitivity to service breakdowns. Research on Pakistan has not fully investigated how personality traits affect the service quality to brand loyalty connection in the fast-food industry. The present research deficit prevents theoretical advancement while blocking managers from developing particular service methods which suit various customer segments.

The research investigates which personal characteristics of Pakistani fast-food customers unites psychological principles with service quality evaluation methods to develop improved knowledge about loyalty growth in high-speed service settings. Literature posits that research studies about service quality and customer loyalty in Pakistan mostly focused on banking and telecommunications and hospitality sectors which operate with different service delivery systems than fast food (Malik, Ghafoor, & Iqbal 2012). The fast-food industry has experienced fast growth yet scholars have dedicated insufficient research to its distinctive service delivery needs. Research studies about service quality evaluation tend to ignore individual psychological differences which affect customer loyalty behaviors (Costa & McCrae, 1990). The Pakistani research field lacks studies which investigate how personality traits affect customer loyalty behaviors in fast-food restaurants that operate with brief high-volume time-sensitive service encounters. There is need to heed the call for research in this area.

2. LITERATURE REVIEW

Service Quality and Brand Loyalty

Research shows that service quality stands as the main factor which determines customer satisfaction and brand loyalty. The SERVQUAL model contains five service quality dimensions which customers apply to assess their service experiences (Parasuraman, Zeithaml, & Berry, 1988). Service quality delivery at consistent levels leads customers to develop repeat business habits and brand recommendations and resistance against competitor switches (Amoozegar Falahat, Wang & Anjum 2025). Research conducted in Pakistan demonstrates that service quality directly affects customer loyalty according to studies. Studies across banking and telecom and hospitality industries show that dependable service answers create better customer relationships which extend their duration (Halim, Salem, K., Tawfik, H., & Maree, 2025; Habib Islam, Parvin, Hassan & Asaf-Ud-Duala 2025). According to Yiğitoğlu, Şahin, Güneri, & Demir (2025)

hotel and restaurant customer loyalty depends on two vital elements which are tangibility and assurance. Research conducted on Pakistan's fast-food sector shows that customers will become more loyal to brands when they experience quick service and well-prepared food and clean facilities and exceptional staff assistance. Research across the world shows that fast-food customers evaluate their satisfaction through three main factors which include service speed and cleanliness standards and product consistency Ellitan & Edgar (2024). Research findings show service quality stands as the main factor which drives customer loyalty thus validating the first hypothesis of this study.

Personality Traits

People use their personality traits to understand how they will react to different service experiences. The Big Five model serves as the primary framework to study psychological differences through its five dimensions which include openness and conscientiousness and extraversion and agreeableness and neuroticism (Costa & McCrae, 1992).

People who identify as open-minded tend to show interest in new things and prefer to experience different things. Open consumers show greater interest in new menu items and digital service platforms and creative service designs (Smith & Brown 2022). The openness of consumers leads to higher brand loyalty because businesses that offer multiple products and technological progress.

People who show conscientiousness demonstrate discipline through their organized actions. Service quality attributes which include accuracy and reliability and timeliness attract consumers who demonstrate conscientious behavior. Research indicates that people who show conscientiousness develop stronger satisfaction and loyalty when services operate with consistency (Hadi, Widyastuti, & Darmansyah 2025).

People who exhibit extraverted personality traits show social skills and they find pleasure in social interactions. Extraverted customers build loyalty through their positive encounters with staff members and their choice of active restaurant environments and interactive service experiences Matzler Faullant, Renzl, & Leiter (2005).

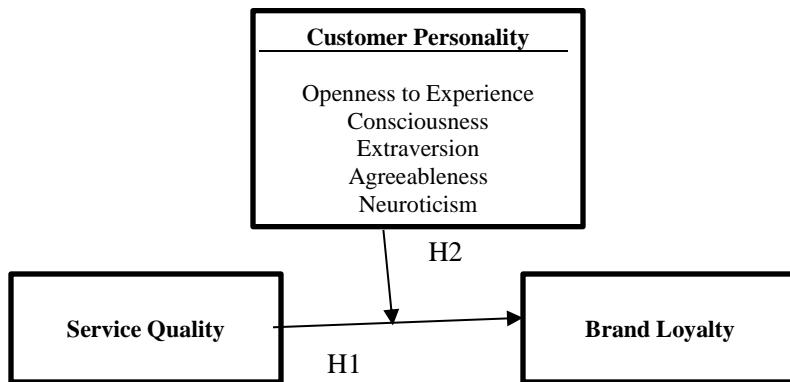
People who exhibit agreeable behavior tend to show cooperative behavior and they trust others and demonstrate empathy. People who are agreeable in nature develop positive responses to polite service and fair treatment and staff politeness which helps them forgive small service mistakes (Azzahara et al., 2024). People who have neurotic tendencies experience emotional instability which makes them

more sensitive to negative service experiences. Customers who have high neuroticism levels experience extreme reactions to service failures which leads to decreased customer loyalty even though the service quality remains at an acceptable level (Damaschi, Aboueldahab, & D'Addario 2025). Research indicates that people respond differently to service encounters because their individual personality traits vary between people. The research provides theoretical support for studying how personality traits affect service quality-loyalty connections.

