EVALUATING SERVICE QUALITY IN AUTOMOBILE MAINTENANCE AND REPAIR INDUSTRY IN INDONESIA

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Abstract---The purpose of this research is to investigate the relationship between the service quality dimensions using SERVQUAL towards customer satisfactions in the context of automobile service and maintenance. The competition in the industry getting strong as there are too many players in the market. Customer started to be more demanding as they have great of choices to select the best that can provide them a superior service. This research used quantitative method and as such it questionnaire to collect data. Data were collected from vehicle owner that sent their vehicle for servicing from 30 selected auto service centers. List of names given to by the service provider based on their history records. Each service centers identified top 20 customers based on the recent activity started from January 2020. Email and short messages sent to customer to notify about the research and the purpose of it to be conducted. Respondents may choose to participate based on voluntary basis. 600 questionnaire distributed and 356 questionnaire returns which brings to 59% returning rates. The results indicate that only tangibles and responsiveness are not significant towards customer satisfaction. The rest were positively influence customer satisfaction. Service providers in the industry should take more serious on the service quality as it is important for their survival in the industry.

Keywords---Customer satisfaction, Service quality, SERVQUAL

I. Introduction

Marketing especially related to service based in 21st century faced greater challenge due to several factors. Rate of new entrants to the market is higher thus created a fierce challenge. It was also recorded that businesses in 21st century faced tough completion within industry. Customer enjoyed the benefits of challenges as they have vast choices based on the services that can meet their needs and expectations (Hapsari, Clemes, & Dean, 2017). Service provider at the same forced to increased their service level in order to gain support and gain customer for market share. Recent reports stated that customer is actually looking for a courtesy vehicle inspection with high expectations that their vehicle will be performing at the best and safety conditions. Customer expects that the service providers provide them with the vehicle status and review together with the estimation for any repairs and time required to complete. Besides that, customer wish to be an options on the maintenance preferences. Customer also expects that the service providers enable to provide them a reliable maintenance schedule that suits to their vehicle conditions and driving behaviors. Another reports also claimed that

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customer expects that service provider to follow up them on the next schedule and provides them with a courtesy call pre and post services.

Competition in the industry led to high demand from customers related to a service delivery. Customer would like to be guided instead of pushing method. Service provider need to explain the whole scenario and provide options to customer on the best approach to solve the issues. At the same time customer requested service provider to show available resources such as product reviews, past customer testimonials and guarantees of service delivered. It is also a must to the service provider to communicate about the vehicle in the layman terms or language. Not many customer is understanding about the automotive but they rely on the experts to take care of their problems. Service provider should be able to explain in details to make things clear and understood by the customer on the facts and issues.

Research indicates (L. Muhammad & Gul-e-Rana, 2019) that misled or wrong information's given will lead to customer dissatisfaction and disappointment. Such situations will lead to a negative customer experiences and will increase the numbers of customer attrition or dropout.

II. Literature review

Customer satisfaction

Customer satisfaction is the state of overall customer experiences that meet or surpass their expectations (Berry, Zeithaml, & Parasuraman, 1985; Borishade et al., 2018; Hirata, 2019). The challenge in achieving customer satisfaction is to meet the customer expectations. Many studies in understanding customer conducted in a different research scope and industries but the change in customer pattern, taste and preferences lead to a continuous study from time to time in order to meet their expectations (Borishade et al., 2018). Customer expectations can only be known should the service provider able and managed to know their market segments and audience. Customer in the same market segments normally behave the same (Minarti & Segoro, 2014). Understanding their expectations is important in order to serve them right (Zhang, Zhang, & Zhang, 2019). It means that service provider needs to reach the right market segments and customer in order to meet their needs and expectations (Davras & Caber, 2019; Gerdt, Wagner, & Schewe, 2019). Recent research (Setiawan & Sayuti, 2017) suggested that service provider to explore new things in meeting the needs of customer. It was claimed by (Mm, 2018) that current customer is unique and complicated (M. F. Shamsudin, Nurana, Aesya, & Nabi, 2018). Business organizations is facing customers that have a different purchase intention as compared to before (Binsar Kristian P. & Panjaitan, 2014). Such situations lead to another challenge for the service provider to change their focused and marketing strategy in order to meet the current customers demand (Fernandes & Solimun, 2018).

