Service Evaluation on Automotive After-Sale Service

N. Nordin[*,1], *A. A. Yaacob*[1], *R. C. Razak*[2], *W. N. W. Radzi*[1] *and U. N. Saraih*[1]

[1] School of Business Innovation and Technopreneurship, Universiti Malaysia Perlis, 01000 Kangar, Perlis, Malaysia

[2] Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, 15150 Kelantan, Malaysia

[*]*norshahrizan@unimap.edu.my*

Abstract *– After-sale service assumes a crucial part in reinforcing the bond between the association and clients. After-sales service refers to various processes which ensure customers are satisfied with the products and services of the organization. The needs and demands of the customers must be fulfilled for them to spread a positive word of mouth. In the present scenario, a positive word of mouth plays an important role in promoting brands and products. After sales service ensures products and services meet or surpass the expectations of the customers. After sales service include various activities such as steps and procedures to find out whether a particular customer is happy with the products or not. In this research, some of the variable is used to measure the after-sales service. The variable is including warranty, staff service, loyalty, safety and comfort level. The researcher will incorporate them to measure and observe how they influence the after-sale service.* ***Copyright © 2016 Penerbit Akademia Baru - All rights reserved.***

Keywords: after-sales service, warranty, staff service, loyalty, safety, comfort level

1.0 INTRODUCTION

Clients are the most reference of each business. Deals experts must attempt their level best to fulfill clients for them to return again to their association. In order to clients reach again the same organization, the after-sale service always indeed. After-sale service will be more focused on a help and information that is provides to customer after they have bought a particular product. A retailer who offers a decent after-sales service, they are additionally endeavoring to keep the auto purchaser as a long haul client by offering after-sales service. After-sale service is vital in light of the fact that it serves to ensure the clients are fulfilled by their buys and if there should be an occurrence of any trouble introducing or setting up supplies, they can get help. Clients begin having faith in the brand and get connected with the association for a more extended term. They talk great about the association and its items. A fulfilled and content client brings more people and in the long run more incomes for the association.

After-sale service assumes a crucial part in reinforcing the bond between the association and clients. After sales service refers to various processes which make sure customers are satisfied with the products and services of the organization. The needs and demands of the customers must be fulfilled for them to spread a positive word of mouth. In the current scenario, positive word of mouth plays an important role in promoting brands and products. After sales service

makes sure products and services meet or surpass the expectations of the customers. After sales service mainly to find out whether the customers were happy with the products or vice versa. In this research paper, some of the variable is used to measure the after-sales service. The variable is including warranty, training service, loyalty, safety and comfort level is being use. This research used the variable to measure and to see the influence of every variable with the after-sale service.

2.0 LITERATURE REVIEW

In the field of after-sales service tool of evaluation, the earliest literatures was found in 1960s, focused and dealt with the service parts industry. The study conducted by Wei Zhang and Liwen Liu dated in 2007 [1] concluded that the customer waiting time is an effective indicator in order to maximize customer satisfaction. Satisfaction in after-sales service impacts directly brand loyalty of the customer. Some other study in the industrial automotive by Sarv Devaraj, Khalil F. Matta, and Edward Conlon, 2001 [2] and Mittal, Vikas , Pankaj Kumar, and Michael Tsiros, 1999 [3], give some suggestion that brand loyalty and customer satisfaction is depend on service quality as a role.

Warranty is one of the variables that are being focused. Four fundamental justifications with respect to the economic part of warranty have been proposed in the writing for a far reaching examination based on Winand Emons, in 1989 [4] that is product failures protection (insurance role), procurement of item quality data to purchasers (signaling role), an instrument to separate buyer hazard inclination if client heterogeneity is not completely detectable by the dealer (sorting role), and to incentivize the vendor to enhance item quality (incentives role). These theories would accordingly be steady with customer inclination for more warranty, all else being equivalent. With respect to role of insurance by Geoffrey Heal in 1977 [5] and Marlin U. Thomas, 2006 [6], warranty give customers some security against poor item quality and are frequently utilized by makers as a value added peculiarity to advance their items. The flagging argument, on the other hand, predicts that higher quality items will have longer warranty, and is maybe the particular case that has gotten the most consideration.

