



Influence of After-Sales Service Quality Factors on Customer Satisfaction in Kathmandu Valley

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Abstract

This study examines the influence of after-sales service quality factors on customer satisfaction in Kathmandu Valley. Customer satisfaction is the dependent variable. The selected independent variables are responsiveness, reliability, problem resolution, availability of service center and traceability. The primary source of data is used to assess the opinion of respondents regarding responsiveness, reliability, problem resolution, availability of service center, traceability and customer satisfaction. The study is based on primary data of 121 respondents. To achieve the purpose of the study, structured questionnaire is prepared. The correlation and multiple regression models are estimated to test the significance and importance of factors influencing after sales services of customer satisfaction in Kathmandu Valley.

The study showed a positive impact of responsiveness on customer satisfaction. It indicates that the quality of reacting quickly and positively leads to increase in customer satisfaction. Similarly, the study showed a positive impact of reliability on customer satisfaction. It indicates that quality of being trustworthy or of performing consistently leads to increase in customer satisfaction. Likewise, the study showed a positive impact of problem resolution on customer satisfaction. It indicates that promptly resolute the problems lead to increase in customer satisfaction. Further, the study showed a positive impact of availability of service centers on customer satisfaction. It indicates that availability of service center leads to better customer satisfaction. In addition, the study showed a positive impact of traceability on customer satisfaction. It indicates that ability to trace all processes from procurement of raw materials to production leads to increase in customer satisfaction.

Keywords: responsiveness, reliability, problem resolution, availability of service center, traceability, customer satisfaction

1. Introduction

Customer satisfaction plays a crucial role in the success of businesses, as it directly influences customer loyalty, repeat business, and overall brand reputation. In a competitive market, businesses must focus on not only delivering quality products but also ensuring high standards of after-sales service. After-sales quality factors, including reliability, availability of service centers, traceability, problem resolution, and responsiveness, are pivotal in shaping customer satisfaction. After-sales service is an essential component of customer experience, affecting their overall perception and loyalty toward a brand. Reliability refers to the consistency and dependability of the after-sales service, ensuring that customers' needs are met effectively. The availability of service centers and traceability further enhances customers' confidence in the brand, providing them with convenient solutions and transparent information about their products. Problem resolution and responsiveness are also critical, as they directly impact how quickly and efficiently issues are addressed. According to Grönroos (2000), after-sales service is an integral part of the total service experience,

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influencing customer perceptions and enhancing their loyalty toward the brand. Reliability is fundamental in maintaining trust, as it ensures that the service provided is consistent and dependable (Parasuraman *et al.*, 1988).

After-sales service quality is a key component of service marketing, which affects customer satisfaction by enhancing the overall customer experience. Reliability, which refers to the consistency of after-sales service performance, is crucial for maintaining trust and ensuring customer loyalty (Lovelock and Wirtz, 2007). Additionally, the availability of service centers is integral in offering customers convenient access to necessary repairs and services, thereby improving customer satisfaction (Keller, 2003). Traceability, which refers to the ability to track product status and service progress, also boosts customers' confidence in the brand's commitment to transparency and quality (Fornell *et al.*, 1996).

Susilo *et al.* (2020) examined the after-sales service to increase customer satisfaction: application of importance performance analysis method. The study identified that 6 out of 20 attributes related to after-sales service are perceived as unsatisfactory, while the remaining attributes were seen as moderately or fully satisfying by customers. Similarly, Tzeng *et al.* (2021) analyzed the factors affecting customer satisfaction on online shopping holiday. The study revealed that information quality, product quality, and savings enhance satisfaction, while product returns negatively affect it; however, good after-sale service helps improve satisfaction by easing the return process. Likewise, Wahjudi *et al.* (2018) assessed the impact of after-sales service quality on customer satisfaction and customer loyalty of middle-upper class landing housings. The study found that After-sales service quality positively impacts customer satisfaction, which in turn positively affects customer loyalty; both direct and indirect relationships between service quality and loyalty were confirmed. Further, Aslam and Farhat (2020) examined the impact of after-sales service on consumer behavioral intentions. The study found that After-sales service quality positively impacts overall customer satisfaction, which in turn leads to increased repurchase intention and word-of-mouth.

