THE INFLUENCE OF AFTER-SALES SERVICE QUALITY, RELATIONSHIP QUALITY AND ALTERNATIVE ATTRACTIVENESS ON CUSTOMER LOYALTY OF MALAYSIAN NATIONAL CARMAKERS

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ABSTRACT

This study aimed to explore the influence of the industry‘s specific dimensions of service quality on relationship quality, and customer loyalty with moderating effect of alternative attractiveness. The philosophical social exchange theory (SET) was employed to develop a conceptual framework, and based on extant literature, the relationships between the variables were tested and explained accordingly. Using the intercept survey method, a sample of 384 national carmakers‘ after-sales service customers was drawn through systematic sampling. The data collected was analysed by combining the descriptive and statistical methods of the Statistical Package for Social Science (SPSS) and the Structural Equation Modelling (SEM) using Partial Least Square (PLS). The finding revealed that automotive after-sales service quality has a significant positive relationship with customer loyalty. Besides, relationship quality also mediates the relationship between automotive after-sales service quality and customer loyalty. On top of that, the significant positive finding of alternative attractiveness as the moderator between relationship quality and customer loyalty demonstrates the importance of relationship quality to secure more existing customers to stay loyal to the national carmakers even under intense competition. Further investigations revealed that customer service was the most important dimension that contributes to the significant positive relationship between automotive after-sales service and customer loyalty. Even though support service carried the least weightage, its significant relationship showed it is important as a measure of service quality in automotive after-sales service. As to managerial and strategy recommendations, managers should prioritize more on ―how‖ the service is delivered rather than ―what‖ is actually delivered to customers. Similarly, the service providers should maintain high quality relationships to secure the longer tenure of relationship with their customers. Finally, directions for future research are deliberated accordingly.

Keywords: After-sales service, service quality, relationship quality, alternative attractiveness, customer loyalty.

ABSTRAK

Kajian ini bertujuan untuk meninjau pengaruh dimensi kualiti perkhidmatan mengikut industri terhadap kualiti hubungan dan kesetiaan pelanggan dengan kesan penyederhana daya tarikan alternatif. Teori Pertukaran Sosial telah digunakan untuk membangunkan rangka kerja konseptual. Berdasarkan kepustakaan semasa, hubungan antara pemboleh ubah telah diuji dan dijelaskan dengan sewajarnya. Kajian ini menggunakan kaedah tinjauan memintas (*intercept survey*). Oleh itu, sebanyak 384 orang pelanggan perkhidmatan selepas jualan pembuat kereta nasional telah dijadikan sampel melalui persampelan sistematik. Data yang diperolehi dianalisa menggabungkan kaedah deskriptif dan statistik iaitu *Statistical Package for Social Science* (SPSS) dan *Structural Equation Modeling* (SEM) menggunakan teknik *Partial Least Square* (PLS). Dapatan kajian menunjukkan bahawa kualiti perkhidmatan selepas jualan automotif mempunyai hubungan positif yang signifikan dengan kesetiaan pelanggan. Selain itu, kualiti hubungan juga didapati menjadi pengantara hubungan antara kualiti perkhidmatan selepas jualan automotif dan kesetiaan pelanggan. Di samping itu, dapatan positif yang signifikan oleh daya tarikan alternatif sebagai moderator antara kualiti hubungan dan kesetiaan pelanggan menunjukkan kepentingan kualiti hubungan dalam memastikan pelanggan sedia ada untuk kekal setia kepada pembuat kereta nasional walaupun wujudnya persaingan sengit. Seterusnya, penelitian lanjut mendapati bahawa perkhidmatan pelanggan merupakan dimensi yang paling penting yang menyumbang kepada hubungan signifikan yang positif antara kualiti perkhidmatan selepas jualan automotif dan kesetiaan pelanggan. Walaupun dimensi perkhidmatan sokongan menunjukkan pengaruh yang paling kecil, hubungannya yang signifikan dengan kualiti perkhidmatan selepas jualan automotif menunjukkan bahawa hal ini adalah penting sebagai dimensi kualiti perkhidmatan selepas jualan automotif. Sebagai cadangan kepada pihak pengurusan dan strategi, pengurus perlu memberi keutamaan lebih kepada "bagaimana" perkhidmatan disampaikan berbanding "apa" yang sebenarnya disampaikan kepada pelanggan. Begitu juga, pembekal perkhidmatan perlu mengekalkan hubungan yang berkualiti tinggi untuk menjamin tempoh hubungan yang berkekalan dengan pelanggan mereka. Akhirnya, cadangan untuk penyelidikan masa depan telah dibincangkan dengan sewajarnya.

Kata kunci: Perkhidmatan selepas jualan, kualiti perkhidmatan, kualiti hubungan, daya tarikan alternatif, kesetiaan pelanggan.

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Zainil Hanim bt. Saidin

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

It is believed that the survival of any business organization is highly related to their loyal customer base. Without the customer, it is less likely that the organizations are going to succeed (Abdullateef, Mohd Mokhtar, & Yusoff, 2011). Loyal customer allows the organization to flourish and guarantees organization‘s long-term business survival. Along with that, meeting the customer‘s complex demand becomes the vital focus of a business organization (Ou, Shih, Chen, & Wang, 2011) and theoretically, customer loyalty is still one of the most important concepts discussed in the marketing literature (Curry & Gao, 2012; Khan, 2012). Leading organization gained customer loyalty through maintaining their superior quality of service (Wong & Sohal, 2003). The excellence posts sales servicing or after-sales service ensures marketability of durable goods and costly products as it influences the decision to purchase the product (Amonkar, 2016). As such, to succeed as a market leader, the business organization needs to emphasize on excellent service quality.

The importance of service industry was manifested accordingly in Malaysian national agenda. As stated in Malaysian Industrial Master Plan 2 (IMP2), the service sector has been recognised as the most important contributor to Malaysian economy as it was the only sector that shows an increasing trend to gross domestic product (GDP). For the latest IMP3; it is forecasted to grow up to 66.5% (Table 1.1). On top of that, IMP3 also demonstrated that the service sector is expected to grow better with expected average annual growth of 7.3% (as demonstrated in Table 1.2). These figures reflect

the increasingly vital role of service sector towards Malaysian economy as the country moves toward a developed nation status. In relation to that, the automotive player, especially national carmakers that provide after-sales service for the vehicles sold are obligated to contribute positively towards the Malaysian government‘s plan as outlined in IMP3. As the national carmakers controlled more than 50% vehicles market share in Malaysian automotive market, their contribution towards the economy and specifically the service sector as stated in IMP is significant.

Table 1.1
GDP Contribution by Sector

Sector	**IMP2 Target 2005**	**IMP2 Actual**			**IMP3 Target 2020**
		1996	2000	2005	
Manufacturing	38.4	29.1	31.9	31.4	28.5
Services	48.4	**50.7**	**53.9**	**68.1**	**66.5**
Agriculture, forestry & fishery	8.2	9.8	8.9	8.2	7.0
Mining & quarrying	4.2	7.7	7.3	6.7	4.4
Construction	4.7	4.7	3.3	2.7	2.5

Source: Ministry of International Trade and Industry (2006)

Table 1.2
Expected Average Annual Growth

Sub-sectors	**Average Annual Growth (%)**		
	2006-2010	2011-2020	2006-2020
Manufacturing	6.7	5.1	5.6
Services	**6.5**	**7.7**	**7.3**

Source: Ministry of International Trade and Industry (2006)

The Malaysian national carmakers as described by these government body such as the Malaysian Investment Development Authority (MIDA) and the Ministry of International Trade and Industry (MITI) including Malaysian Automotive Association (MAA) refer to the first established national car; Perusahan Otomobil Nasional

Berhad (Proton) and the second; Perusahaan Otomobil Kedua (Perodua). Their initial existence has given the opportunity for thousands of ordinary Malaysian to own at least one brand new car. The national carmakers are the valuable asset for the country and are recognised as a symbol of national pride. In view of this, thousands of Malaysians have been trained in the industry and the existence of both organizations has provided a substantial number of job opportunities. Majority of the local automotive market share is controlled by the national carmakers (more than 50%) making this sector to contribute 3.4% to the Malaysian gross domestic product (GDP). These figures justify the importance of national carmakers as the main subject of research.

Market research has emphasized the importance of after-sales service in the automotive industry. An excellence quality of after-sales service may influence the decision to purchase the vehicles (Amonkar, 2016). As such, concentrating on improving the quality of service may help the national carmakers to gain higher level of loyalty (Ngui, 3 April 2014; Malaysia Bernama, 15 July 2013). Customer loyalty in automotive after-sales service can be described in broader perspectives. It is not only concern with higher market share as a result of more sales generated through product promotion in the form of positive word-of-mouth, but customer loyalty in after-sales service is also indicated by continuity of service maintenance and repair activities after the expiry of vehicle free warranty. The ability of the service provider to fulfil the needs and demands above the customer‘s expectation is the silver bullet to develop faith in the brands and subsequently stay connected for a longer customer-service provider relationship (Nordin, Yaacob, Razak, Radzi, & Saraih, 2016). The

service provider needs to understand how the great quality of service contributes to the higher level of customer loyalty.

In relation to that, the observation on the local automotive market shares is not showing favourable performance of national carmakers. In spite of their past favourable achievement and contribution towards the local automotive industry, the current trend of local automotive market shares which indicates the level of customer loyalty shows a decreasing trend and in 2014, as the non-nationals outperformed the nationals by controlling the market in 2015. As illustrated in Figure 1.1, the down trend movement of nationals‘ market share was very alarming for the survival of national carmakers in the Malaysian automotive market. In the early of millennium years, the national carmakers controlled more than 80% of the market shares in local automotive industry.

However, the steady growth recorded by the non-nationals in the subsequent years and especially during year 2014 revealed that they have overtaken the market as the national carmakers are only grappling with only 46% of the market share even as at year 2015. The situation clearly shows that the nationals are losing their market shares and further indicates that the locals are more interested towards non-national brands. Most importantly, this trend demonstrates the lower level of loyalty towards Malaysian national carmakers compared to the years before. Even though Perodua as the second national car company is doing better with 32% market share (Malaysian Automotive Association, 2015), however, they are producing medium and small car where the margins are low (Malaysian Automotive Institute, 2009).