Meeting the customer satisfaction can be done through a clear and standards process, policies, and operation (Misbach, Surachman, Hadiwidjojo, & Armanu, 2013). The service delivery must be consistent over time in order to avoid customer frustration. High commitment and dedication needed by the service provider and employee to deliver a continuous service quality that can meet and surpass customer expectations (Setiawan & Sayuti, 2017). It was also recommended by past research (M. F. Shamsudin, Razak, & Salem, 2018) that the service provider need to be transparent in order to gain customer support. Good communication between the service provider and customer will provide the insight of customer of what actually they are looking after (I. Razak, Nirwanto, & Triatmanto, 2016).

Many studies (S. Hassan, Shamsudin, & Mustapha, 2019) recommended that service provider to develop and change their business strategy towards customer driven. It means that service provider need to realign their business focused from a product based towards customer based (Hamzah, A. A., Shamsudin, 2020). Service provider need to explore what and

how to meet customer expectations and only provide the services that can meet the customer needs (Sallaudin Hassan & Shamsudin, 2019). One of the way to get more information about customer is to collect as many as possible feedback, comment and suggestion from current and past customers that can be used to evaluate and measure the necessary enhance or upgrade based on their feedback (M. F. Shamsudin, Shabi, & Salem, 2018).

Past studies reported that service provider may not only to hear from customer but to listen (Gerdt et al., 2019). It was mentioned that most of the service provider did received feedback from customer but not able to understand the voice of customer (Davras & Caber, 2019). Failing in understanding their messages will have resulted to poor sales and business performance (M. Shamsudin et al., 2015). Service provider have been recommended by (Kim, Cho, & Kim, 2019) to be more responsive in servicing the customer. Customer today, wanted everything to be quick and express. Responsive in the auto repair for example means that the employee managed to provide prompt service that may makes them happy rather than keep them waiting without proper updates (Davras & Caber, 2019).

Automobile maintenance and servicing need more human than machine in order to satisfied customer (Baharudin Kadir, Shamsudin, Nurul, & Mohd, 2020). Many argues that automobile maintenance and services may need machine to repairs and service but most of the service provider failed to make human contact in understanding the actual problems of the auto and the expectations from customer (A. A. A. A. Razak & Shamsudin, 2019). The service could be deliver on time and quick but there is a need to includes the emotion elements between customer and employee for example in building the relationship (Cakici, Akgunduz, & Yildirim, 2019).

Service provider at the same time need to ensure that their customer is happy and satisfied with their employer (Petzer & van Tonder, 2019). According to (M. Shamsudin et al., 2015), happy customer will have resulted to happy customer (Mohd-Ramly & Omar, 2017). Happy employee will work hard to meet the business objectives and goals. As a results customer get the benefits in terms of excellent services that meet their needs and expectations (M.F. Shamsudin, Razak, & Salem, 2018). The objective is very clear, which is to meet the customer needs and to fulfill the customer expectations. The overall process can be translated into the overall customer experiences. (Parihar & Dawra, 2020). High positive customer experiences will lead to satisfaction. Negative customer experiences will lead to losing one future customer and becoming a treat to the market as frustrated customer will tell their friends about the bad services experienced by them (Tabrani, Amin, & Nizam, 2018). It is therefore, very important for the service provider to maintains good service and improve service level as it will help to bring greater benefits and brand image (Quoquab, Mohamed Sadom, & Mohammad, 2019).

