

Balinado, Justine Roy et al.

Article

The effect of service quality on customer satisfaction in an automotive after-sales service

Journal of Open Innovation: Technology, Market, and Complexity

Provided in Cooperation with:

Society of Open Innovation: Technology, Market, and Complexity (SOItmC)

Suggested Citation: Balinado, Justine Roy et al. (2021) : The effect of service quality on customer satisfaction in an automotive after-sales service, Journal of Open Innovation: Technology, Market, and Complexity, ISSN 2199-8531, MDPI, Basel, Vol. 7, Iss. 2, pp. 1-12, <https://doi.org/10.3390/joitmc7020116>

This Version is available at:

<https://hdl.handle.net/10419/241701>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>



Article

The Effect of Service Quality on Customer Satisfaction in an Automotive After-Sales Service

Justine Roy Balinado ^{1,2}, Yogi Tri Prasetyo ^{1,*}, Michael Nayat Young ¹, Satria Fadil Persada ³,
Bobby Ardiansyah Miraja ³ and Anak Agung Ngurah Perwira Redi ⁴

¹ School of Industrial Engineering and Engineering Management, Mapúa University, Manila 1002, Philippines; justineroybalinado@gmail.com (J.R.B.); mnyoung@mapua.edu.ph (M.N.Y.)

² School of Graduate Studies, Mapúa University, Manila 1002, Philippines

³ Department of Business Management, Institut Teknologi Sepuluh November, Kampus ITS Sukolilo, Surabaya 60111, Indonesia; satriafp@gmail.com (S.F.P.); bobard.m@outlook.com (B.A.M.)

⁴ Industrial Engineering Department, BINUS Graduate Program—Master of Industrial Engineering, Bina Nusantara University, Jakarta 11480, Indonesia; wira.redi@binus.edu

* Correspondence: ytprasetyo@mapua.edu.ph; Tel.: +63-28247-5000 (ext. 6202)

Abstract: Assessment of service quality has been widely utilized in after-sales service, especially in the automotive industry. The purpose of the study was to determine factors affecting customer satisfaction in an automotive after-sales service at Toyota Dasmarinas-Cavite Philippines by utilizing the SERVQUAL approach. Several SERVQUAL dimensions such as tangibles, reliability, responsiveness, assurance, and empathy were analyzed simultaneously to the customer satisfaction. Structural equation modeling (SEM) indicated that among the five SERVQUAL dimensions, reliability and empathy were found to have significant relationships to the satisfaction of customers at Toyota Dasmarinas-Cavite Philippines. Interestingly, tangibles, responsiveness, and assurance were found to have no significant relationships to satisfaction. The servicing dealer must deliver a high quality of service to meet customer expectations and achieve high customer satisfaction, which subsequently builds customer trust towards the company. With these, customer retention and loyalty can be attained by the company that can also increase the company's profit and competitive advantage.

Keywords: service quality; after-sales service; structural equation modeling; SERVQUAL; customer satisfaction; customer loyalty



Citation: Balinado, J.R.; Prasetyo, Y.T.; Young, M.N.; Persada, S.F.; Miraja, B.A.; Perwira Redi, A.A.N. The Effect of Service Quality on Customer Satisfaction in an Automotive After-Sales Service. *J. Open Innov. Technol. Mark. Complex.* **2021**, *7*, 116. <https://doi.org/10.3390/joitmc7020116>

Received: 23 February 2021

Accepted: 12 April 2021

Published: 21 April 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Customer satisfaction is an individual perception or feelings towards the kind of service or product they received in relation to their expectation [1]. The idea is basically to satisfy customers for them to continue patronizing a business, for the business to increase their profit and to be sustainable in their line of industry [2]. Today's competitive market situation make industries prioritize customer satisfaction, which is widely known to lead to customer retention and loyalty. Through this, businesses can increase their profit and sustain their competitive advantage within their industry.

In the competitive service industry, customers play an important role in determining the service quality that they received [2]. This service quality or widely known as SERVQUAL is considered as an important factor in interpreting customer satisfaction [3]. It has been already used by different service industries like in the mobile banking, health management, telecommunication, online education, hoteling, and tourism [3]. There are several measures that can explore the SERVQUAL in service industry and one of the most utilized is after-sales service.

After-sales service is commonly used to define services carried out to the consumer of a product during its life cycle after it has been purchased [4]. It is said that after-sales services are not only vital as a requirement on a product or by law, but also a great contributor for a

business to enhance their competitiveness [5]. Examples of these after-sales services are mostly the repairs and maintenance of a product in automotive companies.

Automotive companies' way of delivering after-sales services is through its retailer or dealers. Car producers such as Toyota, Volkswagen, BMW and many others utilize their retailers to deliver services such as vehicle periodic maintenance and other repair services [5]. Over the years, these retailer services have been thriving industries in developing countries such as the Philippines.

The Philippines ranked 9th among the countries with the highest passenger cars sold within the Asia-Pacific region. With approximately 273.4 thousand vehicles in 2019, Toyota was the leading auto-motive company in the Philippines, selling about 161.4 thousand cars in the same year [6]. Toyota Motor Philippines, or TMP, as one of the well-known car companies in the Philippines, uses the approach of using its retailer or dealer to deliver the after-sales services for Toyota vehicle products all over the Philippine network. One of these dealers is the Toyota Dasmarinas-Cavite.