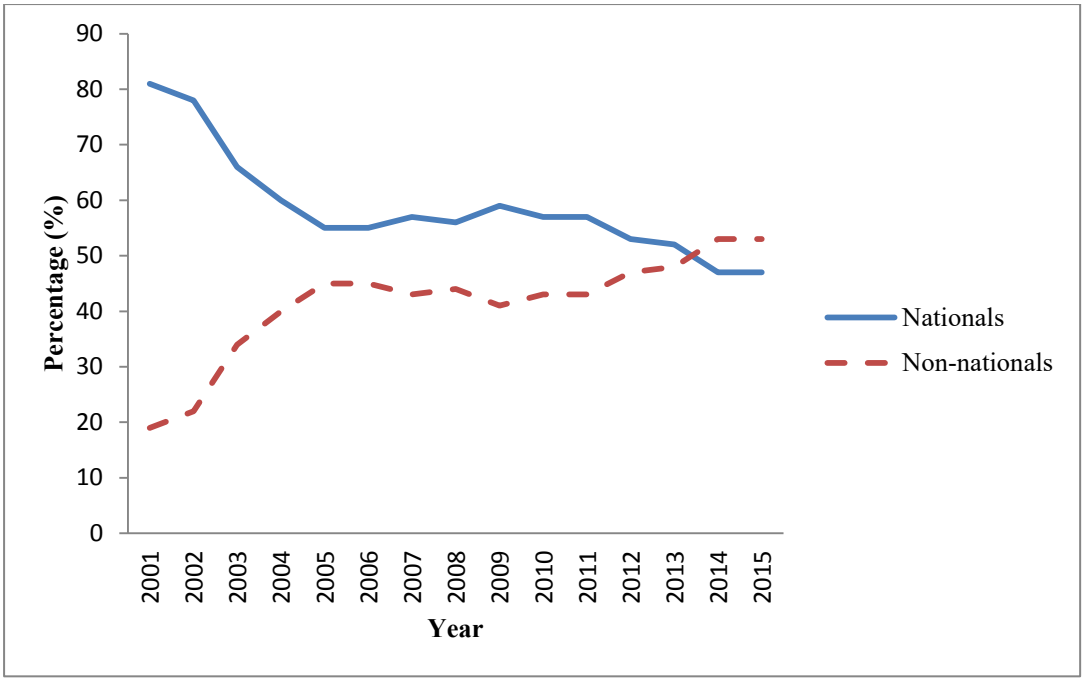

Figure 1.1
Malaysian Vehicles Market Share from 2001 to 2015
Source: Malaysian Automotive Association (MAA)

The poor level of customer loyalty towards national carmakers could be due to many reasons. It could be the poor product quality, ineffective marketing strategy, poor technological and engineering aspect, management failure, and many other various reasons. Apparently, the survey report specifically indicates the after-sales service performance of various automotive organizations operated in Malaysia namely Malaysia Customer Service Index (CSI) produced by J. D. Power Asia Pacific revealed that the customers are expecting better quality of service when they take their vehicles for service or repairs, and national carmakers‘ service centres are not meeting customer‘s expectations (J. D. Power Asia Pacific, 2014).

As illustrated in Figure 1.2 below, the national carmakers were ranked almost at the bottom far below the industry average and the top positions are all occupied by the

non-national brands. According to the former chairman of Proton, Tun Dr Mahathir Mohamad, the issue of quality has resulted in poor perception towards national carmakers and that is the biggest reason for their incompetence which is further indicated by the declining level of customer loyalty (Sidhu & Huang, 4 July 2015). On the similar notion, the Chief Executive Officer (CEO) of Proton Edar Sdn. Bhd., Proton's subsidiary in charge of sales, Hisham Othman also said that in their process of gaining back the loyalty; Proton Holdings will concentrate more on the assurance of excellent quality of service (Malaysia Bernama, 15 July 2013). In fact, the CEO of Perodua, Datuk Aminar Rashid Salleh, also underscored that they are concentrating on the transformation of service operation as the bullet to face the global competitiveness (Ngui, 3 April 2014).

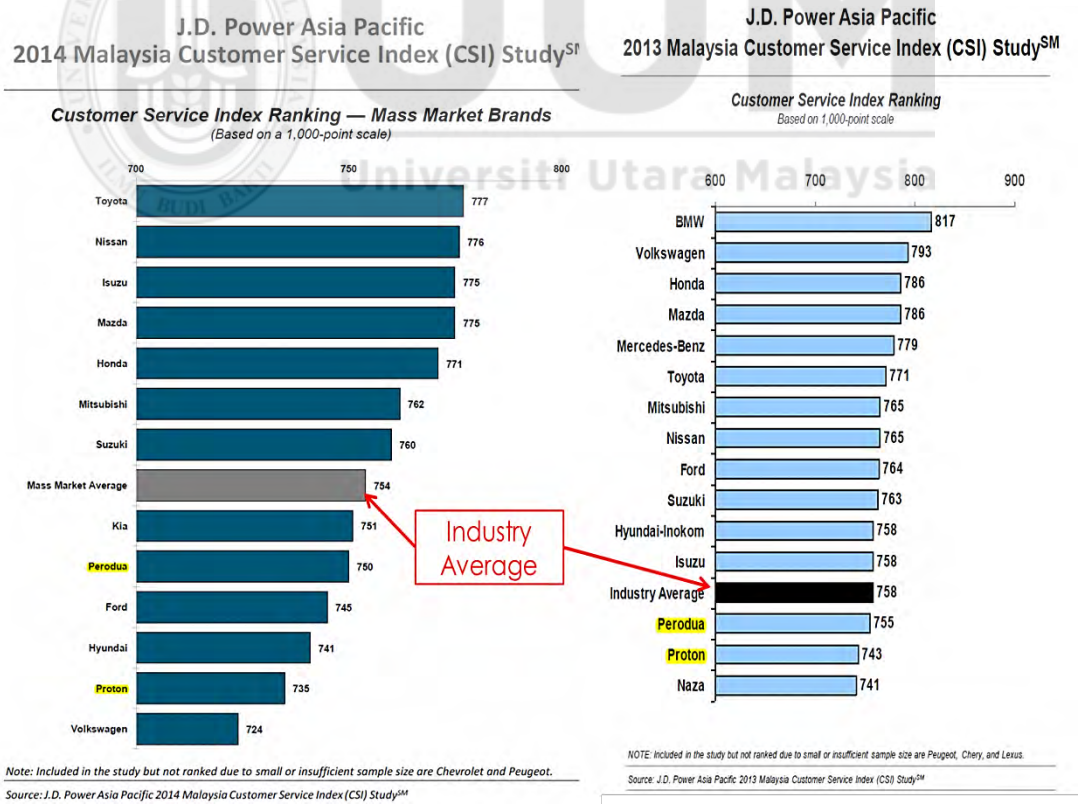

Figure 1.2
Automotive After-sales Customer Service index in 2013 and 2014

Figure 1.3
2016 Customer Service Index in Automotive After-sales Service

Besides that evidence from industry report, further review of the literature has also emphasized the importance of after-sales service in gaining customer loyalty and enhances business opportunity. According to Egonsson, Bayarsaikhan, and Ting (2013), after-sales service is an important stage to enhance more business opportunity by providing a bundle of values to the customers. In fact, after-sales service is the best platform to capture the higher level of customer loyalty (Saccani, Songini, & Gaiardelli, 2006). Undoubtedly, the unfavourable performance of national carmakers in after-sales service especially related to the poor quality of service as highlighted

above could be one of the biggest reasons that contribute to declining level of customer loyalty towards national carmakers.

Therefore, motivated by the foregoing justification, an empirical research is needed to explore on customers perception of service quality of after-sales service and how it affects their decision to stay loyal to the national carmakers. Besides, this current research is also expected to provide empirical support on the importance of customer-service provider relationship in after-sales service industry especially in changing perceptions of the public towards the quality of service provided by the national carmakers and subsequently allow them to remain as the significant contributor towards the local automotive industry.

1.2 Problem Statement

The market survey has emphasized that in automotive, after-sales service is an important stage to market the costly and durable product such as a vehicle (Amonkar, 2016). The excellence after-sales service quality supports the product sold and able to influence the customer‘s purchase decision for the vehicle. Relatedly, the recent study on automotive after-sales service also revealed that customer loyalty is the most important factor in after-sales service (Nordin et al., 2016).

Customer loyalty in after-sales service can be seen from two perspectives. First, after-sales service allows the existing customer to promote the brands to generate more sales and consequently increases the level of loyalty. Second is the willingness of the existing customer in after-sales service to stay loyal by continuing the existing relationship with the service provider after the expiry of vehicle‘s warranty (given by

the manufacturer who is also the service provider for the new vehicles sold). Accordingly, the ability of the service provider to fulfil the customer‘s needs and demand is able to create positive word-of-mouth which plays a crucial role in promoting the good publicity for an organization, and subsequently affects the level of loyalty towards the organization.

However, as being deliberated in the background section of this current study, the market survey report produced by J. D. Power Asia Pacific specifically for after-sales service performance clearly stated that the customers who sent their vehicles for service maintenance and repair expected better service while the national carmakers did not meet the customer‘s expectation (J. D. Power Asia Pacific, 2014; 2016). Obviously, the national carmakers specifically the after-sales service was ranked by the customer far below the market average and the poor customer service performance seems to be the major problem which contributes to the deteriorating level of customer loyalty towards the national carmakers. In addition, the negative and poor perception towards the national carmakers which mainly results from the negative word-of-mouth has contributed to the huge impact on the poor performance of national carmakers (Sidhu & Huang, 4 July 2015).

As a result, Malaysian national carmakers are facing huge challenges to regain their position as the previous market leader. Importantly, the current vehicles sales performance illustrated in the above background section clearly shows a tremendously decreasing trend for nationals brand and in 2014, the non-nationals finally take over the market with cumulative share of 54% while nationals only gained 46% of local automotive market share (MAA, 2014). In 2015 and 2014, the ranking still shows unfavourable result for the nationals (MAA, 2015). This scenario indicates that the

local consumer choice of brand for owning a vehicle is more towards the foreign makes (Raja Sabaradin, 2013). Basically, the fundamental subject in after-sales service business is the quality of service delivered by the service provider. Hence, the poor after-sales service performance which mainly due to the poor quality of service (J. D. Power Asia Pacific, 2014; 2016) and the issue of decreasing level of customer loyalty towards the national carmakers as a result of declining sales (MAA, 2016) motivate the researcher to further investigate the relationship empirically.