Competition in the auto maintenance and services at current state of economy may need service provider to explore and make used of the satisfied customer to boost their businesses (Quoquab et al., 2019). Satisfied customer according to Mohd Farid Shamsudin, Ali, Wahid, & Nadzri, 2019) will prone to enhance and promotes the service through word of mouth. Satisfied customer will tell at least 8 to 10 customers and eventually the same people that received the message will do the same to their family and friends (Khamis & AbRashid, 2018). It means that satisfied customer helps the service provider to promote and advertise their business and attract customer to visit. Information and experienced by customer is more reliable and trusted by others compared to the message from the service provider (Mohd Farid Shamsudin & Razali, 2015). People trust their friends and believed in the testimonial and referrals (Ahmed, Tarique, & Arif, 2017). At the end, service provider may save a lot of cost in acquisition (Khamis & AbRashid, 2018)

Past research (Salem, Shawtari, Shamsudin, & Hussain, 2016) indicates that service provider that managed to keep 5% of their current customer may lead to extra income of 25% to 90% (Izogo, 2017). Such remarkable increase in revenue stream should motivate service provider to reduce the failure rate and being consistent in their services (Abu-Alhaija, Raja

Yusof, Hashim, & Jaharuddin, 2019). It is recommended by B. Kadir and Shamsudin (2019), that the service provider to create their competitive advantage based on the feedback from customer. Service provider may introduce loyalty program in order to keep customer in the lifecycle. It was reported that loyalty program may increase the retention rate since it provides a win-win situation to both customer and service providers.

Service quality

Customer satisfaction in services based industry relied very much on the service quality. Many past studies (Chen & Hu, 2010; Lau, Cheung, Pires, & Chan, 2019; Samen, Akroush, & Abu-Lail, 2013) investigate the role of service quality in various industry such as hotels, quick service restaurants, health centre, banking and many mores but results seems to be varies according to the perceived priority from the customer perspective. This study focused on the services quality with regards to the automobile repair and maintenance industry where it is highly related to services and high challenges to meet the customer expectations (Hapsari et al., 2017; I. Muhammad, Farid Shamsudin, & Hadi, 2016; Souiden & Pons, 2009). Most study on service quality used SERVQUAL dimensions introduced by (Parasuraman, Zeithaml, & Berry, 1994). SERVQUAL consist of five dimensions in which will be used as the main measurements towards customer satisfaction.

Reliability

Most of the challenges in satisfying customer is to understand the customer expectations (Kotler & Mantrala, 1985). The challenges in automobile repair and maintenance is the same but more difficult as some customers just do not understand their actual problems with regards to their auto. Customer at the first place come to seek services with the state that they themselves did not have knowledge on the problems but put high expectation on the repair maintenance to be resolve as brand new (Izarul, Syed, & Nayan, 2020). Service provider need to ensure that they deliver their services at the excellent level by solving the problem at the first time (Seth, Momaya, & Gupta, 2008). Service provider should also keep their promised to complete their job with the time promised (Hapsari et al., 2017). Failure to solve the automobile problems due to other mechanical problems or parts may lead to customer disappointed (Sahoo & Sahoo, 2019). In most of the cases, it was not due to the service provider fault as the customer failed to provide enough information's that is required for trouble shooting. Past research (Sahoo & Sahoo, 2019) suggested that service providers to contact customer and explain to them the actual problems that may not know to customer and specifically quote the price before the task begins. Customer should be given an information about the necessary action to be taken and the reasonable durations that may require to solve the issues (Famiyeh, Asante-Darko, & Kwarteng, 2018). The normal regular services however may not be so difficult as that could be just a routine but service provider need to allocate specific times and duration so that customer can decide their own time slot for appointments (L. Muhammad & Gul-e-Rana, 2019).