Toyota Dasmarinas-Cavite or TDM is located at Dasmarinas, City in Cavite, Philippines. It is the first Toyota dealer in Cavite. The business is focused on the sales and periodic maintenance of all Toyota vehicles. It started on 24 October 2003 and was the very first addition to the Toyota Manila Bay Corporation (TMBC) [7,8]. Toyota Dasmarinas-Cavite also offers after-sales services to all Toyota customers and only aims to exceed the customer expectation and deliver high customer satisfaction.

In enhancing the customer satisfaction, SERVQUAL has been widely utilized in an after-sales service worldwide. In Malaysia, Farooq et al. [3] explored the customer satisfaction in Malaysia Airlines by utilizing the SERVQUAL approach. In Ghana, Baidoo et al. [9] also conducted a study that assessed customer satisfaction in automotive repair garages in Cape Coast metropolis. Finally, In India, Baber [10] also utilized SERVQUAL to explore the gap between the level of expectation in service quality, service perception, and its influence on customer satisfaction of Toyota customers.

Despite the availability of numerous SERVQUAL studies worldwide, there was no local study in the Philippines particularly related to the automotive after-sales service. In fact, the application of SERVQUAL is very important particularly for enhancing the automotive after-sales service such as Toyota Dasmarinas-Cavite, Philippines. By meeting customer expectation and achieving high customer satisfaction, customer retention and loyalty will be certainly possible for Toyota Dasmarinas-Cavite. With these, customer retention and loyalty can be attained by the company, which can also increase the company's profit and competitive advantage.

The purpose of the study was to determine factors affecting customer satisfaction in an automotive after-sales service at Toyota Dasmarinas-Cavite by utilizing the SERVQUAL approach. Several SERVQUAL dimensions such as tangibles, reliability, responsiveness, assurance, and empathy were analyzed simultaneously to the customer satisfaction. This study is the first study that analysed automotive after-sales service in the Philippines. The results could be theoretical foundations for enhancing the customer satisfaction in the automotive industry worldwide.

2. Materials and Methods

2.1. Theoretical Framework

Figure 1 represents the theoretical framework showing customer's perception on service quality in terms of the five dimensions. These dimensions consist of tangibles, reliability, responsiveness, assurance, and empathy. It was assessed with the use of SERVQUAL questionnaires to determine its relationship on customer satisfaction at Toyota Dasmarinas-Cavite Service Department.

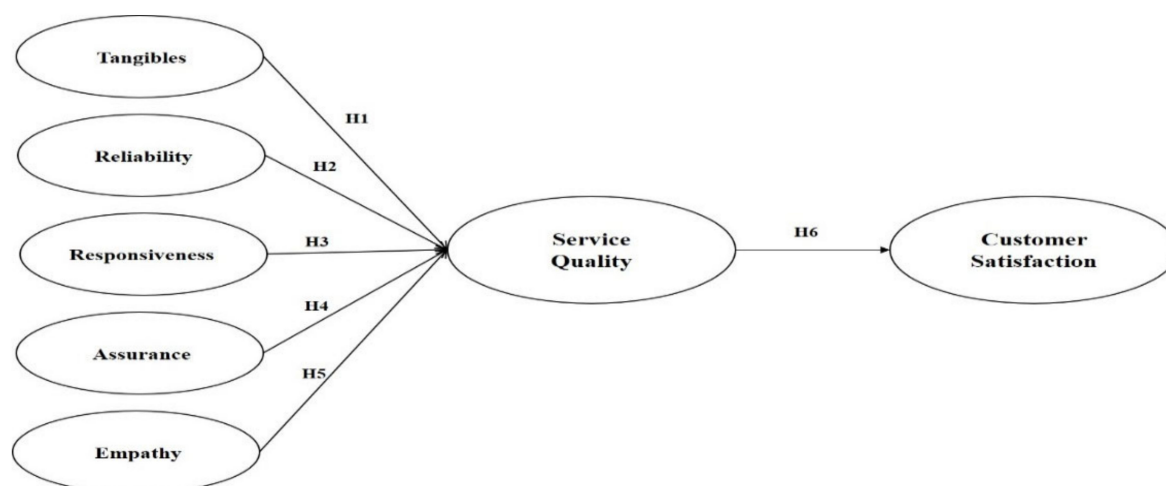


Figure 1. Theoretical Framework.

The tangibles dimension is a form of physical means used by organizations to create and do work. Supporting equipment and the appearance of employees used to serve consumers can create an impression that is easily remembered by consumers. In addition, pleasant conditions are also felt by consumers when making transactions against services produced by the company. Thus, the tangible dimension is part of the increasing condition of employees to act on time in accordance with the wishes of consumers. The better the tangibles provided by the organization, the better the service provided to consumers will be [11]. Thus, we hypothesized the following:

Hypothesis 1 (H1). *Tangibles had a significant direct effect on customer satisfaction.*

The reliability dimension is the ability and commitment possessed by employees to provide services in accordance with the agreement. The decision taken is the desire to adjust performance to customer expectations, which means the timeliness and the same service to all customers [11]. In an automotive service industry, getting a service from a reliable service provider extends the life of the car and prevents its sudden breakdown [7]. Thus, we hypothesized the following:

Hypothesis 2 (H2). *Reliability had a significant direct effect on customer satisfaction.*