Personality Traits as Moderators in the Service Quality–Loyalty Relationship

Service quality leads to customer loyalty but people do not react equally to service encounters. Research shows that personality characteristics affect how customers experience service quality which affects their loyalty responses. Open consumers reward novelty and innovation. Research shows that customers who welcome change will become more loyal when restaurants introduce new menu items and digital ordering systems and creative service formats but these innovations do not impact customers who oppose change (Smith & Brown, 2022). Reliable and accurate services attract conscientious customers who develop stronger bonds with brands. Research indicates that customers who value reliability and accuracy in their service experiences will develop stronger loyalty bonds with their service providers (Azzahra, Andriany, & Shohib, 2024). Frontline staff who deliver friendly service build stronger loyalty bonds with customers who have an extraverted personality type (Matzler et al., 2005; Mooradian & Swan, 2006). demonstrated that customers who exhibit extraverted personality traits build stronger loyalty connections through positive interactions with front-line service personnel. Agreeable customers will stay loyal to businesses which provide respectful and compassionate service even when they experience small service problems (Azzahra, et al., 2024). Neurotic customers experience more severe impacts from service failures which reduces the effectiveness of service quality in building customer loyalty (Matzler, et al., 2005).

3. THEORETICAL FRAMEWORK

**Figure 3.1** Perceived Model

The research framework combines SERVQUAL theory (Parasuraman et al., 1988) with the Big Five model (Costa & McCrae, 1992). The model demonstrates that service quality as independent variable leads to brand loyalty as dependent variable and observes how personality characteristics affect the relation between service delivery and brand loyalty in fast food industry. Thus, the study hypothesizes that:

H1: Service quality creates positive effects on brand loyalty within Pakistan's fast-food industry.

H2: Customer Personality traits moderate the relationship of Service Quality and Brand Loyalty.

4. METHODOLOGY

Research Design

The research design used a quantitative approach with cross-sectional survey methodology to study service quality effects on brand loyalty while personality traits functioned as moderating factors. The research design used quantitative methods because they allow researchers to convert service quality and customer loyalty and personality traits into measurable data for statistical analysis. Prior research in consumer behavior, particularly in service quality and loyalty, has consistently relied on structured questionnaires and quantitative techniques to gather reliable and generalizable insights (Hadi et al., 2025).

The cross-sectional design indicates that data were gathered at a single point in time instead of across multiple periods. This choice was made due to its practicality and efficiency. The fast-food industry of Pakistan undergoes rapid transformation so studying customer opinions at one specific moment reveals current service quality and customer loyalty patterns. The method of cross-sectional surveys works effectively for studying how personality traits affect customer behavior because these traits remain constant throughout time.

The research followed a positivist approach because it believes customer actions can be quantified through objective methods and statistical tools can analyze variable connections. The survey method proved most suitable because it enables researchers to gather responses from numerous participants during a brief period. By focusing on structured questions, the research reduced subjectivity and enhanced the replicability of findings.

Population and Sampling

Target population for this study comprised customers of fast-food restaurants operating in Pakistan's urban centers. Three major metropolitan cities Islamabad, Lahore, and Karachi were selected. These cities are home to the country's largest consumer markets and represent diverse cultural, social, and economic demographics. Moreover, they host a mix of international franchises (such as McDonald's, KFC, and Pizza Hut) and domestic chains (such as OPTP, Fri-Chiks, and Broadway Pizza), ensuring a balanced representation of the sector.

A non-probability purposive sampling strategy was applied. Unlike probability sampling, which relies on random selection, purposive sampling ensures that participants meet pre-specified criteria in this case, having prior experience with fast-food services. This approach was justified because the research aimed to collect meaningful evaluations of service quality and loyalty, which could only be provided by actual customers of fast-food outlets.