Assurance

Repeat purchase occurred when customer is satisfied with their overall experiences of the past (Famiyeh et al., 2018). Repeat purchase can also occur because customer have the trust and confidence towards the ability and skills of the employee in the related job scope (Sahoo & Sahoo, 2019). Service providers need to ensure that they employ right candidates that are meeting specific requirements in order to represent their skills and service delivery at the excellent level (Baharudin Kadir et al., 2020). Service advisor is normally the first contact point between the customer and service providers. Service advisor must have good knowledge on the auto related matters so that it can increase the confidence and trust among the customer that their problem or matters will be taken care by right people. Most of past research (Amin &

Isa, 2008; Giritlioglu, Jones, & Avcikurt, 2014; Narteh, 2018) claimed that assurance is important towards customer satisfaction as failing to choose the right service providers will incurred more cist to the customers.

Tangibles

Recent research (Izarul et al., 2020) indicates that tangibles is important for such services provided related to automobile repairs and maintenance. Most of the customer journey for auto repair requires a good repair facility. The building must be in a proper setup with considerations of safety. Service provider should use a reasonable equipment's that is suitable based on the current technology that match with the autos' world development. Besides that, service provider should provide a space for customer to wait. Waiting areas can be divided into where first is for the registrations and second is while waiting for the service to be completed. According to (Hapsari et al., 2017), a good space and facilities provided to customer may keep the customer satisfied and reduce stress while waiting. (Seth et al., 2008) claimed that attractive uniforms with represent the service providers branding and tag line would help to provide customer positive impression of the level of their services and disciplines.

Empathy

(Kotler & Mantrala, 1985) suggested that service provider pay more attentions in building close relationship with customer by getting closer and use of customer relationship management's elements. Service provider may address customer by their names with a proper salutation to keep customer feel appreciated (M. F. Shamsudin, Razak, et al., 2018). A good customer services system would able to keep the previous records or the history of customer transactions. Service personnel should use the data as the elements of empathy and attract customer attention that they are really care about customer (Izarul et al., 2020). (Seth et al., 2008) suggested that each customer may requires a different set of approach as they come from a various background with a different needs and expectations. Past research (Hapsari et al., 2017) claimed that being empathy enables to increase the overall customer experiences that lead to satisfaction.

Responsiveness

Service provider should design their overall customer experiences that may reduce waiting time (Seth et al., 2008). Past research (Sahoo & Sahoo, 2019) indicates that customer is not tolerating on long waiting time as they could have other things to do. Service provider should have designed their operations with a good standard operating procedures and make it known to customer. Engagement with customer on the process and procedures will helps to gain underrating at the customers' side. Customer services and service assistants should always response to customer enquiries and questions accurately. Staff at the frontline should be willing to helps and attend to customer at the point of requested. (Seth et al., 2008) claimed that responsiveness is also refers to the service provider understanding by extending their working hours when necessary especially during peak session due to festive. Service providers should also consider to open their business on weekend in order to ease the demand of those who busy at work place during weekdays. Responsiveness requires the service provider market sense in meeting the customer needs and wants.

III. Methodology

This research is about to measure the relationship between service quality towards customer satisfaction in the automobile repair and maintenance in Indonesia. There are five main dimensions to be tested against the customer

satisfaction in order to understand which part of the dimension is really important and significant towards leading the customer satisfaction. This research used quantitative method and as such it questionnaire to collect data. Data were collected from vehicle owner that sent their vehicle for servicing from 30 selected auto service centers. List of names given to by the service provider based on their history records. Each service centers identified top 20 customers based on the recent activity started from January 2020. Email and short messages sent to customer to notify about the research and the purpose of it to be conducted. Respondents may choose to participate based on voluntary basis. 600 questionnaire distributed and 356 questionnaire returns which brings to 59% returning rates. There are altogether 21 questions including the respondent details. The data were analyzed using structural equation model.

IV. Results

Table 1 below is the summary of the questionnaire survey where it indicates the mean, standard deviations and Cronbach's alpha values. From the table highest mean is from assurance followed by customer loyalty. The lowest mean derived from responsiveness. Highest Cronbach's alpha recorded is for responsiveness but overall the results is between the range of 0.755 to 0.835.