Besides the industry report, other evidence equally shows that the issue of service quality and its impact on customer loyalty has been identified as one of the important variables influencing the level of customer loyalty in the automotive after sales service (Yieh, Chiao, & Chiu, 2007). Relatedly, after-sales service is also the best platform to capture the higher level of customer loyalty (Saccani et al., 2006). There is no doubt that service quality is important to attract more loyal customers and subsequently contributes to the bottom-line of the firm (Caruana, 2002). In fact, the perceptions of service quality dimensions might influence the customer's behavioural and attitudinal loyalty (Anderson & Sullivan, 1993).

As a result, the study of service quality has engaged the attention of researchers from a range of industries, bringing with them a diversity of dimensions which the relationships with customer loyalty are positive (Curry & Gao, 2012; Etemad-Sajadi & Rizzuto, 2013; Lai, 2015; Radder & Han, 2013; Yieh et al., 2007). Even though the relationship between service quality and customer loyalty was established in positive direction, the previous studies proposed that an effective service quality measurement needs an industry-specific dimension because each service industry carries unique characteristics that reflected the unique consumer needs and demands (Abdullah,

2006; Murali, Pugazhendhi, & Muralidharan, 2016; Yarimoglu, 2015). In addition, Kashif, Altaf, Ayub, Asif, and Walsh (2014) also recognised that the literature has not fully explained on service quality especially in non-western countries and further suggested for future studies to consider the new paradigm to present service quality.

In line with the argument on industry-specific measure, the extant literatures also clearly show that researchers yet to agree unanimously on one established dimension as measures of service quality; for example SERVQUAL. Even though SERVQUAL has received more attention from researchers and practitioners (Caruana, 2002; Etemad-Sajadi & Rizzuto, 2013; Radder & Han, 2013; Roberts, Varki, & Brodie, 2003) the SERVQUAL five dimensions were insufficient to measure service quality and inappropriate for all service settings (Bhat, 2012). The dimensions just emphasized on the functional aspect of quality which only explained the process of services delivery from the service provider to the customer. Besides, the concept and usefulness of its expectation side, the variance restriction in expectation scores and the ability of performance items to better explain service quality has also been argued (Caruana, 2002).

The major scholar such as Cronin and Taylor (1994) also suggested for academician to further revisit the multi-dimensional scale of service quality. The findings in literature also show that each dimension of service quality contributes differently to explain service quality (Siddiqi, 2011; Wong & Sohal, 2003; Yieh et al., 2007). Therefore, dimension-specific assessment of service quality is vital to fulfil specific customer needs and secure higher retention rate (Bhat, 2012; Lai, 2015). The contention among the scholars on measures of service quality has called the previous researchers to consider numerous dimensions to measure service quality. The review

of literature shows that the studies on service quality has modified the SERVQUAL model either by regrouping the five dimensions into the new model or by adding new dimensions deem applicable to the context of study (Bhat, 2012; Kashif et al., 2014; Kumar, Kee, & Charles, 2010). Further to that, there are also researchers who measure service quality by using totally new dimensions such as coverage area, potential quality, and pricing structure and billing system (Aydin & Özer, 2005; Pepur, Mihanović, & Pepur, 2013; Santouridis & Trivellas, 2010).

This current study which mainly focuses on service quality in automotive after-sales service or specifically the industry-specific dimensions has identified a few similar or related studies in the literature. In this respect, customer service was found as an important determinant for service excellence, however, it has largely been overlooked (Andreassen & Olsen, 2008). Relatedly, previous finding in the context of car service industry also proposed that customer service which consolidated in four dimensions of SERVQUAL namely responsiveness, assurance, empathy and reliability is the most important dimension of service quality (Bouman & Wiele, 1992).

Further to that, study has posited that most service industries provide a combination of intangible service together with tangible product (Yieh et al., 2007). Automotive industry that offers tangible product that is vehicle and spare part, together with after-sales service in almost equal ratio is supposed to measure service quality in combination of intangible factor and tangibility element. In this regard, study has suggested that tangibility in service industry is an important element that cannot be ignored and must be examined accordingly (Yieh et al., 2007). Other than looking at customer service and tangibility, service quality in automotive after-sales service needs to consider a more objective measure such as the genuine spare parts delivered

as the technical outcome of service process (Gronroos, 1984). The technical quality or the ‗what' aspect of service is important to determine the effectiveness of repair that is measured objectively by the zero problems that arise and also indicates the high quality of service delivered (Ooi, Lin, Tan, & Chong, 2011).

The rapid changes in customer's needs and behaviour along with the changes in technology and multimedia requires a new paradigm to measure service quality (Kashif et al., 2014). The changes in lifestyle have changed the service quality standard in various service industry (Hakan, 2016), and therefore needs to be evaluated in relation to service quality measures. Along with that, the elements related to advance telecommunication system and technology savvy along with the assistance from back office support might contribute to the new dimension to further explain service quality. Having reviewed the literature, the elements to support the core service quality measures still remain as a gap in the literature especially in automotive after-sales service and therefore needs to be researched further (Egonsson et al., 2013). Being guided by the comprehensive review of literatures and the gaps identified, this current study is evaluating service quality in the context of automotive after-sales service by using the four dimensions which comprised of customer service, tangibles, technical quality and support service. The detail explanation of each dimension is available in chapter two of this thesis.

As explained by social exchange theory (SET), the parties involved in continuously repeated transactions expect a mutually benefited relationship. In the context of this present study, the customers who continuously engage with the service provider in a high-quality relationship would expect to be rewarded with the high quality of service

as the benefit for their willingness to stay loyal, and in return, the organizations also benefited with a longer tenure of relationship that ensures their higher profitability.

The review of past literature has shown that studies in the field of service quality and customer satisfaction have commonly employed the expectation disconfirmation theory (EDT) as their underpinning theory (Chang & Chen, 2009; Kursunluoglu, 2011; Lai, 2015; Shekarchizadeh, Rasli, & Hon-Tat, 2011; Vanniarajan, 2011). The expectation disconfirmation theory (EDT) emphasized on the difference between expectation and actual performance of service and how the result relates to customer satisfaction. However, in the context of this current study, the satisfaction is operationalized in relation to the concept of relationship quality and not the satisfaction as a result of comparison between expectation and performance of service quality. Therefore, instead of using the expectation disconfirmation theory (EDT), this study has chosen the social exchange theory (SET) which is better in explaining how the high quality of service preceded the existence of high quality of relationship to obtain the outcome of relationship marketing such as customer loyalty.

Further to that, Prasad and Aryasri (2008) also suggested relationship quality and customer loyalty as the two ingredients or recipes for successful business. Indeed, studies have proven the vital role of relationship quality as the source of competitive advantage that differentiates a firm from its competitor (Caceres & Paparoidamis, 2007; Doaei, Rezaei, & Khajei, 2011; Vieira, 2013) because it brings about higher level of customer loyalty as the outcome of relationship marketing (Hennig-Thurau, Gwinner, & Gremler, 2002). Service quality alone is not enough for relationship quality unless it is bundled up with close customer-service provider relationship (Crosby, Evans, & Cowles, 1990). Thus, service quality is the precursor of high

quality relationship building because only good quality of service ensures customer to return for relationship development (Crosby et al., 1990; Roberts et al., 2003)

However, there are only a few studies that examined the relationship between service quality and relationship quality (Pepur et al., 2013). Indeed, the previous research has placed very little focus on the impact of after-sales service in the relationship between customer and the service provider (Egonsson et al., 2013). Furthermore, the extant literatures also reveal very limited studies that examined service quality dimensions and relationship quality together with customer loyalty simultaneously in a framework (Roberts et al., 2003). In addition, after-sales service carries vital role in relationship building and therefore must be examined accordingly (Vanniarajan, 2011). Also, most of the studies on service quality in the literatures have rarely examined service quality in automotive after-sales service especially service rendered by Malaysian national automotive organization.

As denoted at the beginning of this research, declining level of customer loyalty towards Malaysian national carmakers is the main issue that needs further research. The local automotive market has seen the implementation of trade policy such as Asean Free Trade Association (AFTA) (Yee, San, & Khoon, 2011) and the revision of National Automotive Policy (NAP) which supports imports rather than nationals have really jeopardized the ability of Malaysian national carmakers to compete with the established automotive giants such as Toyota, Honda, Mercedes-Benz, BMW and Hyundai (Sidhu & Huang, 4 July 2015). The available close competitors offering the competitively priced vehicles and better product in the local turbulent market has exposed the national carmakers in such an alarming situation.

On top of that, the declining sales of vehicle directly impacted the number of vehicle sent for service repair and maintenance, and subsequently reduced their existing customer base. Most importantly, the competition with those ordinary workshops that also offer the service maintenance and repair works might influence the existing customers to discontinue the service visit after the warranty expiry. Thus, the competition both in sales and after-sales service is material to the national carmakers as the manufacturer and also the service provider for national car. In relation to that, the competition variable such as alternative attractiveness has been recommended as one of the variables that contributes to a more holistic view of customer loyalty (Jones & Taylor, 2007; Santouridis & Trivellas, 2010).

Alternative attractiveness refers to the positive characteristics own by the competing companies which in this current study refer to the workshops that provide the maintenance and repair service for a car. Another study by Aydin and Özer (2005) also suggested that future study should examine the impact of situational factors such as alternative attractiveness on behavioural and attitudinal loyalty. Other than suggestions from the previous studies on service quality and customer loyalty explained above, a literature review on relationship quality done by Athanasopoulou (2009) also posited that the level of competition could affect the ability of parties involved in a relationship to develop high quality relationship and proposed the future researcher to examine competition variable such as alternative attractiveness as a moderator.

In view of the foregoing mentioned gaps and the suggestions for further research in the previous studies (Athanasopoulou, 2009; Egonsson et al., 2013; Kashif et al., 2014; Murali et al., 2016; Pepur et al., 2013; Taylor & Cronin, 1994; Yarimoglu,

2015), an understanding of the meaning of the relationship in the integrated frameworks including the dimensions are therefore critical precursors to determining its value in the context of automotive after-sales service industry.