Tegene (2019) examined the effect of after sales services quality on customer satisfaction. The study found that After-sales service quality, including information provision, installation, billing services, customer complaint handling, and enhanced service quality, positively and significantly impacts customer satisfaction, explaining 81.5% of the variation in satisfaction. Similarly, Koskela (2002) analyzed the customer satisfaction and loyalty in after sales service: Modes of care in telecommunications systems delivery. The study revealed that after-sales activities, particularly "care" (maintenance and preventive maintenance), are crucial for customer satisfaction. As customer relationships mature, the importance of care increases, and satisfaction-loyalty relationships are complex and non-linear. Effective communication and specialized interactions between suppliers and customers are essential for improving customer care and loyalty. Likewise, Sunarya and Jamaludin (2022) assessed the influence of product quality and after sales services on customer satisfaction in Mahir Residence Sukabumi. The study found that product quality has the most significant impact on consumer satisfaction followed by after-sales service. Further, Murali *et al.* (2016) investigated the relationship of after sales service quality with customer satisfaction, retention and loyalty: A case study of home appliances business. The study found that attributes significantly influence customer satisfaction retention.

Othman *et al.* (2021) examined the effects on customer satisfaction and customer loyalty by integrating marketing communication and after sale service into the traditional

marketing mix model of umrah travel services in Malaysia. The study revealed that the enhanced umrah service marketing mix (including promotion, price, process, physical evidence, marketing communication, and after-sales service) positively influences customer satisfaction and loyalty toward umrah travel agents in Malaysia. Similarly, Jahanshahi *et al.* (2011) assessed the effects of customer service and product quality on customer satisfaction and loyalty. The study revealed that effective customer service is crucial for satisfaction and loyalty, especially in aviation where service demands are higher. Current service quality models do not fully address aviation's unique requirements, such as the complex role of employees and interrelated service factors. Likewise, Rita *et al.* (2019) analyzed the impact of e-service quality and customer satisfaction on customer behavior in online shopping. The study showed that website design, security/privacy, and fulfillment significantly impact overall e-service quality, which in turn affects customer behavior, while customer service does not have a significant relationship with e-service quality.

Ryu *et al.* (2017) examined the influence of after-sales service quality on customer satisfaction and loyalty in mobile phone. The study revealed that key dimensions of after-sales service quality include human quality, environmental quality and service policy quality have positive influence on customer satisfaction and loyalty in mobile phone. Similarly, Syahrial *et al.* (2019) analyzed the impact of serviceability-oriented dimensions on after-sales service cost and customer satisfaction. The study found that four serviceability dimensions; tangibles, assurance, responsiveness and after-sales service cost have positive influence on customer satisfaction and loyalty. Likewise, Soltani *et al.* (2022) examined the impact of customer satisfaction with after-sales service on corporate profitability. The study found that customer income significantly influences satisfaction perception, and customer satisfaction is positively related to organizational profitability. Further, Nguyen *et al.* (2020) investigated the impact of service quality, customer satisfaction and switching costs on customer loyalty. The study stated that service quality positively influences customer satisfaction, which in turn boosts customer loyalty, while higher switching costs reinforce this loyalty among e-banking users.

In the context of Nepal, Devkota and Dahal (2016) analyzed an empirical study of service quality dimensions on customer satisfaction and customer loyalty in the Nepalese commercial banking sector. The study found that service quality dimensions like reliability, responsiveness, empathy, and assurance significantly affect customer satisfaction and loyalty in Nepalese commercial banks, while factors like tangibility and frequency of visits did not. Similarly, Giri and Thapa (2016) assessed the customer satisfaction on after sales service of two wheelers in Kathmandu Valley. The study concluded that the behavior and competency of technicians have the strongest impact on customer satisfaction in two-wheeler after-sales services, while time taken for service has a strong positive relationship and cleanliness/comfort of the reception area had a weak one.

The above discussion shows that empirical evidences vary greatly across the studies on the influence of after-sales service quality factors on customer satisfaction. Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted.