Table 1: Summary of statistics of the questionnaire survey

Constructs	No. of items	Mean	SD	α
Reliability	4	4.250	1.021	0.755
Assurance	4	5.300	1.036	0.791
Tangibles	4	5.100	1.351	0.815
Empathy	4	4.250	1.220	0.825
Responsiveness	3	4.100	1.335	0.835
Customer satisfaction	3	5.250	1.371	0.801

Notes: SD, standard deviation; α, Cronbach's α; overall α = 0.815

Table 2 below is about the results of principal components analysis where it recorded all values under the accepted ranges as recommended by Hair (2017).

Table 2: Result of principal component analysis

No	Reliability	Assurance	Tangibles	Empathy	Responsive	Customer satisfaction
REL1	0.811					
REL2	0.740					
REL3	0.833					
REL4	0.807					
ASS1		0.748				
ASS2		0.728				
ASS3		0.735				
ASS4		0.707				

TAN1		0.839			
TAN2		0.746			
TAN3		0.704			
TAN4		0.757			
EMP1			0.825		
EMP2			0.850		
EMP3			0.825		
EMP4			0.820		
RESP1				0.750	
RESP2				0.825	
RESP3				0.865	
CS1					0.920
CS2					0.855
CS3					0.750
Eigenvalue	8.657	4.257	2.353	1.253	8.375	7.355
Variance explained (%)	35.331	17.255	11.151	5.779	9.509	8.361

Table 3, shows the measurement model where CR is between the range of 0.80 to 0.94 and the AVE is between the range of 0.77 to 0.84.

Table 3: Measurement model results

Constructs variables	Standardized loadings	t-statistics	CR	AVE
Reliability				
COMPT1	0.863	14.453**	0.80	0.77
COMPT2	0.894	17.311**		
COMPT3	0.730	12.117**		
COMPT4	0.666	11.472**		
Assurance				
EFF1	0.702	12.868**	0.83	0.84
EFF2	0.753	13.764**		
EFF3	0.803	14.894**		
EFF4	0.753	13.575**		
Tangibles				
SVS1	0.813	18.255**	0.93	0.77
SVS2	0.814	17.558**		
SVS3	0.811	18.254**		
SVS4	0.922	19.577**		
Empathy				
COM1	0.712	12.226**	0.89	0.86

COM2	0.825	18.284**		
COM3	0.865	16.577**		
COM4	0.902	18.279**		
Responsiveness				
ACC1	0.788	14.579**	0.86	0.80
ACC2	0.886	16.431**		
ACC3	0.902	17.522**		
Customer satisfaction				
CS1	0.772	14.114**	0.94	0.82
CS2	0.704	14.259**		
CS3	0.869	16.777**		

Table 4 presents SIC values, and the supportive evidence for discriminant validity was found. For example, (table 4), in case of assurance, SIC values were 0.11, 0.23, 027 and 0.20 for tangibles, empathy, responsiveness and customer loyalty, respectively, which is an indication of discriminant validity. Therefore, all latent construct confirmed the discriminant validity

Table 4: Squared correlations between constructs

	Reliability	Assurance	Tangibles	Empathy	Responsive	Customer satisfaction
Reliability	0.13					
Assurance	0.07	0.02				
Tangibles	0.12	0.11	0.05			
Empathy	0.05	0.23	0.02	0.03		
Responsiveness	0.07	0.27	0.24	0.14	0.05	
Customer satisfaction	0.10	0.20	0.15	0.05	0.08	0.09

Table 5 is the details of path analysis where it shows that 2 variables are not significant towards the customer satisfaction. Those two are tangibles and responsiveness. The other 3 variables reliability, assurance and empathy positively influences the customer satisfaction. Figure 1 is the diagram that indicates the same with a relationship arrow. The dotted lines represent insignificant relationships.