1.3 Research Question

Based on the identified issues and gaps deliberated in the problem statement, the comprehensive research question in which the current study endeavours to provide the answer to is: what is the influence of automotive after-sales service quality, relationship quality and alternative attractiveness on customer loyalty in Malaysian national carmakers? From the main research question, the detailed research questions as follows are raised to guide the current study:

i. Is there any relationship between automotive after-sales service quality and customer loyalty in the context of Malaysian national carmakers?

ii. Is there any relationship between automotive after-sales service quality and relationship quality?

iii. Is there any association between relationship quality and customer loyalty in the context of Malaysian national carmakers?

iv. Does relationship quality mediates the relationship between automotive after-sales service quality and customer loyalty in the context of Malaysian national carmakers?

v. Does alternative attractiveness moderates the relationship between relationship quality and customer loyalty in the context of Malaysian national carmakers?

1.4 Research Objective

Based on the above research questions, the purpose of this current study is to evaluate the effects of automotive after-sales service quality and relationship quality on customer loyalty with the moderating influence of alternative attractiveness in Malaysian national carmakers. In order to accomplish the goal, the researcher has developed these research objectives to further explore the research problem and provide the related answers to the above research question. Therefore, the objectives of this current study are as follows:

i. To examine the relationship between automotive after-sales service quality and customer loyalty in the context of Malaysian national carmakers.

ii. To examine the relationship between automotive after-sales service quality and relationship quality.

iii. To examine the relationship between relationship quality and customer loyalty in the context of Malaysian national carmakers.

iv. To examine the mediation effect of relationship quality on the relationship between automotive after-sales service quality and customer loyalty in the context of Malaysian national carmakers.

v. To examine the impact of alternative attractiveness as moderator between relationship quality and customer loyalty in the context of Malaysian national carmakers.

1.5 Scope of Study

The goal of this current study is to evaluate the extent to which service quality, relationship quality and alternative attractiveness may influence the customer loyalty towards Malaysian national carmakers.

In particular, the border of this research is limited to Malaysian national carmakers specifically Proton and Perodua. Additionally, this study investigates the variables such as quality of service, quality of relationship between customer and the service provider, and alternative attractiveness; and these variables are mainly related to repeated service encounter. In relation to that, after-sales service specifically automotive service, maintenance and repair are the best platform for the service process and delivery to take place as well as the relationship to grow. The process of service delivery happens repeatedly during the free warranty period and the continuous customer-service provider interaction happens regularly for the relationship development. Justified by the above, the data for analysis was mainly collected from the individual customers who are waiting for their vehicles to be serviced at the service centre. In other words, the context of this study is automotive after-sales service of Malaysian national carmakers.

Further, customer loyalty in the context of automotive after-sales service being measured in this current study mainly focused on two- fold. First, it promotes the brands to generate more sales and consequently increases the level of loyalty. Second, the willingness of the customer to stay loyal by continuing the existing relationship with the service provider after the expiry of vehicle‘s warranty (given by the manufacturer who is also the service provider for the new vehicles sold).

Next, this research is structured as quantitative examination that involved distribution of relevant questionnaires to the respective respondents with the total numbers of 384 individual customers limited to the branches of national carmakers in the northern region of Malaysia. The selection of northern region in deemed appropriate as it consists of evaluation from rural and urban areas to describe various patterns of consumer behaviour. In addition, all the branches are subjected to the standard and homogeneous service SOP (standard operating procedure). Therefore, evaluation limited to northern region is sufficient to represent the whole population. The detail explanation on population and sampling is available in chapter four of this current study.

1.6 Significance of Study

The significance of each contribution is rather more important than the number of contributions of a research (Summers, 2001). Relatedly, this current study is expected to contribute significantly towards theoretical, methodological and practical standpoint.

Based on the foregoing, the theoretical significance of this study is derived from the contribution to the social exchange theory (SET) by consolidating the multiple service quality concepts and perspectives into a more comprehensive conceptual framework of customer loyalty with customer-service provider relationship as the basis for the existing customer to return for long term mutual benefit. Literatures have shown a lot of studies that examine the relationship between service quality and customer loyalty; and those studies show positive relationship (Bell, 2005; Caceres & Paparoidamis, 2007; Caruana, 2002; Clottey et al., 2008; Curry & Gao, 2012; Etemad-Sajadi &

Rizzuto, 2013; Ismail et al., 2006; Lai, 2015; Lee & Lambert, 2008; Radder & Han, 2013; Wong & Sohal, 2003; Yieh et al., 2007).

However, the dimensions used to measure service quality in explaining its relationship with customer loyalty differ among the studies. This means that the other dimensions of service quality examined with customer loyalty might contribute differently to the literature on service quality and the relationship with customer loyalty. Hence, by integrating the related literature on service quality into the framework, this study has consolidated the other potential dimensions of service quality (such as customer service, support service, tangibility and technical quality) in predicting the relationship with customer loyalty and therefore subsequently expected to contribute to the body of knowledge on social exchange theory (SET) by filling the identified gaps especially in relation to the influence of new paradigm of service quality measurement in reciprocal relationship between customer and the service provider in automotive after-sales service in Malaysian national carmakers.

Although relationship quality is important as a mediator to explain the unique aspect of relationship not explained by service quality (Roberts et al., 2003), and service quality is important as antecedent for relationship quality to exist (Crosby et al., 1990; Roberts et al., 2003), there are very limited researches that examined the relationship between service quality and relationship quality (Pepur et al., 2013). Therefore, by examining the relationship, this current study is expected to extend the body of knowledge accordingly. In addition, after-sales service which involved interaction between the customer and the service provider is an important stage for relationship building and there are needs to examine it accordingly (Vanniarajan, 2011). However, literature has given a little focus on the impact of after-sales service in the customer-

service provider relationship (Egonsson et al., 2013). Hence, by focusing on customer-service provider relationship quality in after-sales service, this study is making a significant contribution towards the social exchange theory (SET) that explains the mutual beneficial relationship.

Virtually all the studies reviewed pertaining the effect of competition variable such as alternative attractiveness examined it as a moderator between various variables as noted in the earlier chapter of this study (Sharma & Patterson, 2000; Song, Su, Liu, & Wang, 2012). Consistent with the literature, this study tested the moderating effect of alternative attractiveness on customer loyalty. According to Santouridis and Trivellas (2010), investigating the effect of alternative attractiveness could lead to a more holistic view of customer loyalty. Indeed, another study by Aydin and Özer (2005) also suggested alternative attractiveness as situational factor that impact behavioural and attitudinal loyalty. A comprehensive literature review of the relationship quality by Athanasopoulou (2009) also suggested that alternative attractiveness should be considered as a moderator in a study of relationship quality. Thus, being guided by the related literature on relationship quality and customer loyalty, this study is expected to contribute to the body of knowledge by examining alternative attractiveness as moderator in the relationship between relationship quality and customer loyalty.

Besides the theoretical significance discussed above, this study also provides significant methodological perspective. First, this study adapted the dimension of support service as additional dimension to measure service quality in the context of automotive after-sales service. In this regards, it needs to be checked for its validity and reliability. Most of the previous studies‘ scales were cross-validated using

traditional method such as factor analysis and Cronbach's alpha. But PLS-SEM used as the technique for data analysis in this study offers a more systematic and up to date assessment for reliability and validity. Furthermore, confirmatory factor analysis (CFA) in the measurement model is used to test and confirm on the uni-dimensionality of the constructs examine. Thus, the confirmation on the validity and reliability of the new paradigm of service quality specifically in the context of Malaysian automotive after-sales service has contributes methodologically to the body of knowledge.

Secondly, this study examines service quality and relationship quality as second-order multi-dimensional construct with four and three dimensions respectively. As such, the findings are expected to contribute significantly to the methodological viewpoint by offering a parsimonious framework.

Next, the findings of this study hopefully provide a comprehensive framework to guide the national carmakers as well as the non-nationals in decision making by focusing their limited resources on the most influential dimensions of service quality and relationship quality. Indeed, this study also empirically proves the important role of competition in a high quality of customer-service provider relationship and how it plays the role in gaining higher level of customer loyalty. This current study may also guide the national carmakers in problem solving and consequently develop a competitive marketing policies and practices that fit for the global competition. On top of that, the success of national carmakers could allow them to contribute positively towards the national agenda generally and specifically the service sector of Malaysian GDP is outlined in IMP 3 (Ministry of International Trade and Industry [MITI], 2014).

1.7 Operational Definition

Automotive After-sales Service Quality: Refers to the automotive after-sales service quality dimensions which adapted with some modifications of SERVQUAL and comprised of customer service, tangibility, technical quality, and support service. The description of each dimensions are as follows:

Customer service refers to the combination of four SERVQUAL dimensions; responsiveness, assurance, empathy and reliability (Ismail et al., 2006; Parasuraman, Zeithaml, & Berry, 1988; Wong & Sohal, 2003).

Tangibility refers to the SERVQUAL tangibility dimension which described as appearance of physical facilities, equipment, personnel and written materials available in the service centre‘s premises and surrounding area (Ismail et al., 2006; Parasuraman et al., 1988; Wong & Sohal, 2003).

Technical quality refers to the outcome of the service process or in other words can be described as what has been delivered as a result of the service process (Ismail et al., 2006; Parasuraman et al., 1988; Wong & Sohal, 2003).

Support service refers to internal organization‘s support system provided as additional helping hands for service excellence. It involves the back office support staff or any other employees who deliver the service to the customer outside the premises for example during emergency breakdown and also includes are the systems occupied to serve the customers (Cronin, Brady, & Hult, 2000; Llach, Marimon, Alonso-Almeida, & Bernardo, 2013; Negash, Ryan, & Igbaria, 2003).

Relationship quality refers to the strength of existing relationship developed during the continuous interaction between the customer and the service provider, and measured using three dimensions which are satisfaction, trust and commitment (Crosby et al., 1990; Hennig-Thurau et al., 2002; Morgan & Hunt, 1994; Roberts et al., 2003).

Alternative attractiveness refers to the positive characteristics belong to the competitors (the most frequently visit ordinary workshops) that might influence the customer to divert their decision to service their car at those workshops after the warranty expiry or in the next visit for those customers whose warranty has expired (Callarisa Fiol, Alcañiz, Moliner Tena, & García, 2009; Sharma & Patterson, 2000).