The major objective of the study is to examine the influence of after-sales service quality factors on customer satisfaction in Kathmandu Valley. Specifically, it examines the

relationship of responsiveness, reliability, problem resolution, availability of service center and traceability with customer satisfaction in Kathmandu Valley.

The remainder of this study is organized as follows: section two describes the sample, data, and methodology. Section three presents the empirical results and final section draws the conclusion.

2. Methodological aspects

The study is based on the primary data which were collected from 121 respondents through questionnaire. The study employed convenience sampling method. The respondents' views were collected on responsiveness, reliability, problem resolution, availability of service center, traceability and customer satisfaction. This study is based on descriptive as well as causal comparative research designs.

The model

The model used in this study assumes that customer satisfaction depends upon responsiveness, reliability, problem resolution, availability of service center and traceability. Therefore, the model takes the following form:

Customer satisfaction = f (responsiveness, reliability, problem resolution, availability of service center, traceability)

More specifically,

$$CS = \beta_0 + \beta_1 RS + \beta_2 RL + \beta_3 AS + \beta_4 PR + \beta_5 TB + e$$

Where,

CS = Customer satisfaction

RS= Responsiveness

RB = Reliability

PR= Problem resolution

AS = Availability of service

TB = Traceability

Customer satisfaction was measured using a 5-point Likert scale where the students were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "I am satisfied with the overall after-sales service I received", "The after-sales service has met my expectations" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.852$).

Responsiveness was measured using a 5-point Likert scale where the students were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "The service team responded quickly to my inquiries and concerns after the purchase", "The customer service representatives were easily reachable when I needed assistance" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.790$).

Reliability was measured using a 5-point Likert scale where the respondents were

asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “The company consistently delivers the after-sales service as promised”, “I can trust the after-sales service provided to meet my expectations” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.800$).

Problem resolution was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “My issues were resolved efficiently and effectively during after-sales service”, “The service team took immediate action to resolve my concerns” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.887$).

Availability of service centers were measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “The service centers are conveniently located for me to access”, “The availability of service centers meets my expectations for convenience” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.854$).

Traceability was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include “The Company provides clear documentation regarding the service performed on my product”, “I receive regular updates about the progress of my after-sales service” and so on. The reliability of the items was measured by computing the Cronbach’s alpha ($\alpha = 0.836$).

The following section describes the independent variables used in this study along with the hypothesis formulation.

Reliability

Reliability, in the context of customer satisfaction, refers to the consistency and dependability of after-sales services in meeting customer expectations. Sarwar and Azmat (2013) demonstrated that reliable after-sales services positively influence customer satisfaction by ensuring that services are delivered as promised. According to Tuan and Shang (2014), reliability in after-sales support enhances trust and encourages repeat business, directly impacting customer satisfaction. Likewise, Nguyen *et al.* (2018) indicated that the reliability of post-purchase services plays a significant role in shaping the overall customer experience and satisfaction. Further, Amatea *et al.* (2006) highlighted that consistent and reliable follow-up on customer issues improves satisfaction and builds strong customer relationships. In addition, Guay *et al.* (2003) concluded that a significant relationship exists between service reliability and customer satisfaction. Based on it, this study develops the following hypothesis:

H₁: There is a positive relationship between reliability and customer satisfaction.

Availability of service centers

The availability of a service center plays a crucial role in shaping customer satisfaction by ensuring that customers have easy access to support and maintenance services.

According to Shukla *et al.* (2016), when customers can easily reach a service center, it reduces frustration and enhances their overall experience with the product. Similarly, Shende *et al.* (2014) revealed that the proximity and accessibility of service centers contribute significantly to customer satisfaction, as timely support helps customers feel valued. Likewise, Utomo *et al.* (2023) highlighted that customers are more likely to be satisfied when they can quickly access assistance through a nearby service center. Further, Jain *et al.* (2017) found that the availability of local service centers encourages customers to engage more with a brand and fosters a sense of security. Based on it, this study develops the following hypothesis:

H₂: There is a positive relationship between availability of service centers and customer satisfaction.