From the previous study, there are two sorts of loyalty; behavioral and attitudinal loyalty based on Kumar and Shah, 2004 [7] N. Nordin, 2014, [8] Dean, 2007 [9]. Based on Halil Nadiri, Kashif Hussain, Erdoğan Haktan Ekiz and Şamil Erdoğan in 2008, [10] Osman M. Karatepe, Erdogan H. Ekiz in 2004, [11] Youjae Yi in 1990, [12] stated that the behavioral parts of the client dependability were portrayed regarding repurchase plans, verbal correspondence, and proposals of the association. Yuping Liu-Thompkins, E. V. Williams and Leona Tam in 1990, [13] defined characterized attitudinal faithfulness as an ideal assessment that will be held with sufficient quality and steadiness to advance a more than once great reaction towards an item/brand or a store. Based on the Table 1, the customer service that is most related with this research are repair and maintenance service and training service. One of the procedures of introducing better client benefits in auto fabricating industry is to give fitting trainings to staff and clients [15]. Giving repair and support is the interwoven piece of client administration in auto producing industry. Based on Wesley M. Toy, P.E. Saratoga and Calif in 1987, [16] stated that Upkeep means evolving, cleaning, introducing, and restarting up the parts which has issues.

Table 1: The different types of customer services in automotive industry

Customer Service	Objective
Discovery services	Finding new needs of clients and making new entrepreneurial open doors.
Repair and maintenance services.	Changing, cleaning, installing, and restarting up the parts
Leasing services	Client can bear the cost of and change autos each 3 years without bothers or exchanging.
Communicational services	After sold, create a long term relationship with clients for any demand.
Information-al services	Advising clients about new items, auto news and service focuses.
Training services	Clarify support timetable and remarkable peculiarities of the vehicle. Tips for issue conclusion, troubleshooting, safe driving & treatment of vehicle.

As indicated by [7], consumer steadfastness is by all accounts focused around an accumulation of elements. The main element is a trust. Purchasers must trust the seller or experienced item. Second, the exchange or relationship must have a positive seen esteem more noteworthy than that supplied by contenders. Third, if advertisers expand on the first two variables, they might be capable to make a level of positive client passionate connection. Dennis Pitta, Frank Franzak and Danielle Fowler in 2006, [14] support that passionate reaction may be duty to their brands that is impervious to change. According to Seyed Mohammad Sadeq Khaksar, Nawaser Khaled, Afshar Jahanshahi Asghar in year 2010 [15] stated that there is different type of client service in automotive industry. Refer Table 1.

Customers deserved to feel higher comfort level in after-sale service. Based on the research result conducted by M. Satish, R.N Balamurugan, Surinder Nath Sharma and Dr. P. Karthikeyan in 2003, [17] there are finding the result and give some suggestion in term of comfort level of client. The level of performance measures also need to be verified due to findings for different car company. [18]. Refer Table 2.

Table 2: The different car company, finding and suggestion

Car Company	Finding	Suggestion
MARUTI SUZUKI INDIA LIMITED	There are just 75% of clients fulfilled on client lounge office accessible in merchant workshops.	MARUTI ought to consider & demand their merchants to give a different parlor to female clients with newspapers, magazines, TV, drinks, and so on.
HYUNDAI MOTORS	The WAIT & TAKE office is offered for 35% of vehicles adjusted by them, actually for minor employments.	In Client relax area, just TV office is given. This can be enhanced by including Internet, magazines, water and features to upgrade client agreeableness.
TATA MOTORS	25% clients are mindful of refreshment offices accessible to the clients. i.e the refreshment is given on time bound.	In house game plans can be given to offer refreshments to clients on the double.
HONDA MOTORS	Web office is accessible in the client lounge for the client accommodation and 45% of clients are utilizing this office.	The working hours can be reached out from 8 hours to 12 hours, as in typical course a large portion of the high section vehicle clients like to take conveyance of their vehicles in the night times.
	33% of office accessible to illuminate the prepared status of vehicle to the clients. i.e. just through phone hint.	Separated from telephonic data about vehicle status to the client, sms hint can likewise be given.
MAHIND-RA & MAHIND-RA	Half of the clients are emphatically reacted to Extended Warranty.	There is no online framework at the workshops for their administration operations. By giving this office, their merchants can experience the vehicle history before going to the vehicle.