Responsibility is the behavior of employees in the organization to act in time and convey information in accordance with consumer needs. The ability to respond to what is owned by employees will be positively assessed by consumers so that it can create capabilities when serving consumers. The motivation of employees to solve problems faced by customers when using the services has a positive effect on customer satisfaction [11]. Thus, we hypothesized the following:

Hypothesis 3 (H3). *Responsiveness had a significant direct effect on customer satisfaction.*

Assurance is one of the core dimensions of service quality that impacts customer satisfaction [12]. Khan et al. [12] stated that the process of acquired knowledge being showcased by staff in executing their term of preferences during service delivery can be highly assuring to customers. This gives customers the confidence that the service delivery representative will perform his/her duty professionally and ethically, encouraging the likelihood of word-of-mouth activity, especially in financial institutions [12]. Thus, we hypothesized the following:

Hypothesis 4 (H4). *Assurance had a significant direct effect on customer satisfaction.*

Faarooq et al. [3] provided evidence for the fact that better quality of personnel services will significantly improve customer satisfaction level. Without empathy, customers will remain dissatisfied with service quality; therefore, empathy greatly impacts customer satisfaction [12]. Thus, we hypothesized the following:

Hypothesis 5 (H5). *Empathy had a significant direct effect on customer satisfaction.*

Service quality is one of the main determining factors of customer satisfaction. Customers are the key evaluator that plays an important role in measuring the quality of service or product [13]. To remain competitive, retain their existing customers, and attract new ones, accommodation providers generally improve their service quality and, consequently, their customer satisfaction as a key strategy [2]. The study of Baidoo, F. and Odum-Awuakye, G. A [6] showed that wide quality service gaps exist between the expectation of the customer and the mechanics operating the garage. Communication gaps, tools and equipment, lack of service standard and working procedures, and the quality of service was the quality service gaps that have influenced customer satisfaction levels [6]. They recommended that dealership centers endeavor to work in partnership with these wayside garages, offer training support and help them to come out with service standards and work procedures [6]. Thus, we hypothesized the following:

Hypothesis 6 (H6). *Overall service quality had a significant direct effect on customer satisfaction.*

2.2. Participants

A total of 256 customers from Toyota Dasmarinas-Cavite were voluntary participants in the study. They were the individuals who are regularly having their vehicle serviced or those who have past experience of having their vehicle serviced at Toyota Dasmarinas-Cavite. Table 1 shows the descriptive statistics of all the respondents.

Table 1. Descriptive Statistics of Respondents (N = 256).

Characteristics	Category	Frequency (N)	Percentage (%)
Gender	Male	157	61.3%
	Female	98	38.3%
	Prefer Not to Say	1	0.4%
Age	18–30 years old	85	33.2%
	31–45 years old	122	47.7%
	46–60 years old	47	18.3%
	60 years old and above	2	0.8%
Estimated Monthly Income	P15,000 and below	39	15.2%
	P15,001–P50,000	160	62.5%
	P50,001–P100,000	52	20.3%
	P100,001 and above	5	2%
Number of Years Owning a Toyota Vehicle	0–5 years	166	64.8%
	6–10 years	78	30.5%
	11–15 years	9	3.5%
	16–20 years	2	0.8%
	21 years and above	1	0.4%

2.3. Questionnaire

A SERVQUAL-type questionnaire was utilized in this study. It is a tool used to measure service quality using both the gap concept and service quality dimensions [13]. The SERVQUAL comprised of the five service quality dimensions, which were the tangibles, reliability, responsiveness, assurance, and empathy [14–17]. Appendix A shows the sample survey questionnaire used in this study.

2.4. Analytical Tools

Structural equation modeling (SEM) was utilized to derive the relationships between SERVQUAL dimensions and customer satisfaction. It is an advanced statistical approach designed to describe causal relationships between the latent variables construct [18–20]. It is also widely utilized in SERVQUAL-type of study [21,22].

Figure 1 shows the study's structural equation modeling (SEM) framework. A total of 50 customer assessment items were used under service quality with 10 items each per service quality dimensions, which are the tangibles, reliability, responsiveness, assurance, and empathy. In addition, a total of 10 items were used to assess customers based on customer satisfaction and future intention. These were the items customers answered to determine the effects of service quality on customer satisfaction in automotive after-sales service.

3. Result

Figure 2 represents the initial model of the current study. Based on Table 2, three paths were found not to be significant: tangibles-customer satisfaction, responsiveness-customer satisfaction, and assurance-customer satisfaction. Thus, a revised model was derived by eliminating these three paths.