Traceability

Traceability refers to the ability to track the status and history of a customer's service request or product issue. Aho *et al.* (2020) found that traceability positively influences customer satisfaction by providing customers with clear updates on the status of their issues. Likewise, Tayal *et al.* (2021) found that providing customers with traceability information, such as real-time updates, improves satisfaction and reassures them. In addition, Zhou *et al.* (2022) concluded that traceability has a significant relationship with customer satisfaction. Based on it, this study develops the following hypothesis:

H₃: There is a positive relationship between traceability and customer satisfaction.

Problem resolution

Problem resolution refers to the ability of a company to effectively address and resolve customer issues or complaints. According to Saludin and Tan (2010), customers are more likely to feel satisfied when their problems are resolved quickly and professionally. Similarly, Komunda and Osarenkhoe (2012) highlighted that customers who experience prompt and effective solutions to their problems are more likely to remain loyal and satisfied with the service. Likewise, Ahmed and Amir (2011) showed that customers appreciate a company's ability to resolve problems efficiently, which leads to an overall positive customer experience. Further, Amata *et al.* (2016) found that when companies offer clear solutions and actively address customer concerns, customer satisfaction is positively impacted. In addition, Allred and Money (2010) concluded that effective problem resolution is strongly linked to customer satisfaction, as it directly affects the customer's perception of service quality. Based on it, this study develops the following hypothesis:

H₄: There is a positive relationship between problem resolution and customer satisfaction.

Responsiveness

Responsiveness refers to the speed and willingness of a company to address customer inquiries and concerns. Ibrahimi *et al.* (2016) demonstrated that the responsiveness of a company plays a significant role in determining customer satisfaction, as quick responses to issues enhance customer trust and loyalty. Similarly, Negassa and Japee (2023) found that customers are more likely to remain satisfied when they receive timely and effective responses to their problems. Likewise, Setiono and Hidayat (2022) emphasized that responsiveness in addressing customer concerns is crucial for maintaining customer satisfaction, as it reinforces the company's commitment to high service quality. Further, Adebayo *et al.* (2022) noted that

responsive customer service, which provides quick solutions and clear communication, leads to higher satisfaction levels. Based on it, this study develops the following hypothesis:

H₅: There is a positive relationship between responsiveness and customer satisfaction.

3. Results and discussion

Correlation analysis

On analysis of data, correlation analysis has been undertaken first and for this purpose, Kendall's Tau correlation coefficients along with mean and standard deviation has been computed and the results are presented in Table 1.

Table 1

Kendall's Tau correlation coefficients matrix

This table presents Kendall's Tau coefficients between dependent variable and independent variables. The correlation coefficients are based on 121 observations. The dependent variable is CS (Customer satisfaction). The independent variables are RP (Responsiveness), RL (Reliability), PR (Problem resolution), AS (Availability of service center) and TB (Traceability).

Variables	Mean	S.D.	CS	RP	RL	PR	AS	TB
CS	3.403	1.046	1					
RP	3.370	1.050	0.515**	1				
RL	3.458	1.012	0.510**	0.680**	1			
PR	3.430	1.023	0.539**	0.637**	0.701**	1		
AS	3.379	1.080	0.533**	0.534**	0.538**	0.627**	1	
TB	3.408	0.958	0.577**	0.579**	0.583**	0.626**	0.658**	1

Notes: The asterisk signs (**) and (*) indicate that the result are significant at one percent and five percent levels respectively.

Table 1 shows the Kendall's Tau correlation coefficients of dependent and independent variables. The study shows that responsiveness is positively correlated to customer satisfaction. It indicates that the quality of reacting quickly and positively leads to increase in customer satisfaction. Similarly, reliability is positively correlated to customer satisfaction. It indicates that quality of being trustworthy or of performing consistently leads to increase in customer satisfaction. Likewise, problem resolution is positively correlated to customer satisfaction. It indicates that promptly resolute the problems lead to increase in customer satisfaction. Further, availability of service centers are positively correlated to customer satisfaction. It indicates that availability of service center leads to better customer satisfaction. In addition, traceability is positively correlated to customer satisfaction. It indicates that ability to trace all processes from procurement of raw materials to production leads to increase in customer satisfaction.