Customer loyalty in this current study measures the level of composite loyalty which considers both attitudinal loyalty (e.g. positive word-of-mouth publicity and recommendations), and also behavioural loyalty (e.g. repeat visit for the next service). (Callarisa Fiol et al., 2009; Cater & Cater, 2009; Hennig-Thurau et al., 2002; Wong & Sohal, 2006). The attitudinal and behavioural loyalty is further measured in two-fold. First, the promotion of the high quality of service and great customer-service provider relationship may reflect the positive image and trust towards the national carmakers and positively reflect the vehicle sales performance indicated by better loyalty. Second, for those customers who sent their vehicle to the service provider because of warranty contract, the behavioural loyalty refers to the repeat visit after warranty expires.

1.8 Organization of the Study

This thesis is divided into six chapters. The chapters are organized according to the process of conducting research employed by this current study.

Chapter one which is the introduction has outlined numerous important subjects relevant to the research topic –the influence of after-sales service quality, relationship quality, alternative attractiveness on customer loyalty of Malaysian national carmakers". This chapter also discusses the problem statement that requires for research, followed by the research questions and research objectives, scope of study, research contribution to both academics and practitioners, operational definition and the arrangement of thesis.

In chapter two, a thorough discussions on the underpinning theory which is social exchange theory (SET) leads to the development of conceptual framework for this current study. Chapter two also offers the detail literature review, explanations on the identified dimensions (customer service, support service, technical and tangibility), review on dimensions and definition of the various concepts of service quality, relationship quality, alternative attractiveness and customer loyalty, including the findings of previous studies.

Chapter three offers explanation about the research framework of the study. This chapter also explains on development of hypothesis statement which have been described in the form of relationship between service quality in automotive after-sales service and customer loyalty, service quality in automotive after-sales service and relationship quality, and followed by association between relationship quality and

customer loyalty. The hypotheses also include relationship quality as a mediator and alternative attractiveness as a moderator.

Chapter four introduces method of research employed for this current study together with its detailed quantitative approach. The chapter also explains Partial Least Squares Structural Equation Modeling (PLS-SEM) as the statistical method used for data analysis and followed by discussion of the data that contribute to research validity.

Chapter five provides analysis and outcomes of the research findings which is derived from the collected empirical data. Partial Least Squares Structural Equation Modeling (PLS-SEM) employed as method for data analysis provides statistical result in answering the research questions of quantitative study.

The last chapter which is chapter six delivers discussions on results and the necessary conclusion about the results and it also highlights the theoretical contribution as well as managerial implication from this research. Also included in this last chapter are recommendations which serve as a guideline for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The first section of this chapter starts with the discussion about underpinning theory that supports and guided the research‘s conceptual framework. This chapter also reviewed the past literature and studies with regards to customer loyalty, service quality, relationship quality and alternative attractiveness. Each section begins with the importance of the variables to be studied and followed by what has been studied under the light of the relationship between the variables. Importantly, the study is presented with a few subsections explaining the relationship between the variables as per demonstrated in this study‘s research framework.

Each variable in the conceptual framework was explained accordingly. It starts with the discussion on customer loyalty which is the dependent variable in this current study followed by the relationship of the dependent variable with the independent variable and the mediator. The next section discusses service quality in different perspectives according to different schools of thought, including various service quality dimensions examined in the past studies. This section also explains about SERVQUAL and SERFPERF as the instrument in measuring service quality. Next, in section 2.5, the researcher discusses the role of relationship quality as the source of competitive advantage in retaining the existing customer then followed by section 2.6 that explains alternative attractiveness as competition factor to impact the level of loyalty towards Malaysian national carmakers. Finally, the summary of the chapter follows.

2.2 Underpinning Theory

A theory as defined in Merriam-Webster dictionary is a reasonable or a scientific common principle or a set of principles that explain a phenomenon. A theory and empirical study are related to each other when the research hypothesis is developed that leads to empirical test to improve the theory. In a quantitative study, an underpinning theory serves as the backbone to explain how the variables in the conceptual model connected to each other in achieving the research objective.

Evidence from the past works of literature has shown that service quality has widely being related to the expectancy disconfirmation theory (EDT). The expectancy disconfirmation theory (EDT) explains the perceived satisfaction related to the expectation and performance of the service delivered. Meanwhile, in this current study, the service quality is measured based on the performance of service (SERVPERF) whereas the customer satisfaction is measured in relation to the concept of relationship quality between a customer and the service provider. In light of the above differences, the social exchange theory (SET) is better to explain the conceptual model of this present study that emphasized on mutually benefited customer-service provider relationship to obtain a higher level of customer loyalty.

2.2.1 Social Exchange Theory

Social exchange theory (SET) has been used in various disciplines to describe interdependence of exchange partners. Social exchange theory (SET) was initially conceptualized in sociology and social psychology discipline and four scholars were responsible for the development of this theory; George Homans, John Thibaut, Harold Kelly and Peter Blau (Emerson, 1976). The main objective of social exchange theory

(SET) is to describe the role of relationship developed from the behaviour of actors that are involved in an exchange process within the community. In line with that, Cropanzano and Mitchell (2005) pointed out that social exchange theory (SET) basically described social behaviour in exchange approach that involved a sequence of interdependent interaction resulting in obligation of the parties involved in a high-quality relationship.

The social exchange starts with minor transactions with little risk in slightly lower degree of trust where both parties can prove their level of trustworthiness which enables relationship expansions for major transactions to take place (Blau, 1960). Further, an exchange as explained in social exchange theory (SET) by Homans (1958) covers both exchange of material goods and non-material goods which are delivered in symbolic value, for instance, status or prestige. Along with that, the continuous and on-going relationships are the essence of social exchange theory (SET) and the parties in the relationship might gain mutual benefit from the exchange. In the exchange, the customer will face less perceived risk or simplified process of transaction in the exchange process while the organization might benefit in terms of long-term profitability and higher level of loyalty. The reciprocal and mutually benefit relationship is gained by both parties who interact.

Borrowing the idea from Cropanzano and Mitchell (2005), the parties that interact in an evolving relationship are subject to the rules of exchange such as reciprocity, and reciprocity which described in relation to interdependence in social exchange requires two-direction transactions which involve giving and at the same time expecting something in return as rewards. Both parties interacting in the relationship will give much better when they received much reward from others, and when they give much

they will tend to get more from others to reciprocate the exchange. Relatedly, relational factors still dominate the material exchange when the buyer is looking beyond the immediate comparison between cost and benefit but expecting rewards from the relationship (Barry & Doney, 2011). This process will lead to a high quality interaction in a balance relationship called equilibrium, which refers to balance in successful relational exchange (Homans, 1958).

Accordingly, drawing upon social exchange theory (SET) concept, an exchange is described as a sequence of interdependent transactions that in accumulation will result in interpersonal attachment between the parties involved in the transactions (Cropanzano & Mitchell, 2005). However, in relation to the concept of relationship in extant literature, Cropanzano and Mitchell (2005) argued that relationship can be interpreted in two different ways; relationship developed from a series of interdependent transactions and relationship conceptualized as the interpersonal attachment resulting from a series of interdependent transactions. Accordingly, the distinction between these two stages has been fully appreciated (Cropanzano & Mitchell, 2005).

Having reviewed the literature, social exchange theory (SET) has been used to guide the study on the influence of relationship satisfaction (economic and social) in determining retailer‘s commitment in the relationship between retailers and manufacturers (Mapkhot Goaill, Perumal, & Mohd Noor, 2014). The importance of relational factor beyond the immediate benefit/cost that resulted in relationship continuity as suggested by social exchange theory (SET) has also guided the study on relationship quality in a cross-cultural setting (Barry & Doney, 2011). On top of that, social exchange theory (SET) also explained on the role of price discount as rewards

for loyalty given where the salespeople are motivated to grant a discount to make the relationship more attractive and subsequently preserve the longer relationship (Wieseke, Alavi, & Habel, 2014). However, this current study is looking at the social exchange theory from the non-monetary aspect i.e relationship as benefit that motivates the high quality relationship beyond the monetary aspects.

Further review of literature on customer satisfaction as resulted from perceived quality of service showed that most of the researchers have used expectation disconfirmation theory (EDT) as the guide to support their studies (Chang & Chen, 2009; Kursunluoglu, 2011; Lai, 2015; Shekarchizadeh et al., 2011; Vanniarajan, 2011). Expectation disconfirmation theory (EDT) or also called expectancy confirmation theory proposes that customers compare their post-purchase experience of consuming the product or service in relation to their prior expectation (Lai, 2015). The result from the comparison of expectation and performance determines the level of satisfaction. Accordingly, customer satisfaction is an evaluation that the service was at least as good as it was supposed to be. However, in the context of this present study, the satisfaction is operationalized in relation to the construct of relationship quality where satisfaction is a concern on the customer‘s cognitive and affective evaluation from customer‘s own experience across all service episodes within the relationship. In other words, the satisfaction is more towards the relationship satisfaction resulted from the high quality repeated transactions between a customer and the service provider.

Based on the foregoing justification, this current study which is governed by the customer-service provider relationship has chosen the social exchange theory (SET) as the underpinning theory to explain the study‘s conceptual framework. The

following sections provide detail explanation on each variable in the conceptual framework.

2.3 Customer Loyalty

Customer loyalty has been established as important by marketers and academics due to its positive effects on long-term business profitability (Ribbink, Riel, Liljander, & Streukens, 2004). Indeed, a recent study found that customer loyalty was the most important factor in automotive after-sales service (Nordin et al., 2016). The loyal customers may contribute to the long-term success as they ensure continuous support in terms of recommendation, publicity, positive word-of-mouth and repeat purchase behaviour (Kaur & Soch, 2013; Purgailis & Zaksa, 2012; Srinivasan, Anderson, & Ponnavolu, 2002; Ulaga & Eggert, 2006). Even though literatures have described loyalty in two discrete dimensions, the true loyalty can only be achieved through the combination of repurchase and positive attitude towards the product (Day, 1969). In the same tone, the combination of both behavioural and attitudinal loyalty known as composite loyalty is the most selected conceptual definition to describe customer loyalty in consumer researches (Hallowell, 1996; Jacoby, Chestnut, & Fisher, 1978; Rundle-Thiele, 2005).