3.0 METHODOLOGY

Many of the research design for the previous study explore the performance and satisfaction in related the after-sales service and automotive industry. This research is aimed for the new feature and to evaluate the after-sales service towards automotive industry in the Malaysia. The system for the study is start-up with some point of the study. The theme of the study are consistently tight down, seeking the wellspring of writing, refine the subject and examination inquiry amid the pursuit. The inquiry is generally led by the key point that is "After-sales service" and emulated by an alternate key point "Auto" to find the really related journal.

The previous research papers is consistently assessed and the summary of meta-analysis with a specific end goal to pick the related and legitimate variable. From the meta-analysis could be used to be as the selected measurable variable, and then the framework is drawn out and be proposed. Figure 1 depicts the proposed framework on After-sales service evaluation. Once the framework is done and proposed, the research instrument is developed. The questionnaire is developed based on the framework and article reviewed. The framework is constantly referred in order to generate idea to create a valid and related question. Figure 1 demonstrates the process on conducting a study on the service evaluation of automotive after-sales service.
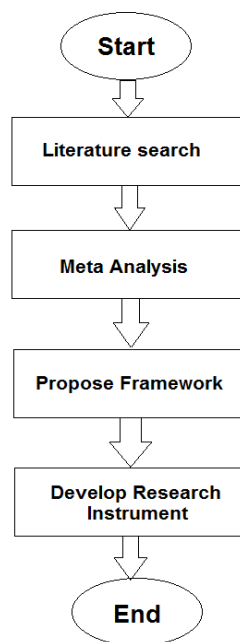

Figure 1: Preliminary research flow chart

4.0 PROPOSED FRAMEWORK

Research frameworks are developed by joining thoughts and speculations that help specialists recognize issues and create questions for pertinent writing (Smyth, 2004). A research framework includes the impact of independent variables on a dependent variable. An independent variable is the variable controlled by the specialist to influence or change the dependant variable. A dependent variable as the information measured, anticipated, or observed by the researcher and will be anticipated that would be influenced by a control of the independent variable. Six variables will be examined according to the research. Service evaluation on automotive after-sale service containing four independent variables and the
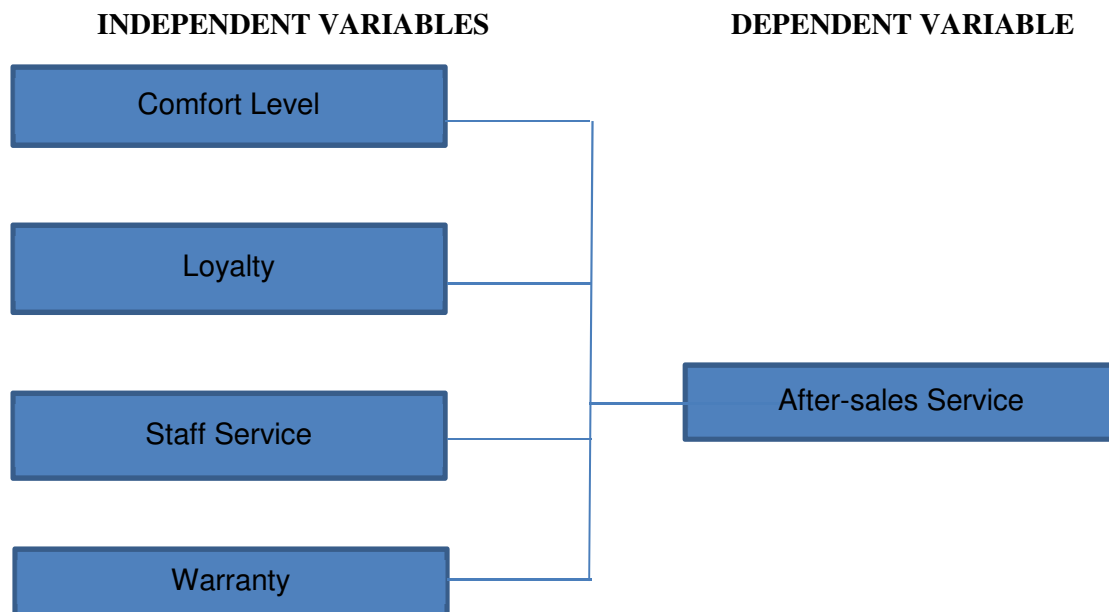
remaining is one dependent variable as in Fig. 2.