Regression analysis

Having indicated the Kendall's Tau correlation coefficients, the regression analysis has been carried out and the results are presented in Table 2. More specifically, it shows the regression results of responsiveness, reliability, problem resolution, availability of service center and traceability on customer satisfaction.

Table 2

Estimated regression results of responsiveness, reliability, problem resolution, availability of service center and traceability on customer satisfaction

The results are based on 121 observations using linear regression models. The model is $CS = \beta_0 + \beta_1 RS + \beta_2 RL + \beta_3 PS + \beta_4 AS + \beta_5 TB + e$ where the dependent variable is CS (Customer satisfaction). The independent variables are RP (Responsiveness), RL (Reliability), PR (Problem resolution), AS (Availability of service center) and TB (Traceability).

Models	Intercepts	Regression coefficients of					Adj. R _{bar} ²	SEE	F- Value
		RP	RL	PR	AS	TB			
1	1.176 (4.880)**	0.661 (9.677)**					0.410	0.786	93.640
2	1.056 (4.104)**		0.679 (9.504)**				0.220	1.038	77.900
3	1.036 (4.189)**			0.685 (9.989)**			0.442	0.775	99.770
4	1.280 (5.347)**				0.629 (9.312)**		0.799	0.799	86.707
5	1.001 (3.703)**					0.705 (9.225)**	0.412	0.802	85.106
6	0.915 (3.625)**	0.379 (3.625)**	0.351 (3.625)**				0.468	0.763	53.423
7	0.812 (3.244)**	0.310 (2.556)**	0.093 (3.579)**	0.357 (2.492)*			0.489	0.748	39.258
8	0.732 (2.948)**	0.287 (2.396)*	0.362 (3.751)**	0.220 (2.433)*	0.240 (2.275)*		0.502	0.735	31.788
9	0.692 (2.676)**	0.267 (2.142)*	0.035 (2.295)*	0.209 (2.122)*	0.203 (1.651)	0.284 (3.437)**	0.506	0.737	25.350

Notes:

- Figures in parenthesis are t-values.
- The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent respectively.
- Customer satisfaction is the dependent variable.

Table 2 shows that the beta coefficients for responsiveness are positive with customer satisfaction. It indicates that responsiveness has a positive impact on customer satisfaction. This finding is consistent with the findings of Iberahim *et al.* (2016). Similarly, the beta coefficients for reliability are positive with customer satisfaction. It indicates that reliability has a positive impact on customer satisfaction. This finding is consistent with the findings of Sarwar and Azmat (2013). Likewise, the beta coefficients for problem resolution are positive with customer satisfaction. It indicates that problem resolution has a positive impact on customer satisfaction. This finding is consistent with the findings of Komunda and Osarenkhoe (2012). Further, the beta coefficients for availability of service centers are positive with customer satisfaction. It indicates that availability of service centers have positive impact on customer satisfaction. This finding is consistent with the findings of Shende *et al.* (2014). In addition, the beta coefficients for traceability are positive with customer satisfaction. It indicates that traceability has a positive impact on customer satisfaction. This finding is consistent with the findings of Tayal *et al.* (2021).

4. Summary and conclusion

Customer satisfaction is the measure of how well a company's products or services meet or exceed customer expectations. Customer satisfaction is a crucial aspect of business success, and it can be influenced by several factors, including responsiveness, reliability, problem resolution, availability of service centers, and traceability. Responsiveness refers to

how quickly and effectively a company addresses customer inquiries or issues, and research has shown that responsive companies tend to have higher customer satisfaction as customers feel their concerns are taken seriously. Reliability is another critical factor; customers appreciate companies that consistently deliver quality products or services, as it builds trust and satisfaction.

This study attempts to examine the influence of after-sales service quality factors on customer satisfaction in Kathmandu Valley. The study is based on primary data of 121 respondents.

The major conclusion of the study is that responsiveness, reliability, problem resolution, availability of services center and traceability have positive impact on customer satisfaction. The study also concludes that problem resolution is the most significant factor followed by responsiveness that influence customer satisfaction in Kathmandu Valley.