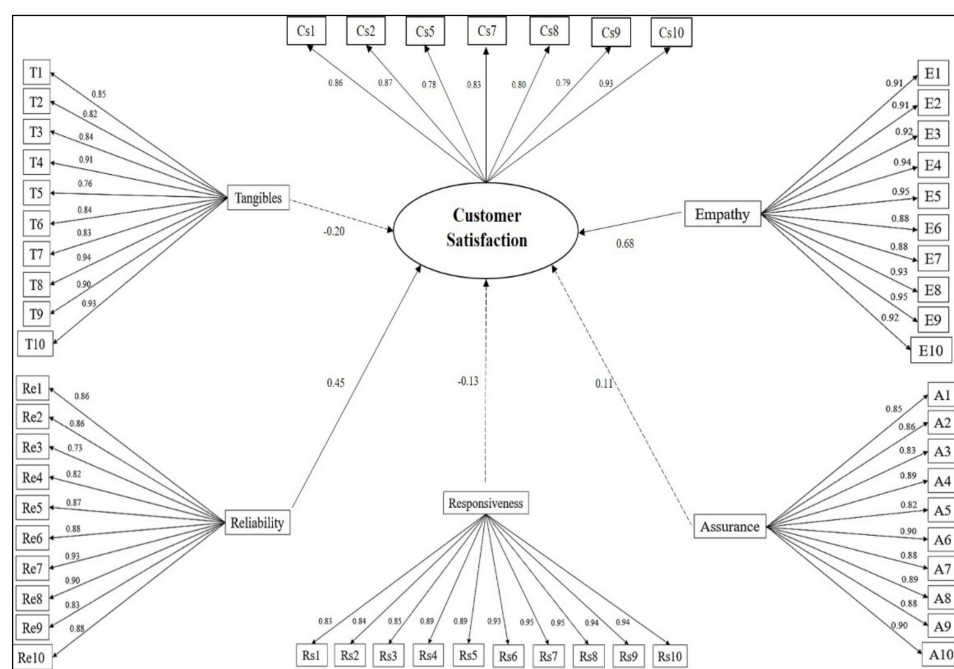
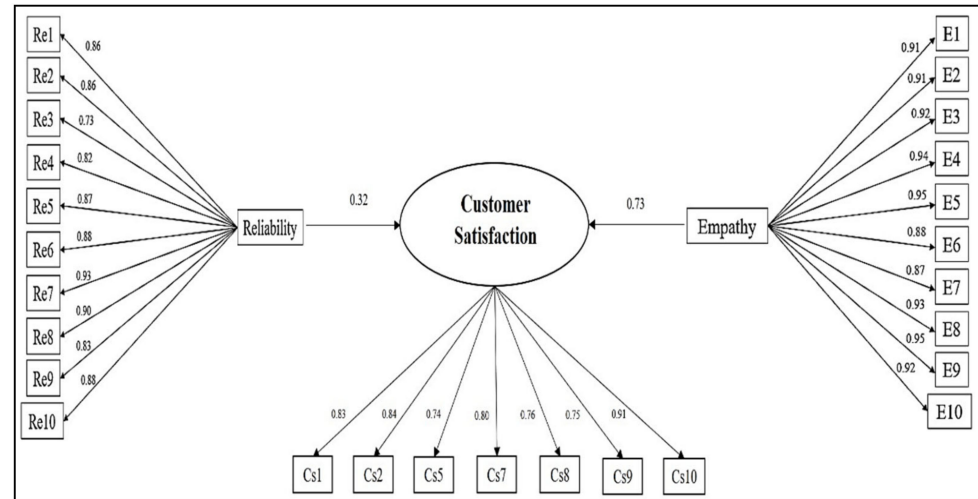


Figure 2. SEM Initial Results.

Figure 3 represents the final model of factors affecting customer satisfaction at Toyota Dasmarinas-Cavite service operation. Furthermore, an evaluation of each construct validity and composite reliability was also conducted; this was done to ensure that each set of indicators in relation to its construct accurately represents the investigated variables. In Table 3, three measures were used to test the reliability and validity of each construct. Cronbach's α and composite reliability (CR) measures the internal consistency of the construct and average variance extracted (AVE) measures the construct validity. All values surpass the recommended value (Cronbach's $\alpha > 0.7$, CR > 0.7 , and AVE > 0.5), implying that each construct is indeed valid and reliable. This shows that among the five SERVQUAL factors, reliability and empathy were found to have a significant relationship to the satisfaction of customers at Toyota Dasmarinas-Cavite.

Table 2. Relationship Between the Five Factors.

No	Variables	Direct Effect	<i>p</i> -Value	Indirect Effect	<i>p</i> -Value	Total Effect	<i>p</i> -Value
1	T → CS	−0.20	0.058	-	-	−0.20	0.058
2	Re → CS	0.45	0.006	-	-	0.45	0.006
3	Rs → CS	−0.13	0.375	-	-	−0.13	0.375
4	A → CS	0.11	0.251	-	-	0.11	0.251
5	E → CS	0.68	0.000	-	-	0.68	0.000

**Figure 3.** The Final SEM.**Table 3.** Construct Reliability and Validity.

Factor	Cronbach's α	Average Variance Extracted (AVE)	Composite Reliability (CR)
Reliability	0.963	0.702	0.959
Empathy	0.982	0.829	0.980

Table 4 shows the relationship between the two hypotheses in this study. From this table, two hypotheses were shown to be significant, which was an indication of a relatively acceptable model construct. Reliability and empathy's *p*-value indicates a highly significant relationship between the two variables.

Table 4. Relationship Between the Two Hypothesis.

No	Variables	Direct Effect	<i>p</i> -Value	Indirect Effect	<i>p</i> -Value	Total Effect	<i>p</i> -Value
1	Re → CS	0.32	0.001	-	-	0.32	0.001
2	E → CS	0.73	0.000	-	-	0.73	0.000

As presented in Table 5, the GFI and AGFI values were 0.897 and 0.862, respectively, indicating that the model passed the minimum cut-off of the model fit [19]. In addition, the RMSEA value was 0.039, indicating that it was lower than the suggested cut-off of 0.07. IFI, TLI, and CFI values were greater than the suggested cut-off of 0.90 [20], indicating that the hypothesized construct of the specified model reflected the observed data very well [23,24].