Total 350 questionnaires were distributed through both in-person and online channels. Out of these, 300 were returned complete and usable, yielding a strong response rate of 85%. This sample size was considered robust, as it not only exceeded the commonly applied threshold of 200 respondents for survey-based studies but also met the "10-times rule" recommended for Structural Equation Modeling (Hair, Risher, Sarstedt, & Ringle, 2019). In line with established guidelines, the minimum required sample size should be at least ten times greater than the maximum number of structural paths leading to any construct in the research framework. The majority of participants in the study belonged to the 18-

35 age range because this age group represents the primary consumer base for Pakistan's fast-food industry. The research participants consisted of both male and female customers who mainly belonged to student and young professional groups and middle-income families. The study population accurately represents the demographic that consumes fast food the most actively.

Measurement Instruments

The research employed validated measurement tools from previous studies which researchers adapted to suit the fast-food industry in Pakistan. The implementation of established measurement tools enhanced both the reliability and validity and comparison potential of the research outcomes. The SERVQUAL scale (Parasuraman, et al., 1988) measured service quality through its five established dimensions which include tangibility and reliability and responsiveness and assurance and empathy. The assessment included two statements which demonstrated reliability through "The restaurant delivers orders on time" and tangibility through "The restaurant maintains cleanliness in its dining areas." The research used in Altaf, Tanveer, Mustafa & Mushtaq (2019) scales to evaluate brand loyalty through three dimensions of customer preference and word-of-mouth and purchase intention. The survey included two statements which asked participants about their brand loyalty through "I plan to keep purchasing from this brand and I would suggest this brand to others. The Big Five Inventory (BFI-44) developed by Costa and McCrae (1992) served as the instrument to assess personality traits. The instrument assesses five personality traits which include openness and conscientiousness and extraversion and agreeableness and neuroticism. The survey included two statements to measure personality traits where participants rated themselves as talkative for extraversion and dependable for conscientiousness. The survey participants used a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) to provide their responses. The researchers selected Likert scaling because it provides simple measurement while being widely accepted and effective for detecting different levels of attitudes and perceptions.

Data Collection & Analysis Procedure

Data collection took place over two months in 2025 using both offline and online strategies to maximize coverage. Printed questionnaires were shared at well-frequented fast-food restaurants during busy hours, while digital surveys were circulated through platforms like WhatsApp and Facebook groups. The data

was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through Smart PLS 4.0. PLS-SEM was chosen over covariance-based SEM because of its reliability for moderation effect.

5. RESULT & FINDING

Descriptive Statistics

Descriptive analysis was conducted to evaluate general trends in responses before moving into hypothesis testing.

Table 5.1 Descriptive Statistics

Construct	Mean	SD
Service Quality	4.21	0.65
Brand Loyalty	4.05	0.72
Personality Traits	3.88	0.70

The mean score for service quality (4.21) was above the scale midpoint (3.0), suggesting that respondents generally perceived fast-food restaurants positively in terms of cleanliness, reliability, responsiveness, and staff behavior. Brand loyalty also scored relatively high ($M = 4.05$), indicating that customers expressed willingness to repurchase, recommend, and prefer their chosen brands. Personality traits ($M = 3.88$) revealed moderate variation across customers, providing sufficient diversity for testing the moderating role.

Measurement Model Assessment

Before testing hypotheses, it was necessary to establish the reliability and validity of the measurement model. The constructs were assessed using Cronbach's alpha (α), Composite Reliability (CR), and Average Variance Extracted (AVE).

Table 5.2 Measurement Model

Construct	Cronbach α alpha	CR	AVE
Service Quality	0.91	0.93	0.68
Brand Loyalty	0.88	0.91	0.66
Personality Traits	0.85	0.89	0.60

Cronbach's alpha and CR values for all constructs exceeded the threshold of 0.70, confirming strong internal consistency. AVE values ranged from 0.60 to 0.68, all above the recommended cutoff of 0.50, confirming that the indicators explained more than half of the variance in their respective constructs. Both the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT) test confirmed discriminant validity, as the square root of AVE for each construct was greater than its correlations with other constructs, and HTMT values were below the threshold of 0.85. These results collectively confirm that the measurement model was robust and suitable for hypothesis testing.

Structural Model Results

Structural Equation Modeling (SEM) was performed to test the hypothesized relationships between service quality, brand loyalty, and the moderating role of personality traits.