INDEPENDENT VARIABLES **DEPENDENT VARIABLE**

Figure 2: Proposed conceptual framework

5.0 DATA ANALYSIS

This descriptive analysis was conducted to provide an overview of the respondents' perception of the variables, ensure the validation and reliability processes, and thereby ascertain the mean score and standard deviation of the constructs. The mean score of the items of each of the factors was then used for hypotheses testing. The means and standard deviation of the study variables are shown in Table 3. As discussed in Chapter 3, five variables were used in this study: 4 independent variables and 1 dependent variable. A mean score of less than 3.00 {(6/3 + lowest value (1)} was treated as low, a mean score of more than 5.00 {(highest value (7) - 6/3} was treated as high, and a mean score between range 3.00 to 5.00 was treated as moderate. Previous studies suggest that a mean value of more than 2.5 is acceptable (Wong, Teo & Russo, 2012). Hair et al. (2010) suggest that a mean value between 2.5 and 5 should be considered acceptable.

Table 3: Respondents' perception

Variable	n	Mean	Std. Deviation
After-sales Service	147	4.0231	.51472
Comfort Level	147	4.0833	.49252
Staff Service	147	3.8231	.58114
Warranty	147	3.4014	.64609
Loyalty	147	3.8469	.55783

Table 3 shows the mean value of the after-sales service is (M = 4.1946, SD = 0.49252). The mean value of the staff service is (M = 3.8231 SD = 0.58114. The remaining mean value of the warranty variable is (M = 3.9558SD = 0.59801), and that of the loyalty variables is (M = 3.8469SD = 0.55783). These results indicate that all the variables are at a moderate level,

because their mean values lie between 3.8231 to 4.1946.

Correlation analysis identifies the interrelation of the study variables. Pearson's correlation coefficient (r) involve the measurement of linear associations and on how variables are related, Table 4.7 shows the bivariate correlations between the dependent variable and predictors for this study namely comfort level, staff service, warranty and loyalty. Values of correlation coefficients (r) are ranged between -1.00 and +1.00 with positive numbers used to identify a positive relationship and negative number is used to identify a negative relationship. Additionally, the closer a Pearson's r value to 1 the stronger the relationship between the two variables.

Table 4: Correlation analysis: Correlations

		Aftersales	comfort	staff	warranty	loyalty
Aftersales	Pearson Correlation	1	.481**	.576**	.319**	.594**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	147	147	147	147	147
Comfort	Pearson Correlation	.481**	1	.705**	.401**	.634**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	147	147	147	147	147
Staff	Pearson Correlation	.576**	.705**	1	.451**	.790**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	147	147	147	147	147
Warranty	Pearson Correlation	.319**	.401**	.451**	1	.432**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	147	147	147	147	147
Loyalty	Pearson Correlation	.594**	.634**	.790**	.432**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	147	147	147	147	147

**Correlation is significant at the 0.01 level (2-tailed).

The Table 4 shows that the loyalty variables had the highest correlation (r=.594; p<.05), followed by staff service (r=.576; p<.05), followed by comfort level variable (r=.481; p<.05) and the last ranking is warranty variable that has the lowest value which is (r=.319; p<.05). The warranty variables had a small correlation value (r=.319; p<.05). All the variables had a positive and statistically significant effect at p<.05.

6.0 CONCLUSION

For a start, this study is conducted to examine the aspects and dimension which may influence the after-sales service in automotive company. This study revealed that all the selected variables have a significant relationship with after-sales service on automotive company thus it can be concluded that the objective for this research project is fulfilled. This research will allow the service provider to make a step closer in understanding the needs and wants of customer. Nevertheless, the service provider needs to take necessary approaches in order to fulfil the need and want of the customer on after-sales service.