Table 5. Goodness of Fit and Parameter Estimates.

Goodness of Fit Measures of the SEM	Parameter Estimates	Minimum Cut-Off	Recommended by
Goodness of Fit Index (GFI)	0.897	>0.80	[19]
Adjusted Goodness of Fit Index (AGFI)	0.862	>0.80	[19]
Root Mean Square Error of Approximation (RMSEA)	0.039	<0.07	[20]
Incremental Fit Index (IFI)	0.952	>0.90	[20]
Tucker Lewis Index (TLI)	0.953	>0.90	[20]
Comparative Fit Index (CFI)	0.951	>0.90	[20]

4. Discussion

In general, the study shows that two out of five factors were found to have a significant effect on customer satisfaction. Based on Figure 3, which represents the final SEM in the current study, empathy was found to have the most significant effect on satisfaction (β : 0.73). Several indicators are such as (1) service staffs understand customer needs (λ : 0.91), (2) service staffs give individual attention to the customer (λ : 0.91), (3) service staffs apologize when committing mistakes (λ : 0.92), (4) service staffs apologize when the customer requests were not done (λ : 0.94), (5) service staffs assist all customers in a caring manner (λ : 0.95), (6) convenient schedule for customers (λ : 0.88), (7) informing if there will be changes in promised time (λ : 0.87), (8) service staff's willingness to help (λ : 0.93), (9) service staff's courtesy (λ : 0.95), and (10) dealer is competent in correcting customer concerns (λ : 0.92). These results only show that customers appreciate it when they feel that they are important as a customer. They become even more satisfied if they are given prompt action and attention whenever they are availing of Toyota's service. Customers also appreciate when the service personnel apologized ahead of time if some requests cannot be done due to some reason, and if there will be any changes from the initial promised time to prevent customer disappointment. A similar study also provides evidence for empathy's significant influence on overall customer satisfaction. It was also stated that personal empathy positively contributes to service quality like in the airline industry [3].

Reliability was also found to have a significant effect on satisfaction (β : 0.22). Several indicators are such as (1) ease of arranging appointment schedule (λ : 0.86), (2) prioritization on appointment customers (λ : 0.86), (3) accommodation of walk-in customers (λ : 0.73), (4) promised time on service completion (λ : 0.82), (5) fairness on cost estimate prior to servicing (λ : 0.87), (6) vehicle cleanliness (λ : 0.88), (7) recommendations provided for customer's vehicle (λ : 0.93), (8) addressing customer vehicle concerns and requests (λ : 0.90), (9) addressing customer vehicle concerns and requests (λ : 0.83), and (10) all the discussed services were done accurately (λ : 0.88). These results indicate that most customers were satisfied with the service when the promised commitment time, estimated cost, vehicle concerns, and customer requests were achieved and done accurately. To add, vehicle cleanliness also represents the quality of service especially during vehicle turnover that makes the customers even more satisfied and makes not only the service personnel but also the servicing dealer more reliable. These findings were similar to Baber (2018) who mentioned that not every customer has good automobile knowledge, which is why they value reliable service, which has an impact on satisfaction [7]. In addition, service from a reliable service provider prolongs the vehicle's life and prevents possible breakdown.

Surprisingly, tangibles, responsiveness, and assurance were found to have no significant effects on customer satisfaction. Tangibles (β : -0.20) several indicators in this study were (1) accessibility to service entrance (λ : 0.85), (2) accessibility to the service reception area (λ : 0.82), (3) visual signs and messages for customers provided by the dealer (λ : 0.84), (4) service staff's appearance (λ : 0.91), (5) amenities (λ : 0.76), (6) state of the art equipment in-service workshop (λ : 0.84), (7) Courtesy items installed to vehicles (λ : 0.83), (8) overall service reception appearance (λ : 0.94), (9) overall service workshop appearance (λ : 0.90), and (10) overall facility appearance (λ : 0.93). This only indicates that customers have fewer

expectations when it comes to overall personnel and facility appearance. They are more focused on the quality of service delivered on their vehicle and how service personnel assists and communicate with them. A previous study revealed that tangibility does not take a significant role in providing service quality as customers do not expect to have tangibility in the after-sales service [7].

Responsiveness (β : -0.13) which was also found not significant to satisfaction includes indicators such as (1) assistance provided by guards or other staffs upon entry (λ : 0.83), (2) assistance by receptionist staff at the reception area (λ : 0.84), (3) waiting time before assisted by the Service Advisor (λ : 0.85), (4) assistance by the Service Advisor (λ : 0.89), (5) service staffs respond to all customer inquiries (λ : 0.89), (6) service advisor's clarity of explanation of service (λ : 0.93), (7) clarity of explanation to service billing or charges (λ : 0.95), (8) service staffs promptly serve all customers (λ : 0.95), (9) service staffs courteousness (λ : 0.94), and (10) Overall service staff's responsiveness to customers (λ : 0.94). This also shows that customers have fewer expectations when it comes to the overall responsiveness of service personnel.