Table 5.3 Structural Model Results

Hypothesis	Path	Beta	T value	P value	f ²	Q ²	R ²
H1	SQ → BL	0.58	9.21	0.00	0.35	0.41	0.52
H2	SQ × PT → BL	0.14	2.35	0.01	0.07	0.12	0.52

The interaction term between service quality and personality traits was positive and significant ($\beta = 0.14$, $p < 0.05$). Although the effect size was smaller ($f^2 = 0.07$), it remained meaningful. This result demonstrates that personality traits influence the extent to which service quality translates into loyalty, adding psychological depth to the analysis. To better understand the moderating effects, each personality trait was examined individually to highlight its distinct role in shaping the service quality–brand loyalty relationship. The Variance Inflation Factor (VIF) results for all constructs showed values under 3.0 which proved that multicollinearity did not affect the study. The results from 5,000 bootstrap resamples confirmed the stability of the estimated values.

6. DISCUSSION

The research investigates how service quality affects brand loyalty in Pakistan's fast-food industry while showing how personality traits affect this

relationship. The study unites SERVQUAL model with Big Five personality framework to solve a major deficiency in Pakistani consumer behavior research while creating new insights for international service management and consumer psychology fields. The study shows service quality creates an excellent foundation for customer loyalty development yet psychological customer traits affect their service perception which leads to different behavioral responses at $\beta = 0.58$ ($p < 0.001$). Previous research shows that customers maintain brand loyalty when companies provide reliable and fast and accurate service delivery. The R^2 value of 0.52 shows that service quality explains more than half of all brand loyalty variations. The study proved that personality traits function as moderators which determine how customers transform service quality into loyalty ($\beta = 0.14$, $p < 0.05$). The research shows that customers have distinct reactions to service quality because their psychological characteristics determine their loyalty behavior. Customers who demonstrate responsible conduct will maintain their loyalty to businesses when these organizations provide dependable and consistent service quality. The research study expands our knowledge about SERVQUAL model operations through its findings about how personality traits affect its performance. The research confirms that the Big Five framework works well for forecasting consumer actions in new market environments. The research fills an essential knowledge gap in Pakistani studies because most existing research focuses on banking and hospitality and telecommunications services instead of the expanding fast-food industry.

6. CONCLUSION AND IMPLICATIONS

The research investigated service quality effects on brand loyalty in Pakistan's fast-food sector by studying how personality traits influence this relationship. The research used SERVQUAL and Big Five personality models to achieve its findings. The research confirmed that service quality functions as a positive factor drives brand loyalty in the fast-food industry. Customers who experience high levels of tangibility and reliability and responsiveness and assurance and empathy will stay loyal in this competitive market where customers face low barriers to switch between brands. The research shows that personality traits affect how service quality affects customer loyalty. Service quality leads to stronger customer loyalty among customers who display conscientiousness and extraversion and agreeableness but openness only creates loyalty when customers experience new

things. The company will lose customer loyalty because neurotic customers tend to get upset when service failures occur. The research demonstrates that service delivery quality affects customer loyalty but individual psychological characteristics between customers influence their loyalty responses.

The research adds theoretical value through its demonstration of personality effects on service quality-loyalty relationships and its validation of Big Five personality traits in developing markets and its development of service industry-specific marketing theories. The research results demonstrate that fast-food businesses must use personality-based marketing approaches to enhance their service quality and protect customer loyalty. The marketing strategy for conscientious customers' needs to provide dependable information but extraverted customers will engage more with social and interactive content. Service organizations need to achieve operational excellence through training programs which teach staff to develop relationship-building abilities including empathy and politeness. Businesses can keep their neurotic customers while drawing in customers who want new things through their implementation of quick service recovery systems and their digital innovations and menu changes. Organizations that implement customer relationship management systems with personality data can develop personalized service approaches which result in higher customer loyalty.

The research findings indicate potential research directions which include studying different geographic areas and using combined research methods and studying new psychological factors and multiple service industries. Academic research about digital service quality and personality traits presents an attractive area for upcoming academic studies. Service quality serves as the main factor which drives customer loyalty yet it produces different reactions from various consumer groups. Fast-food brands can create successful loyalty programs through service strategies which understand psychological differences between customers to deliver personalized experiences in Pakistan's competitive market.

REFERENCES

- Aaker, D. A. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. Free Press. Retrieved from https://books.google.com.pk/books?hl=en&lr=&id=r_TSY5sxnO8C&oi=fnd&pg=PT10.