Being guided by the above literature and the nature of loyalty in the context of automotive after-sales service, the customer loyalty in this current study is defined by the composite loyalty where the behavioural loyalty is expressed in terms of repeat purchase behaviour and the attitudinal loyalty described by the act of recommendation and positive word-of-mouth (Hennig-Thurau et al., 2002) which subsequently contributes to the publicity and the positive image of the national carmakers (Prasad

& Aryasri, 2008). In automotive industry, after-sales service is a bridge where the customer keeps on coming for routine vehicle service maintenance and repair at least for the warranty period and that repeated transactions have created something called relationship.

Along the bridge, the service provider might deliver the high quality of service which serves as the source of competitive advantage to differentiate them from competitors and at the same time creating good publicity which promotes recommendation and positive word-of-mouth on their organizations. As posited by Prasad and Aryasri (2008); those referral, strong word-of-mouth and recommendation indicate customer loyalty towards the national carmakers. In particular, the loyalty in automotive after-sales service indicates by the act of consumer‘s recommendations about the brand and also the willingness to stay in the relationship by keep on servicing the vehicles with the same service provider (Nordin et al., 2016).

2.3.1 Definitions and Dimensions

Customer loyalty as a complex and important construct for practitioners and academics has received adequate attention in marketing literature (Cannière, Pelsmacker, & Geuens, 2010; Tarus & Rabach, 2013). The scholars such as Fornell and Johnson (1996) hypothesized loyalty as the results of customer satisfaction. However, other scholar such as Oliver (1999) advocated that satisfaction alone is not enough to secure loyalty. That school of thought has urged the researchers until currently to empirically proof the various factors that contribute to higher loyalty such as corporate image and trust (Kaur & Soch, 2013), commitment (Tarus & Rabach, 2013) and conflict handling and communication (Ndubisi, 2007a).

Other than the mixed finding on the factors that determined customer loyalty, the important role played by customer loyalty construct to both organization and customer has made it worth for further research. The importance of loyal customer to an organization has been conceptually and empirically proven where the researchers have advocated that retaining the existing customer is five to six times cheaper compared to acquiring the new ones (Ndubisi, Wah, & Ndubisi, 2007). The existing customer who is considered well trained on the products and services offered by the business organization has given the opportunity to the organization to save their cost on educating and convincing the new customers. The loyal customer may also benefit from the less time and effort invested in seeking information of the potential service provider.

The important role played by loyal customer towards increasing customer retention rate has made researchers to define customer loyalty in various aspects according to their specific objective of study. Looking at the trend in defining loyalty, researchers in the early days generally refer customer loyalty from the aspects of loyalty to a brand (Uncles & Hammond, 2002). The development in marketing strategy from customer acquisition to customer retention or from transactional to relational marketing has brought a distinction between brand loyalty and customer loyalty. Brand loyalty only centres on the commitment towards a product but in contrast; customer loyalty comprises the interactive nature of relationship marketing where it involves customer personal acknowledgement and commitment towards the whole organization including its employees (Buttle, 1996).

Similarly, Uncles and Hammond (2002) also define loyalty as opposed to brand by emphasizing that customer loyalty must concern on featuring people instead of brand.

As a result, the focus in marketing has changed from focusing on brand to a more comprehensive and holistic nature of loyalty which is customer loyalty (Buttle, 1996). Further to that, customer loyalty can be seen from two different situations; loyalty to the sales person and loyalty to the organization (Wong & Sohal, 2003). The findings of their study revealed that the customers of retail store are more loyal to the employees instead of the store. As argued by Khan (2012), the relationship between the customer and the sales person generated from the continuous interaction between the sales person who served as the representative of the organization has contributed to a high level of loyalty to the particular organization.

The study of customer loyalty was initially focused only on customer repeat purchase behaviour, and the loyalty is seen from the repetitive purchase of the same brand (Srinivasan et al., 2002). Behavioural loyalty as described by Ulaga and Eggert (2006) refers to repurchase intention and word-of-mouth and the similar description has been given by Hallowell (1996) who refers to loyalty as the continuous purchase, increased volume of purchase from the same supplier and also recommendation of the products or services. The same description based on number of purchase was highlighted by Oliver (1999) who suggested that most of the researchers defined loyalty in relation to the process taken by customer to become loyal and they generally concern only on the frequency and volume purchase of a same brand.

He further discovered that in order to impact loyalty, the definition should describe beyond what customer did and must contain the aspect of psychological meaning and in relation to that, an extension definition of customer loyalty given as ~~a~~ deeply held commitment to rebuy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite

situational influences and marketing efforts having the potential to cause switching behaviour". Further to that, another behavioural loyalty as described by Jones and Taylor (2007) was more towards intention such as repurchase intentions, exclusive purchasing intentions, and switching intentions.

However, due to complexities of customer loyalty concept and arguments that repeat purchase behaviour alone is not enough to define and differentiate between true loyalty and spurious loyalty, a number of researchers have added attitudinal aspects in addition to behavioural aspect of loyalty (Srinivasan et al., 2002). The attitudinal loyalty was discussed in relation to the strong continuous relationship and resistance towards accepting any harassment made by competitors (Dick & Basu, 1994). The similar point was highlighted by Jones and Taylor (2007) who have given strength of preference, advocacy and altruism as example of attitudinal loyalty. The recent study by Purgailis and Zaksa (2012) defined loyalty in relation to customer's attitude, where trust and willingness to recommend were given as the example. The earlier definition of attitudinal loyalty by Rundle-Thiele (2005) also relates attitudinal loyalty to customer's attitude but the element of feeling that attach the customer to the supplier also considered. The more recent study by Kaur and Soch (2013) also agrees to the aspect of customer's emotional attachment and described willingness to recommend and positive word-of-mouth as example of attitudinal loyalty.

This nature of attitudinal loyalty is consistent with the objective of this current study as it considers competition factor of alternative attractiveness and its ability to influence customer loyalty. East, Gendall, Hammond, and Lomax (2005) argued that in daily activities, customers are more associated with behavioural loyalty compared to attitudinal loyalty and they further argued that combination of behavioural and

attitudinal concept was the poor predictor of loyalty outcome compared to singular dimension such as word-of-mouth which was predicted by attitudinal loyalty. However, true loyalty can only be achieved through repurchase intention and its combination with positive attitude towards the product (Day, 1969). Notably, the integration of both behavioural and attitudinal loyalty known as composite loyalty is the most selected conceptual definition to describe customer loyalty in consumer researches (Hallowell, 1996; Jacoby et al., 1978; Rundle-Thiele, 2005).

Other than concern on customer loyalty definition, the measurement of customer loyalty also carried a significant value in marketing literature (Rundle-Thiele, 2005). Having reviewed the literature, customer loyalty was measured using the similar concept of its definition. For example, Caceres and Paparoidamis (2007) examined customer loyalty based on both behavioural loyalty and attitudinal loyalty and the finding shows that attitudinal loyalty is more significant to drive loyalty. Further, behavioural loyalty normally depends on the availability of the product but attitudinal loyalty has its enduring factor related to commitment (Caceres & Paparoidamis, 2007). Indeed, a study by Rundle-Thiele (2005) proposed that attitudinal loyalty is the most important dimension for marketers. However, different with Jones and Taylor (2007); behavioural loyalty, attitudinal loyalty and cognitive loyalty were the three dimensions proposed in marketing literature. In the same vein, considering loyalty measure from more than one dimensions will provide a greater understanding for marketers to upgrade customer loyalty level (Rundle-Thiele, 2005).

In the context of automotive industry; specifically after-sales service, the loyalty is important based on a number of factors: first, will the existing customer who come for routine service maintenance and repair return after the expiry of service warranty; or

will they terminate the relationship by choosing the workshops other than national carmakers that provide the similar services?. In addition to that, the loyalty is also expressed explicitly from more people buying the products as a result of free promotion made by the existing customer through positive word-of-mouth (Nordin et al., 2016). As proven in empirical research, losing the existing customers is more costly compared to retaining them since they have the authority to influence the potential customer to buy from the recommended organization (Ndubisi et al., 2007). The loyal customers may provide the positive word of mouth about their experience and relationship developed with the service provider. In fact, loyalty was found as the most influential factor in automotive after-sales service (Nordin et al., 2016).

The study of customer loyalty in tourism industry by Radder and Han (2013) also considered the same point when they postulated that loyal customer willing to pay premium price for the product and their loyalty behaviour is expressed by communicating the positive word-of-mouth and recommendation which assist in giving good publicity for the national car after-sales service companies. A good relationship between customer and service provider might curtail them from sharing negative experiences with colleagues which may cause additional defections (Trasorras, Weinstein, & Abratt, 2009). Furthermore, loyal customers possess the authority and credibility which can ensure the success of the services organizations by communicating their favourable experience with the service provider (Heskett, 2002). In relation to that, through their word-of-mouth communication, loyal customers were also the marketers for the organization and they were the most valuable customers who can bring more and more new customer (Kaur & Soch, 2013).

Driven by the above marketing literatures on the importance of measuring customer loyalty from both dimensions, that is composite loyalty (Caceres & Paparoidamis, 2007; Hallowell, 1996; Jacoby et al., 1978; Rundle-Thiele, 2005), this current study will measure customer loyalty not only from repeat visit for car service maintenance and repair after service warranty expiry but the loyalty factors such as word-of-mouth and recommendations. On another note, most of the studies on customer loyalty normally used both worth-of-mouth and repeat purchase‘s items as reflective indicators of customer loyalty construct (Chiu, Cheng, Huang, & Chen, 2013).

2.3.2 Customer Loyalty in the Context of Service Industry

Retaining existing customer is imperative for competitive industry such as automotive especially after-sales service business. The number of car sold will determine the number of car that will be brought for after-sales service to serve the free service warranty tenor. Therefore, it is the role of after-sales service department to secure those customers to return for service maintenance and repair after the end of warranty period. The importance of service quality in gaining higher customer loyalty has made researchers to keep on studying on the conceptualisation and measurement for service quality. In the literature, service quality is among the most frequently studied variable (Athanasopoulou, 2009). Even though service quality has been the focus of study for several decades, many of the previous studies have only emphasized on different aspects of service quality and as a result, the researchers have failed to achieve consensus on its concept and measurement (Ismail et al., 2006; Liu, Guo, & Lee, 2011).