Assurance was also found to have no significant effect on customer satisfaction (β : 0.11) but a high p-value of 0.251 (Table 2). Indicators under this factor were (1) maintenance reminder for customer's upcoming service (λ : 0.85), (2) confirmation and a reminder on customer's appointment schedule (λ : 0.86), (3) vehicle check listing or inventory system upon entry (λ : 0.83), (4) informing customers when their vehicle is being serviced (λ : 0.89), (5) allowing customers to watch their vehicle being service (λ : 0.82), (6) Service Advisor's constant update on the vehicle status (λ : 0.90), (7) providing warranty on parts and service repairs (λ : 0.88), (8) returning of used parts to customers (λ : 0.89), (9) all customer concerns and requests were done (λ : 0.88), and (10) all services and requests done were explained and shown upon vehicle pick-up (λ : 0.90). These revealed that customers have less expectation on service personnel's constant communication, honesty, and transparency such as returning all valuable items to the customers, informing if the vehicle is already being serviced, and allowing them to watch to show them that all the discussed inspections are properly done. In addition, explaining all the services done to the customer and giving them a work guarantee assures them of the kind of service they received from the servicing dealer but they do not see it as a contributing factor to the overall good service quality that they expect on their vehicle.

5. Conclusions

Service quality plays an important role in customer satisfaction, particularly in automotive after-sales service. The study aimed to explore the effects of service quality dimensions on customer satisfaction at Toyota Dasmarinas-Cavite. The findings revealed that there is a significant relationship between customer satisfaction and the two dimensions reliability and empathy, while tangibility, responsiveness, and assurance seemed to have less of an effect on customers.

Today, where most people rely on their vehicle as their day-to-day service, they need to make sure that their vehicle is always safe and in good running condition, which is why they still prefer having their car serviced at an authorized service center such as at Toyota Dasmarinas-Cavite [25,26]. In return, the servicing dealer must deliver a high quality of service to meet customer expectations and achieve high customer satisfaction that can later build customer trust towards the company. With these, customer retention and loyalty can be attained by the company that can also increase the company's profit and competitive advantage.

6. Recommendations

6.1. Practical Implications

This study has several practical implications for Toyota Dasmarinas-Cavite, its employees, and the management. The findings of this study suggest that Toyota Dasmarinas-Cavite must focus more on factors such as reliability and empathy in delivering high

quality of service since these are the factors most of the customers consider that affect their satisfaction.

The company must continue to provide employee pieces of training, particularly on service technicians to enhance their skills that will help the company to deliver fast and reliable service to all its customer's vehicles. This can be done by participating in all the training conducted by Toyota Dasmarinas-Cavite (TDM) or can be by Toyota Motor Philippines (TMP). The dealer can schedule a quarterly training properly coordinated with the training facilitators at the TMP. The dealer can also perform a job rotation at the service workshop which can also be done quarterly for the technicians to enhance their skills and knowledge on other tasks. In this case, reliable service can be attained and will lead to customer assurance on their vehicle's good running condition and performance.

The company must also continue to conduct customer care or customer handling related training especially for the service marketing personnel who handles customer directly for them to better understand the customer needs and expectations. This can be done at least once a year. The training can also serve as an annual refresher to the employees who already had this kind of training. With these, service personnel can identify and understand the customers better; what they want and how they feel. In this case, a suitable approach can be adapted towards the customer that can make them feel more comfortable and even more satisfied not only with the service they received but also with the heartfelt treatment by the service personnel.

Lastly, the management must always continue to improve the quality of service by doing "kaizen" activities, and even turning customer feedbacks and concerns into positive input to improve the overall service quality.

6.2. Limitations and Future Research

There are some limitations needed to be considered in this study. This study only utilized the traditional five factors of the SERVQUAL tool, namely tangibles, reliability, responsiveness, assurance, and empathy. There are still other factors and tools that can consider using in this type of study thus limiting the findings of this study. Future researchers can explore these factors using the latest improved tools and models that are applicable in this type of study. The study also focuses only on one after-sales service dealer. Future studies can overcome such limitations by exploring other servicing dealers and industries.

Author Contributions: Conceptualization, J.R.B. and Y.T.P.; methodology, J.R.B.; software, Y.T.P., M.N.Y., S.F.P., B.A.M. and A.A.N.P.R.; validation, Y.T.P., M.N.Y., B.A.M., and A.A.N.P.R.; formal analysis, J.R.B.; investigation, J.R.B.; resources, J.R.B.; data curation, Y.T.P.; writing—original draft preparation, J.R.B.; writing—review and editing, M.N.Y., S.F.P., B.A.M., and A.A.N.P.R.; visualization, Y.T.P.; supervision, Y.T.P., M.N.Y., and S.F.P.; project administration, Y.T.P.; funding acquisition, Y.T.P. and M.N.Y. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Mapúa University Directed Research for Innovation and Value Enhancement (DRIVE).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Acknowledgments: The authors would like to thank all the respondents who answered our online questionnaire.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Sample Survey Questionnaire.