- Altaf, M., Tanveer, M., Mustafa, F., & Mushtaq, N. (2019). Relationship of Service Quality and Consumer Loyalty: Moderating Role of Consumer Perception of Public Relationship. *Paradigms*, 13(1), 25-31.
- Amoozegar, A., Xu, L. J., Falahat, M., Wang, Y., & Anjum, T. (2025). Service quality and customer satisfaction using SERVQUAL model: Restaurant industry in Malaysia. *International Journal of Innovative Research in Social Sciences*, 8(5). <https://doi.org/10.53894/ijirss.v8i5.8857>.
- Azzahra, Z., Andriany, D., & Shohib, M. (2024). Big five personality and consumer trust: The impact on consumer loyalty. *KnE Social Sciences*, 503-515.
- Costa, P. T., Jr., & McCrae, R. R. (1990). Personality disorders and the five-factor model of personality. *Journal of Personality Disorders*, 4(4), 362–371. <https://doi.org/10.1521/pedi.1990.4.4.362>.
- Costa, P. T., Jr., & McCrae, R. R. (2008). The Revised NEO Personality Inventory (NEO-PI-R). In G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *The SAGE handbook of personality theory and assessment* (Vol. 2, pp. 179–198). Sage Publications. <https://doi.org/10.4135/9781849200479.n9>
- Damaschi, G., Aboueldahab, A., & D'Addario, M. (2025). Decomposing brand loyalty: An examination of loyalty subcomponents, product price range, consumer personality, and willingness to pay. *Behavioral Sciences*, 15(2), 189. <https://doi.org/10.3390/bs15020189>.
- Ellitan, L., & Edgar, T. (2024). The influence of food quality and service quality on repurchase intention through customer satisfaction. *Journal of Entrepreneurship & Business*, 5(2), 90–105.
- Goldsmith, R. E., & Foxall, G. R. (2002). *Consumer psychology for marketing* (2nd ed.). Thomson Learning. https://www.researchgate.net/publication/278016938_Consumer_Psychology_for_Marketing.
- Habib, S. N., Islam, T., Parvin, M. H., Hassan, S. M. R., & Asaf-Ud-Daula. (2025). Impact of service quality on customer satisfaction in online food delivery services: Evidence from Bangladesh. *International Journal of Science and Business*, 46(1), 40–49. <https://doi.org/10.58970/IJSB.2594>
- Halim, Y., Salem, K., Tawfik, H., & Maree, A. (2025). Service quality as a driver of customer satisfaction and purchase intentions: A mixed-

- methods longitudinal study of the Egyptian Post Office (2013–2023). *Future Business Journal*, 11, 246. <https://doi.org/10.1186/s43093-025-00246>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hadi, S. S., Widyastuti, S., & Darmansyah, D. (2025). Consumer loyalty in Indonesia's fast-food industry: A systematic literature review of service quality, price fairness, satisfaction and word of mouth in the digital era. *Journal of Economics and Business Letters*, 5(3), 30–42. <https://doi.org/10.55942/jebl.v5i3.574>
- Khan, M. F., Noon, M. B. K., & Khan, M. A. (2024). Fostering purchase intentions through CSR and service quality: The role of customer satisfaction, brand loyalty, and admiration. *Sustainability*, 16(23), 10584. <https://doi.org/10.3390/su162310584>
- Malik, M. E., Ghafoor, M. M., & Iqbal, H. K. (2012). Impact of brand image, service quality and price on customer satisfaction in Pakistan telecommunication sector. *International Journal of Business and Social Science*, 3(23), 123–130.
- Matzler, K., Faullant, R., Renzl, B., & Leiter, V. (2005). The relationship between personality traits (extraversion and neuroticism), emotions and customer self-satisfaction. *Innovative Marketing*, 1(2), 32–39.
- Mooradian, T. A., & Swan, K. S. (2006). Personality-and-culture: National extraversion and WOM. *Journal of Business Research*, 59(6), 778–785. <https://doi.org/10.1016/j.jbusres.2006.01.019>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40. <https://www.scirp.org/reference/referencespapers?referenceid=1937458>
- Piacentini, M., & Mailer, G. (2004). Symbolic consumption in teenagers' clothing choices. *Journal of Consumer Behaviour*, 3(3), 251–262. <https://doi.org/10.1002/cb.138>.
- Rosenberg, L. J., & Czepiel, J. A. (1984). A marketing view of customer retention. *Journal of Consumer Marketing*, 1(2), 45–51. <https://doi.org/10.1108/eb008094>
- Smith, J. K., & Brown, L. M. (2022). The quest for novelty: Openness to

experience drives consumer behavior. *Journal of Consumer Behaviour*, 21(4), 789–801. <https://doi.org/10.1002/jocb.589>

Yiğitoğlu, V., Şahin, E., Güneri, B., & Demir, M. Ö. (2025). The impact of sustainable QR menus on service quality and customer satisfaction: The moderating role of perceived risk. *Sustainability*, 17(5), 2323. <https://doi.org/10.3390/su17052323>