References

- Adebayo, T., 2022. An evaluation of reverse logistics responsiveness and customer satisfaction in retailing. *International Journal of Research in Business and Social Science* 11(1), 93-98.
- Ahmed, I., and M. Amir, 2011. Service quality; service features; and customer complaint handling as the major drivers of customer satisfaction in banking sector of Pakistan. *International Review of Business Research Papers* 7(1), 313-318.
- Aho, A. C., P. Pietilä, T. Ahola, and M. Martinsuo, 2020. Enhancing customer satisfaction through traceability in service delivery. *Journal of Service Management* 31(5), 987-1008.
- Allred, C. R., and R. B. Money, 2010. The service hand-off: Effects of multivendor service performance on customer satisfaction—an experimental study. *Journal of Services Marketing* 24(3), 184-195.
- Amata, P., J. Smith, and R. Taylor, 2016. *The impact of proactive customer service on satisfaction: A study of customer concerns and solutions*. *Journal of Business and Consumer Studies* 12(3), 45-60.
- Amatea, E. S., S. Smith-Adcock, and E. Villares, 2006. From family deficit to family strength: Viewing families' contributions to children's learning from a family resilience perspective. *Professional School Counseling* 9(3), 177-189.
- Aslam, W., and K. Farhat, 2020. Impact of after-sales service on consumer behavioral intentions. *International Journal of Business and Systems Research* 14(1), 44-55.
- Devkota, N., and S. Dahal, 2016. An empirical study of service quality dimensions on customer satisfaction and customer loyalty in the Nepalese commercial banking sector. *International Journal of Social Sciences and Management* 3(3), 165-176.
- Fornell, C., M. D. Johnson, E. W. Anderson, J. Cha, and B. E. Bryant, 1996. The American customer satisfaction index: Nature, purpose, and findings. *Journal of Marketing* 60(4), 7-18.
- Giri, S., and K. Thapa, 2016. A study of customer satisfaction on after sales service of two wheelers in Kathmandu valley. *Journal of Business and Social Sciences Research* 1(1), 1-21.
- Grönroos, C., 2000. Service management and marketing: A customer relationship management approach. Wiley.
- Guay, F., H. W. Marsh, and M. Boivin, 2003. Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of Educational Psychology*

95(1), 124

- Iberahim, H., N. M. Taufik, A. M. Adzmir, and H. Saharuddin, 2016. Customer satisfaction on reliability and responsiveness of self-service technology for retail banking services. *Procedia Economics and Finance* 37, 13-20.
- Jahanshahi, A. A., M. A. H. Gashti, S. A. Mirdamadi, K. Nawaser, and S. M. S. Khaksar, 2011. Study the effects of customer service and product quality on customer satisfaction and loyalty. *International Journal of Humanities and Social Science* 1(7), 253-260.
- Jain, R., J. Aagja, and S. Bagdare, 2017. Customer experience: A review and research agenda. *Journal of Service Theory and Practice* 27(3), 642-662.
- Keller, K. L., 2003. *Strategic Brand Management: Building, Measuring, and Managing Brand Equity* (2nd Ed.). Pearson Prentice Hall.
- Komunda, M., and A. Osarenkhoe, 2012. Remedy or cure for service failure. Effects of service recovery on customer satisfaction and loyalty. *Business Process Management Journal* 18(1), 82-103.
- Koskela, H., 2002. Customer satisfaction and loyalty in after sales service: Modes of care in telecommunications systems delivery. Helsinki University of Technology.
- Lovelock, C., and J. Wirtz, 2007. *Services Marketing: People, Technology, Strategy* (6th Ed.). Pearson Education.
- Murali, S., S. Pugazhendhi, and C. Muralidharan, 2016. Modelling and investigating the relationship of after sales service quality with customer satisfaction, retention and loyalty—a case study of home appliances business. *Journal of Retailing and Consumer Services* 30, 67-83.
- Negassa, G. J., and G. P. Japee, 2023. The effect of bonding, responsiveness and communication on customer retention: the mediating role of customer satisfaction. *Journal of Relationship Marketing* 22(2), 115-131.
- Nguyen, D. T., V. T. Pham, D. M. Tran, and D. B. T. Pham, 2020. Impact of service quality, customer satisfaction and switching costs on customer loyalty. *The Journal of Asian Finance, Economics and Business* 7(8), 395-405.
- Othman, B. A., A. Harun, N. M. De Almeida, and Z. M. Sadq, 2021. The effects on customer satisfaction and customer loyalty by integrating marketing communication and after sale service into the traditional marketing mix model of Umrah travel services in Malaysia. *Journal of Islamic Marketing* 12(2), 363-388.
- Parasuraman, A., V. A. Zeithaml, and L. L. Berry, 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing* 64(1), 12-40.
- Rita, P., T. Oliveira, and A. Farisa, 2019. The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon* 5(10), 1-14.
- Ryu, J. H., S. J. Lee, H. S. Oh, and J. H. Cho, 2017. The influence of after-sales service quality on customer satisfaction and loyalty in mobile phone. *Journal of the Society of Korea Industrial and Systems Engineering* 40(4), 87-95.
- Saludin, M. N., and P. K. Tan, 2010. The importance of customer satisfaction and customer complaint towards a better-quality service using six sigma: An academic perspective. *Jurnal Teknologi* 107-126.
- Sarwar, M., and M. Azmat, 2013. Influence of after-sales service on customer satisfaction. *Interdisciplinary Journal of Contemporary Research in Business* 4(9), 435-443.
- Setiono, B. A., and S. Hidayat, 2022. Influence of service quality with the dimensions of reliability,