In examining the relationship between service quality and customer loyalty in heritage museum context, the study by Radder and Han (2013) found that service quality directly and positively related to customer loyalty. However, contrary to the study on service quality in automotive after-sales service, service quality was not hypothesized directly with customer loyalty but the effect was mediated by trust and satisfaction (Yieh et al., 2007). In relation to that, Yieh et al. (2007) has chosen not to examine the direct impact due to the objective of their study to see the influence of trust and satisfaction in between the service quality and customer loyalty. Similarly, in low cost airline setting, service quality and satisfaction are the two important drivers of loyalty (Curry & Gao, 2012). However, due to insignificant result for one of the dimensions of service quality, that study found satisfaction as a better predictor of loyalty and the situational factor or the context of service encountered was given as the reason for insignificant result (Curry & Gao, 2012).

In the same vein, a study on service quality in retail industry, Clottey et al. (2008) measured customer loyalty from attitudinal perspective and found the similar result for service quality when they reported that the higher the customer‘s perceptions on service quality, the higher the willingness to recommend the retailer to family and friends. Along with that, study of service quality in relation to customer relationship management in retail financial service has given a more specific result for service quality when the findings show technical quality as more dominant in influencing customer loyalty (Bell, 2005). That study which examined relationship between technical and functional service quality with customer loyalty then expertise, and switching cost as moderator has provided a new insight on the relative importance of technical and functional service quality in loyalty decision.

The similar study by Caceres and Paparoidamis (2007) also examined the service quality from technical and functional aspect and found that service quality was not directly related to customer loyalty but mediated by relationship satisfaction. However, the study by Caceres and Paparoidamis (2007) shows different result from Bell (2005) when the finding of Caceres and Paparoidamis (2007) shows that functional quality is more powerful compared to technical aspect. Another study in retail environment found significant and positive association between service quality and customer loyalty, however, the correlation was slightly low at only 0.28 (Wong & Sohal, 2006). Thus, until recently, study on service quality is still attracting the attention of researchers. For example, in mobile phone industry, a significant and positive relationship between service quality and customer loyalty was reported (Qayyum, Khang, & Krairit, 2013) and service quality was also the focus of hospital in Pakistan (Kashif et al., 2014).

Based on the above literature review, it is found that service quality is positively related to customer loyalty. However, some studies show indirect relationship with customer loyalty when other variables also considered as influencing factor between service quality and customer loyalty. Additionally, the previous researchers also examined service quality from various aspects of service quality in various industries; some focused on service quality as an overall construct while some examined relative importance of technical and functional aspects with different impact on customer loyalty. Therefore, as a contribution to the knowledge content, this current study is conceptualising service quality from each concept of technical and functional including service environment and also considers the specific service quality

dimension (support service) to represent service quality measurement in after-sales service automotive industry.

2.3.3 Customer Loyalty as the Outcome of Relationship Building

After-sales service is the tenor to promote relationship building (Egonsson et al., 2013; Vanniarajan, 2011). A recent study on automotive after-sales service also highlights on the element of faith in brand which triggered a longer tenure of customer-service provider relationship (Nordin et al., 2016). The loyalty is not only demonstrated based on the repeat visit after the warranty expires but also creates more sales due to the higher level of satisfaction, trust and commitment developed from the quality relationship during the after-sales stage. The importance of relationship between service quality and relationship quality is demonstrated when the service quality alone cannot capture the unique aspect of relationship building (Crosby et al., 1990; Roberts et al., 2003) and both relationship quality and customer loyalty are the two ingredients for business success (Prasad & Aryasri, 2008).

Besides, customer loyalty is the outcome of relationship building (Hennig-Thurau et al., 2002) and relationship quality is also identified as the source of competitive advantage in facing the global competition with the non-national carmakers. The importance of customer-service provider long-term enduring relationship has been empirically proven in the literature related to customer loyalty. The relational benefits integrated with the high quality relationship has contributed to the relationship marketing outcome labelled as customer loyalty and word-of-mouth communication; directly and indirectly (Hennig-Thurau et al., 2002). With respect to the study on relationship quality in insurance industry in Iran by Doaei et al. (2011), the direct and

indirect impact gives different findings. Doaei et al. (2011) examined the relationship marketing tactic and its impact on customer loyalty and found that relationship quality directly influences customer loyalty, while the influence of relationship quality on the relationship between tactic and customer loyalty is insignificant because commitment and satisfaction as indicator for relationship quality do not support the indirect relationship. Empirical study on relationship quality and customer loyalty in retail food industry in India discovered that the higher the quality of relationship between the customer and the outlet, the higher the level of customer loyalty and which brings about repeated purchase and willingness to spread positive word-of-mouth (Prasad & Aryasri, 2008).

A study on business loyalty of companies that buy advertising service from advertising agencies revealed a significant direct effect of each component of relationship quality; satisfaction, trust and commitment towards business loyalty (Caceres & Paparoidamis, 2007). Wong and Sohal (2006) also considered customer loyalty in retail environment and discovered a high positive correlation between relationship quality and customer loyalty. However, their study examined relationship quality as an overall construct, and which makes to be slightly different from other studies. For example, a study on the relationship quality and customer loyalty in mobile service found that both relationship quality dimensions; trust and satisfaction significantly influence customer loyalty (Liu et al., 2011). Another study also in mobile service (Abdullah, Putit, & Teo, 2014) only measured relationship quality based on trust as single dimension towards the relationship between the user and service provider. However, these studies did not provide empirical testing on the variable between relationship quality and customer loyalty.

From the review of literature, it is found that most of the studies posited that relationship quality is important to influence customer loyalty (Chen & Myagmarsuren, 2011; Hennig-Thurau et al., 2002; Prasad & Aryasri, 2008) and profitability of loyal customer also has been generally accepted in the literature.

2.4 Service Quality

Service is featured by intangibility, inseparability, perishability and heterogeneity element (Parasuraman, Zeithaml, & Berry, 1985; Siddiqi, 2011). Intangibility as described by Siddiqi (2011) refers to uncounted, untested, or cannot be stored prior to sale. Unlike product quality, the measures at least can be traced from the number of defect. As for inseparability features, it refers to simultaneous consumption of service or in other words, the production and consumption must happen at the same time (Siddiqi, 2011). Perishability according to Siddiqi (2011) simply implies that the service cannot be stored for later sale or consumption. As for heterogeneity, Siddiqi (2011) refers to the variability of service performance due to different service provider, place and time of service delivery. Mosadeghrad (2013) and Parasuraman et al. (1985) supported the idea when they found that the subjective and elusive nature of service leads to difficulty in understanding and conceptualising of service quality.

To assist in evaluation process, the customers‘ comparison between the expectation and the actual performance will result in an outcome known as service quality (Gronroos, 1984; Parasuraman et al., 1985). In relation to that, service quality as defined by the major scholar such as Zeithaml (1988) refers to the customers‘ subjective evaluation or judgement on the overall service excellence of the service provider. Most of service quality literatures are commonly narrated according to these

three concepts; technical quality, functional quality, and SERVQUAL and SERVPERF (Clottey et al., 2008; Radder & Han, 2013). Another scholar, Brady and Cronin (2001), proposed service environment which comprised of facility design, social factors and ambient conditions as another framework of service quality. However, by considering the parsimony factor, the service environment has been included as part of functional dimension (Brady & Cronin, 2001). The most recent service quality framework which is a derivative for SERVQUAL (Clottey et al., 2008) has been introduced by Cronin and Taylor (1994) and this work is just based on the performance of the service experience called SERVPERF. Even though service quality has received considerable attention by researchers, the conceptualization and measurement especially on what to be measured are still debatable and the ambiguity in the literature (Brady & Cronin, 2001) has called the current research to further explore on its dimensions.

2.4.1 Service Quality in Various Disciplines and Context of Studies

Technical and functional quality is the concept introduced by Gronroos (1984) under Nordic school or European perspective. Under Gronroos's framework, service quality is defined according to technical concept by referring quality to the outcome of the service process. Gronroos (1984) further elaborates that technical outcome of the process refers to what they received as a result from customer-service provider interaction and important as part of service quality evaluation. A study by Ooi, Lin, Tan, and Chong (2011) has given effectiveness of the car service or repair as the example of technical quality. According to Gronroos (1984), the total quality of service is also concerned with the functional aspect of technical quality being delivered to them, that is, the process of service or how they get the service for

example, the friendliness of a personnel in dealing with the customer. The element of subjectivity of service evaluation is more prominent to functional quality because it cannot be assessed objectively but in contrast, the technical quality produces result which is quite objective in nature. Customers are concerned on the objective and subjective evaluation of service. Drawing the idea from Gronroos (1984), both quality aspects; technical and functional are interrelated to each other and the existence of technical quality is a pre-requisite for functional quality success.

In relation to that, a study on service quality in financial planning service by Sharma and Patterson (1999) also considers technical and functional quality where the technical aspect is the core service measured by the competency of the financial advisor in assisting the clients to meet their financial goal. Accordingly, the core service alone might not differentiate the service firm from their competitors and the functional aspect of quality similar to the five dimensions of SERVQUAL may contribute as a means of competitive advantage (Sharma & Patterson, 1999). Similarly, in women‘s apparel industry, the physical goods itself or the product quality is labelled as technical quality and the four SERVQUAL dimensions except tangible as functional quality (Clottey et al., 2008) to determine the relationship with customer loyalty, and the instruments from Gronroos (1984) was adapted to measure technical quality and Parasuraman's et al. (1988) for functional quality (Clottey et al., 2008).

SERVQUAL is the universal service quality measures in various industry and context of study but has received a lot of modification to suit with the needs and objective of the study. In a study by Ooi et al. (2011) on the influence of TQM practices towards service quality in Malaysian SME, they have adopted the five dimensions of

SERVQUAL as the measurement for service quality and found a significant positive relationship when 72.2% of service quality was explained by TQM. However, the study on service quality in Indian banking industry by Lenka, Suar, and Mohapatra (2010) divided SERVQUAL into soft quality or human aspect which is reflected by responsiveness, assurance, empathy and reliability and the hard quality which referred to service firm‘s attributes measured by tangibility and technical quality that is represented by technology adoption. Similar to a study on service quality provided by primary care physician in Turkey; Shemwell, Yavas, and Bilgin (1998) also measured service quality using SERVQUAL where their study combined and measured expectation and performance simultaneously and creating composite service quality.