I. Customer Profile						
Name (Optional): _____						
Gender: _____						
Age:						
___ 18–30 years old		___ 46–60 years old				
___ 31–45 years old		___ 61 years old and above				
Estimated Monthly Income:						
___ P15,000 and below		___ P50,001–P100,000				
___ P15,001–P50,000		___ P100,001 and above				
Number of years owning a Toyota vehicle: _____						
II. Customer Assessment based on Service Quality						
Answer the following statements by checking the column that corresponds to your answer.						
Rating Scale:						
5—Very Satisfied						
4—Somewhat Satisfied						
3—Neither Satisfied or Dissatisfied						
2—Somewhat Dissatisfied						
1—Very Dissatisfied						
	Tangibles	5	4	3	2	1
1. Aecessibility to service entrance.						
2. Aecessibility to service reception area.						
3. Visual signs and messages for customers provided by the dealer.						
4. Service staffs appearance.						
5. Amenities (TV, WiFi, furnitures, and refreshments).						
6. State of the art equipments in service workshop.						
7. Courtesy items installed to vehicles (floor mats; steering, shifter and handbrake covers).						
8. Overall service reception appearance (service counters and waiting area).						
9. Overall service workshop appearance (equipments, tools, and working bays).						
10. Overall facility appearance (accessibility, cleanliness, ambience, etc.).						
	Reliability	5	4	3	2	1
1. Ease of arranging appointment schedule.						
2. Prioritization on appointment customers.						
3. Accomodation on walk-in customers.						
4. Promised time on service completion.						
5. Fairness on cost estimate prior to servicing.						
6. Vehicle cleanliness (interior and exterior).						
7. Recommendations provided for customer's vehicle (prior to and after service).						
8. Addressing customer vehicle concerns and requests.						
9. Service staff returns personal belongings and other valuable items.						
10. All the discussed services were done accurately.						
	Responsiveness	5	4	3	2	1
1. Assistance provided by guards or other staffs upon entry.						
2. Assistance by receptionist staff at the reception area.						
3. Waiting time before assisted by the Service Advisor.						
4. Assistance by the Service Advisor.						
5. Service staffs responds to all customer inquiries.						
6. Service advisor's clarity of explanation of service (prior to and after service).						
7. Clarity of explanation to service billing or charges.						
8. Service staffs promptly serve all customers.						
9. Service staffs courteousness.						
10. Overall service staffs responsiveness to customers.						

Assurance	5	4	3	2	1
1. Maintenance reminder for customer's upcoming service.					
2. Confirmation and reminder on customer's appointment schedule.					
3. Vehicle checklisting or inventory system upon entry (interior and exterior condition; valuable items left).					
4. Informing customers when their vehicle is being service.					
5. Allowing customers to watch their vehicle being service.					
6. Service Advisor's constant update on the vehicle status.					
7. Providing warranty on parts and service repairs.					
8. Returning of used parts to customers.					
9. All customer concerns and requests were done.					
10. All services and requests done were explained and shown upon vehicle pick-up.					

Empathy	5	4	3	2	1
1. Service staffs understand customer needs.					
2. Service staffs gives individual attention to customer.					
3. Service staffs apologize when committing mistakes.					
4. Service staffs apologize when customer requests were not done.					
5. Service staffs assist all customers in a caring manner.					
6. Convenient schedule for customers.					
7. Informing if there will be changes in promised time.					
8. Service staffs willingness to help.					
9. Service staffs courtesy.					
10. Dealer is competent in correcting customer concerns.					

III. Customer Assessment based on Customer Satisfaction and Future Intention

Answer the following statements by checking the column that corresponds to your answer.

Rating Scale:

5—Very Likely

4—Somewhat Likely

3—Neutral

2—Somewhat Unlikely

1—Very Unlikely

Customer Satisfaction and Future Intention	5	4	3	2	1
1. Recommending TDM's service to a friend or peer.					
2. Re-availment of TDM's service.					
3. Switching to another Toyota Service left.					
4. Switching to non-Toyota or outside car service left.					
5. Recommending the service marketing staff/Service Advisor to a friend or peer.					
6. Switching to another service marketing staff/Service Advisor.					
7. Continue patronizing TDM's services even if your vehicle is already out of warranty.					
8. Continue patronizing TDM's services despite of price increases.					
9. Continue patronizing TDM's services despite of minor unwanted experience.					
10. Overall satisfaction with TDM's Service performance.					

References

1. Tahanisaz, S.; Shokuhyar, S. Evaluation of passenger satisfaction with service quality: A consecutive method applied to the airline industry. *J. Air Transp. Manag.* **2020**, *83*, 101764. [CrossRef]
2. Nunkoo, R.; Teeroovengadum, V.; Ringle, C.; Sunnassee, V. Service quality and customer satisfaction: The moderating effects of hotel star rating. *Int. J. Hosp. Manag.* **2019**, *91*, 102414. [CrossRef]
3. Farooq, M.; Salam, M.; Fayolle, A.; Jaafar, N.; Ayupp, K. Impact of Service Quality on Customer Satisfaction in Malaysia Airlines: A PLS-SEM Approach. *J. Air Transp. Manag.* **2018**, *67*, 169–180. [CrossRef]
4. Gaiardelli, P.; Saccani, N.; Songini, L. Performance measurement of the after-sales service network—Evidence from the automotive industry. *Comput. Ind.* **2007**, *58*, 698–708. [CrossRef]
5. Shokouhyar, S.; Shokoohyar, S.; Safari, S. Research on the influence of after-sales service quality factors on customer satisfaction. *J. Retail. Consu. Serv.* **2020**, *56*, 102139. [CrossRef]
6. Statista. Automotive Industry in the Philippines. Available online: <https://www.statista.com/statistics/1009280/philippines-automotive-companies-by-number-units-sold/> (accessed on 22 November 2020).
7. Toyota. Toyota Dasmarias-Cavite. Available online: http://www.toyotadasma.com.ph/about_us.php (accessed on 10 July 2020).
8. Toyota. Toyota Motor Philippines. Available online: <https://toyota.com.ph/> (accessed on 10 July 2020).