Table 5: Path analysis of structural model

Casual path	Path coefficient	t-statistics	Results
Reliability → Customer satisfaction	0.379*	2.021	Supported
Assurance → Customer satisfaction	0.389**	2.636	Supported

Tangibles → Customer satisfaction	-1.132*	-5.211	Not supported
Empathy → Customer satisfaction	0.327*	2.658	Supported
Responsiveness → Customer satisfaction	-1.172*	-4.511	Not supported

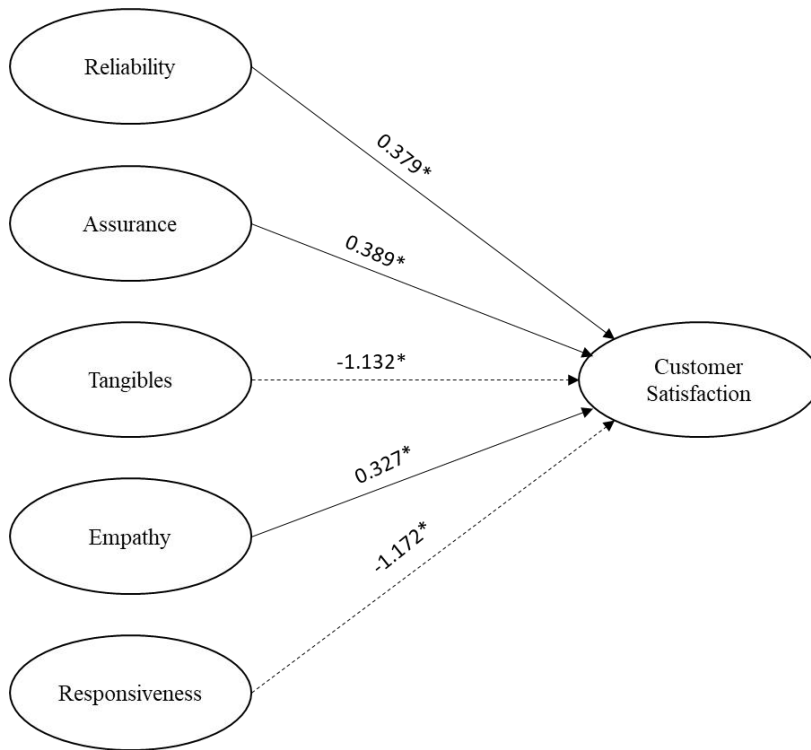Note: *,**Significant at p < 0.05 and p < 0.01 levels, respectively

Figure 1: Hypothesized relationships

V. Discussions and conclusions

The result of this study revealed that at least two factors were not significant towards customer satisfaction in the context of automobile services and maintenance. The two factors are tangibles and responsiveness. The balance of three factors remain significant towards customer satisfaction.

Further investigation revealed that customer have high tolerance on the equipment used and the facilities provided by the service providers. Customer claimed that most of the facilities used are almost at par to the industry needs. There are also statements from customers that they are actually not really aware of the equipment's used whether it is according to the trends or current technology. Waiting areas is a must for the customers and most of them have not much issues as long as the areas complete with mini bar, good ventilations and some basic entertainments such as television or light music. However, it was found that customer is more appreciate if the waiting areas is equipped with free WIFI for the customers to browse through internet or using social media while waiting's.

It was also revealed that responsiveness was not significant towards customer satisfaction. It was found that the current policy and procedures have been revised and developed towards the positive customer experiences. Most of the service providers prepared the customer journey in a way that they will give priority to customer once they arrived at the service

centers. The journey will begin with the appointment confirmation with fixed timeslot for the customers. A phone call will be made a day before the appointment day and service assistant will approach customer with a well prepared past records or service history in their hands. As such, customer have nothing much concerns whether there is anything else that need to be improved as they are currently satisfied with the process and practiced.

Service providers in the industry must take note on the results of this study. There are at least another three elements that given priorities by customer that need to be focused and given priority. There is no other way to keep the bonding relationship over long period of time except continuously providing the best services that meet customer expectations.

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