After-sales service has very important role in satisfied the customer. It's very important for a company to adopt a good after-sales service to assure the efficiency and effectiveness to serve the customer. There is a need to respond within a reasonable and acceptable to the customer on warranty claims. Companies are not required to suspend the demands made by the customer and try to fulfil it either repair or replace with a new product. The loyalty will be the issue of

principle for creating and keeping up association with the customers. It has been proven that loyal customer can spread a positive word-of-mouth to other potential customer.

REFERENCES

[1] Zhang, Wei. "Outsourced After-Sales Service Contracting in Consumer Markets." In POMS Conference. 2009.

[2] Devaraj, Sarv, Khalil F. Matta, and Edward Conlon. "Product and service quality: The antecedents of customer loyalty in the automotive industry."Production and Operations Management 10, no. 4 (2001): 424-439.

[3] Mittal, Vikas, Pankaj Kumar, and Michael Tsiros. "Attribute-level performance, satisfaction, and behavioral intentions over time: a consumption-system approach." The Journal of Marketing (1999): 88-101.

[4] Emons, Winand. "The theory of warranty contracts." Journal of Economic Surveys 3, no. 1 (1989): 43-57.

[5] Heal, Geoffrey. "Guarantees and risk-sharing." The Review of Economic Studies (1977): 549-560.

[6] Thomas, Marlin U. Reliability and warranties: methods for product development and quality improvement. CRC Press, 2006.

[7] Nordin, N., and R. C. Razak. "The Concept of Kano-QFD Integration for Non-linear Customer Needs in Product and Service Design." (2014).

[8] Back, Ki-Joon, and Sara C. Parks. "A brand loyalty model involving cognitive, affective, and conative brand loyalty and customer satisfaction."Journal of Hospitality & Tourism Research 27, no. 4 (2003): 419-435.

[9] Dean, Alison M. "The impact of the customer orientation of call center employees on customers' affective commitment and loyalty." Journal of Service Research 10, no. 2 (2007): 161-173.

[10] Nadiri, Halil, Kashif Hussain, Erdogan Haktan Ekiz, and Samil Erdogan. "An investigation on the factors influencing passengers' loyalty in the North Cyprus national airline." The TQM Journal 20, no. 3 (2008): 265-280.

[11] Karatepe, Osman M., and Erdogan H. Ekiz. "The effects of organizational responses to complaints on satisfaction and loyalty: a study of hotel guests in Northern Cyprus." Managing Service Quality: An International Journal 14, no. 6 (2004): 476-486.

[12] Yi, Youjae. "A critical review of consumer satisfaction." Review of marketing 4, no. 1 (1990): 68-123.

[13] Liu-Thompkins, Yuping, E. V. Williams, and L. Tam. "Not all repeat purchases are the same: Attitudinal Loyalty and Habit." College of Business and Public Administration. Old Dominion University, Norfolk (2010).

[14] Pitta, Dennis, Frank Franzak, and Danielle Fowler. "A strategic approach to building online customer loyalty: integrating customer profitability tiers."Journal of consumer marketing 23, no. 7 (2006): 421-429.

[15] S. M. S. Khaksar, N. Khaled, and A. J. Asghar, "Study of the relation of customer service and entrepreneurial opportunities," Asian Journal of Management Research, 2010.

[16] D. Calif, "Waste audit study: automotive repairs,"Wesley M. Toy, PE Saratoga, Calif, for the California Department of Health Services, Toxic Substances Control Division, Alternative Technology Section, pp. 131-142, 1987.

[17] M. Sathish, R. Balamurugan, S. N. Sharma, and P. Karthikeyan, "Customer relationship management in car service industry with reference to car dealers in Coimbatore," Journal Of Business Management & Social Sciences Research, vol. 2, pp. 43-49, 2013.

[18] N. Nordin, A. A. Osman, and A. H. Adom, "A review on lean assessment models and performance measures", Journal of Advanced Review on Scientific Research 21, no. 1 (2016): 1-26.