9. Baidoo, F.; Odum-Awuakye, G.A. Assessing customer satisfaction levels in the SMES automobile vehicle maintenance and repairs service delivery system in cape coast—Ghana. *Afr. J. Appl. Res.* **2017**, *3*, 82–94.
10. Baber, H. Service quality perception of customers—A study of Toyota Motors in India. *Organ. Mark. Emerg. Econ.* **2018**, *9*, 311–323. [CrossRef]
11. Ngaliman, E.; Suharto, M. The effect of tangibles, responsiveness, and reliability on customer satisfaction of delivery services. *Int. J. Econ. Manag. Stud.* **2019**, *6*. Available online: <http://www.internationaljournalsrsg.org/IJEMS/paper-details?Id=310> (accessed on 10 July 2020).
12. Johnson, E.; Karlay, J. Impact of Service Quality on Customer Satisfaction. Master's Thesis, University of Gävle, Gävle, Sweden, May 2018; p. 43.
13. Kalaja, R.; Myshketa, R.; Scalera, F. Service quality assessment in health care sector: The case of durres public hospital. *Proc. Soc. Behav. Sci.* **2016**, *235*, 557–565. [CrossRef]
14. Chatzoglou, P.; Chatzoudes, D.; Vraimaki, E.; Leivaditou, E. Measuring citizen satisfaction using the SERVQUAL approach: The case of the Hellenic Post. *Proc. Econ. Financ.* **2013**, *9*, 349–360. [CrossRef]
15. Rezaei, J.; Kothadiya, O.; Tavasszy, L.; Kroesen, M. Quality assessment of airline baggage handling systems using SERVQUAL and BWM. *Tour. Manag.* **2018**, *66*, 85–93. [CrossRef]
16. Rashid, M.H.; Nurunnabi, M.; Rahman, M.; Masud, M.A. Exploring the relationship between customer loyalty and financial performance of banks: Customer open innovation perspective. *J. Open Innov. Technol. Mark. Complex.* **2020**, *6*, 108. [CrossRef]
17. Ijadi Maghsoodi, A.; Saghaei, A.; Hafezalkotob, A. Service quality measurement model integrating an extended SERVQUAL model and a hybrid decision support system. *Eur. Res. Manag. Bus. Econ.* **2019**, *25*, 151–164. [CrossRef]
18. Prasetyo, Y.; Castillo, A.; Salonga, L.; Sia, J.; Seneta, J. Factors affecting perceived effectiveness of COVID-19 prevention measures among Filipinos during enhanced community quarantine in Luzon, Philippines: Integrating protection motivation theory and extended theory of planned behavior. *Int. J. Inf. Dis.* **2020**, *99*, 312–323. [CrossRef] [PubMed]
19. Gefen, D.; Straub, D.; Boudreau, M. Structural equation modeling and regression; Guidelines for research practice. *Commun. Assoc. Inf. Syst.* **2000**, *4*, 7. [CrossRef]
20. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E.; Tatham, R.L. *Multivariate Data Analysis*; Pearson Prentice Hall: Upper Saddle River, NJ, USA, 2006.
21. Vatolkina, N.; Gorbashko, E.; Kamynina, N.; Fedotkina, O. E-service quality from attributes to outcomes: The similarity and difference between digital and hybrid services. *J. Open Innov. Technol. Mark. Complex.* **2020**, *6*, 143. [CrossRef]
22. Hong, J.; Kim, B. Service quality, relationship benefit and experience value in the auto repair services sector. *J. Open Innov. Technol. Mark. Complex.* **2020**, *6*, 30. [CrossRef]
23. Prasetyo, Y.T.; Tanto, H.; Mariyanto, M.; Hanjaya, C.; Young, M.N.; Persada, S.F.; Miraja, B.A.; Redi, A.A. Factors affecting customer satisfaction and loyalty in online food delivery service during the covid-19 pandemic: Its relation with open innovation. *J. Open Innov. Technol. Mark. Complex.* **2021**, *7*, 76. [CrossRef]
24. Prasetyo, Y.T.; Senoro, D.B.; German, J.D.; Robielos, R.A.; Ney, F.P. Confirmatory factor analysis of vulnerability to natural hazards: A household Vulnerability Assessment in Marinduque Island, Philippines. *Int. J. Disaster Risk Reduct.* **2020**, *50*, 101831. [CrossRef]
25. Balinado, J.R.; Young, M.N. The impact of technology on service supply chain of Toyota Dasmarinas Cavite: A comparative study. In Proceedings of the 2020 7th International Conference on Frontiers of Industrial Engineering (ICFIE), Singapore, 18–20 September 2020.
26. Balinado, J.R.; Tri Prasetyo, Y. The impact of 5S lean tool to service operation: A case study in toyota dasmarinas-cavite service operations. In Proceedings of the 2020 the 6th International Conference on Industrial and Business Engineering, Macau, China, 27–29 September 2020.