- responsiveness, assurance, empathy and tangibles on customer satisfaction. *International Journal of Economics, Business and Management Research* 6(09), 330-341.
- Shende, V., A. Gaikwad, and S. Kale, 2014. *Impact of service quality on customer satisfaction in the retail sector. International Journal of Research in Commerce, IT and Management* 4(6), 45-50.
- Shukla, P., M. Banerjee, and J. Singh, 2016. Customer commitment to luxury brands: Antecedents and consequences. *Journal of Business Research* 69(1), 323-331.
- Soltani, S., F. M. Sobhani, and S. E. Najafi, 2022. Examining the impact of customer satisfaction with after-sales service on corporate profitability. *Journal of Industrial Engineering International* 18(1), 25-36.
- Sunarya, E., and M. Jamaludin, 2022. The Influence of Product Quality and After Sales Services on Customer Satisfaction in Mahir Residence Sukabumi. *Research Horizon* 2(4), 489-500.
- Susilo, A., and R. B. Ikhsan, 2020. After-sales service to increase customer satisfaction: application of importance performance analysis method. *Journal of Business Studies and Management Review* 3(2), 1-7.
- Syahrial, E., H. Suzuki, and S. J. Schvaneveldt, 2019. The impact of serviceability-oriented dimensions on after-sales service cost and customer satisfaction. *Total Quality Management and Business Excellence* 30(11-12), 1257-1281.
- Tayal, S., S. Mehta, S. K. Sharma, and R. Agarwal, 2021. *Enhancing customer satisfaction through traceability information: The role of real-time updates in supply chains. Journal of Business Research* 134, 476-489.
- Tegene, D., 2019. The effect of after sales services quality on customer satisfaction: The Case of Ethio Telecom.
- Tuan, A. Y., and G. Q. Shang, 2014. Vibration control in a 101-storey building using a tuned mass damper. *Journal of Applied Science and Engineering* 17(2), 141-156.
- Tzeng, S. Y., M. Ertz, M. S. Jo, and E. Sarigöllü, 2021. Factors affecting customer satisfaction on online shopping holiday. *Marketing Intelligence and Planning* 39(4), 516-532.
- Utomo, W., W. Suryono, J. Jimmi, T. A. Santosa, and I. Agustina, 2023. The effect of STEAM-based hybrid based learning model on students' critical thinking skills. *Jurnal Penelitian Pendidikan IPA* 9(9), 742-750.
- Wahjudi, D., T. Kwanda, and R. Sulis, 2018. The impact of after-sales service quality on customer satisfaction and customer loyalty of middle-upper class housing. *Jurnal Teknik Industri* 20(1), 65-72.
- Zhou, X., M. Pullman, and Z. Xu, 2022. The impact of food supply chain traceability on sustainability performance. *Operations Management Research* 15(1), 93-115.