In evaluating the reliance and effectiveness of Fuzzy linguistic compared to Likert scale, Hu, Lee, and Yen (2010) also used SERVQUAL measurement to examine medical service quality which is more subjective in evaluation process. Having reviewed the literature on service quality, it is observed that when researchers consider both technical and functional, they still used SERVQUAL instrument to measure the aspect of service delivery, that is functional quality and for the technical quality instrument, it is adapted from other industry‘s study because there are no common or universal instruments for technical quality developed in the previous literature (Kang & James, 2004). Most of the researchers applied dichotomous method in evaluating service quality (Clottey et al., 2008; Gronroos, 1984; Lenka et al., 2010; Ooi et al., 2011; Radder & Han, 2013; Sharma & Patterson, 1999). This is consistent with the suggestion by Omar et al. (2013), who noted that it is crucial for service firm to resort to both technical and functional quality because customer is not

only evaluating the process and the service experience in dealing with the provider, but they also evaluate the outcome of the service.

However, due to the nature and requirement of their study, for example, the intangible information gathered during interaction between physician and patient in medical service (Hu et al., 2010; Shemwell et al., 1998), some studies only considered single approach of functional quality in measuring service quality. The literature also shows that other than measuring service quality based on Nordic or American perspective, there were studies that measured different approach of service quality. For example, a study on service quality in airline industry by Llach, Marimon, Alonso-Almeida, and Bernardo (2013) evaluates service quality based on hedonic quality which measured the value of enjoyment gained from searching for product. The complex nature of service which involves evaluation of a combination between tangible and intangible elements during the moments of truth has made service quality as an interesting subject for further research. Furthermore, the debate among researchers on service quality measurement shows the importance of service quality and more empirical studies are needed to upgrade the meaning of service quality (Bhat, 2012).

2.4.2 Service Quality as a Multidimensional Construct

Service quality was established as a multidimensional construct, however, the issue of its dimensions has not received adequate attention by previous researchers (Kang & James, 2004). Even though SERVQUAL as developed by Parasuraman et al. (1985) offers a generally accepted and most widely used measurement for service quality, it did not conceptualise technical aspect of service delivery and only reflected the functional quality of service (Kang & James, 2004; Lenka et al., 2010). Customers are

not only looking at the process of service delivery, but the outcome of the service is also their main concern (Omar et al., 2013). Bhat (2012) equally agrees with this by arguing that that the five dimensions of service quality are inadequate to measure service quality. Even the earlier study by major scholar such as Cronin and Taylor (1994) also suggested for academicians to further validate the multidimensional scale of service quality.

Until recently, the literature have refused to fully explain on the issues of service quality especially in non-western country and the literature needs a new paradigm to present service quality (Kashif et al., 2014). As a result of those drawbacks, the previous researchers have considered various dimensions in evaluating the service quality related to the objective of their study and industry (Choudhury, 2013; Huang, Lin, & Fan, 2015; Kashif et al., 2014; Mosadeghrad, 2013; Murali et al., 2016). Based on the foregoing, customers in car after-sales service have identified service quality as one of the important variables in influencing customer loyalty through satisfaction and trust (Yieh et al., 2007). The service quality was measured using modified SERVQUAL dimensions by excluding reliability dimension as the reason to avoid redundancy with trust which was studied as a mediator between service quality and customer loyalty (Yieh et al., 2007).

Earlier study by Bouman and Wiele (1992) also in car after-sales service focused on instrument development based on SERVQUAL dimensions. Bouman and Wiele (1992) measured service quality specifically for car after-sales service using 48 service items in three dimensions instead of 22 items in five dimensions proposed in SERVQUAL and the three dimensions consist of customer kindness, tangibles and faith. Customer kindness described all the four SERVQUAL dimensions except

tangibles and the finding shows that customers in car after-sales service viewed customer kindness as one factors and the other two; tangibles and faith only influence service quality indirectly through customer kindness (Bouman & Wiele, 1992). Therefore, since customer loyalty is the outcome of service quality, this current study aims to test some of SERVQUAL dimensions; responsiveness, assurance, empathy and reliability in one group named customer service dimension with customer loyalty and the grouping is similar to the one proposed by Bouman and Wiele (1992). SERVQUAL has been widely used in the literature and in practice as measurement scales for service quality (Caruana, 2002; Etemad-Sajadi & Rizzuto, 2013; Roberts et al., 2003). According to Ismail et al. (2006), the exploratory and quantitative research shows that the five dimensions were found to be relevant for the banking, insurance, appliance repair and maintenance, securities, brokerage, long-distance telephone service and automobile repair industries.

However, in a recent study on service quality, Bhat (2012) postulated that the five dimensions are insufficient for service quality measurement and the SERVQUAL scale is also inappropriate as generic measure for service quality. Furthermore, the SERVQUAL five dimensions also need modification to adapt with the industry needs (Babakus & Boller, 1992). In relation to that, previous researchers have employed the SERVQUAL dimension in many ways. Some employed SERVQUAL as it is (Ooi et al., 2011; Roberts et al., 2003), some modified it according to the needs of the study (Agus et al., 2007; Caruana, 2002; Caruana et al., 2000; Kumar et al., 2010; Shekarchizadeh et al., 2011) and there were also researchers who operationalized service quality in different measurement dimension relevant to their context of study (Aydin & Özer, 2005; Lai, 2015; Santouridis & Trivellas, 2010).

Therefore, having reviewed the literature, other than service quality in car after-sales service, it becomes apparent that many service quality studies in different contexts and industries have considered various dimensions involved. Importantly, one of such studies is that of Agus et al. (2007) that was conducted on service quality in public service in Malaysia. The study by Agus et al. (2007) was slightly different from other study in the sense that it employed the original SERVQUAL that was developed by Parasuraman et al. (1985) which consists of ten dimensions; tangibility, reliability, responsiveness, competence, courtesy, credibility, access, communication and understanding. Due to the nature of service delivered in public service sector, the security dimension has been excluded from the evaluation. The findings demonstrate a solid connection between service quality dimensions and customer satisfaction, and in particular the service provider's credibility, responsiveness and accessibility.

From the findings, it also revealed that each dimensions contribute differently to the level of service quality performance. Guided by the literatures, a study needs to examine each dimension to identify the most important dimensions that contribute to excellent level of service quality. Borrowing the suggestion by Bhat (2012), service quality dimension-specific assessment is necessary to enhance firm's effectiveness in fulfilling customers specific needs which subsequently improves firm's position in the market. Rather than measuring service quality based on the original ten dimensions, another study that measures service quality and relationship quality between service firm and their customers by Roberts et al. (2003) employed the five dimensions of SERVQUAL and examined its relationship with loyalty. Similar to that, a study on service quality in banking industry also measured service quality using the five SERVQUAL, however, Caruana (2002) has chosen the three dimensions of

SERVQUAL (responsiveness, assurance and empathy) and merged into one dimension and leaving reliability and tangibility as it is (Parasuraman, Zeithaml, & Berry, 1994).

A similar study on service quality in audit firm by Caruana et al.(2000) also measured service quality based on the three dimensions, however, this study did not consider tangibility in service quality evaluation because the respondents were approached at their own premises. Looking at the literature on service quality in banking industry, other than the study by Caruana (2002) delineated above, another study by Kumar et al. (2010) examined service quality in different dimensions using tangibility, reliability, and other two additional dimensions; competence and convenience which the authors believed to be important for service quality in the context of banking in Malaysia. The difference in the dimensions is due to the different objective of study where Kumar et al. (2010) examined service quality by comparing between conventional and Islamic banking.

The multidimensional of service quality in the literature also can be seen in the studies which added the dimensions relevant to describe quality in their context of study. For example, Santouridis and Trivellas (2010) measured the network quality, value-added service, mobile devices, customer service, pricing and billing system as additional dimensions in service quality evaluation. That study measured service quality in telecommunication industry and considered customer service which was operationalized as how the service is being delivered to the customer by the service provider. One point to note, the human interaction in service delivery process and human-related factor is similar to the concept of functional quality described by SERVQUAL (Santouridis & Trivellas, 2010). In contrast, the study by

Shekarchizadeh et al. (2011) which measured service quality in higher education considered professionalism, hospitality and commitment as the important dimensions for service quality in education, however the similarity is still present when they also considered tangibility and reliability for their service quality measurement. Similar to the study on service quality in hospital, Kashif et al. (2014) also added sincerity, personalization and formality to the SERVQUAL's dimensions (reliability, tangibility and assurance) were also taken into account.

Aside from measuring service quality as a multidimensional construct, there are also studies choose to measure service quality as an overall construct; for example a study on service quality in the retail environment (Wong & Sohal, 2006) and service quality in the restaurant (Hyun, 2010; Lai, 2015). An important point to note, even though that most recent study in the restaurant by Lai (2015) has measured service quality as an overall construct, he further suggested that in order to match with particular study's different settings and industry, future studies should examine service quality as a multidimensional construct. In relation to that, the below Table 2.1 summarizes the previous studies with multi-dimensional service quality suitable to the objective and context of the study.

Table 2.1
Previous Study with Multi-dimensional Service Quality

Author	Industry	SERVPERF/SERVQUAL	Dimensions
(Yieh, Chiao, & Chiu, 2007)	Automotive after-sales service	SERVPERF (modified SERVQUAL)	Interaction, empathy, and tangibility.
(Bouman & Wiele, 1992)	Automotive after-sales service	SERVQUAL (modified by combining expectation and perception)	Responsiveness, empathy, tangibility, assurance, reliability, and faith.
(Agus, Barker, & Kandampully, 2007)	Public service	SERVPERF (security excluded)	Responsiveness, tangibility, faith, competence, courtesy, credibility, access, communication and reliability.
(Caruana, Money, & Berthon, 2000)	Audit firm	SERVPERF (tangibility excluded)	Responsiveness, empathy, assurance and reliability.
(Caruana, 2002)	Banking	SERVPERF	Responsiveness, empathy, tangibility, assurance and reliability
(Kashif, Altaf, Ayub, Asif, & Walsh, 2014)	Hospital	PAKSERV (modified SERVQUAL)	Assurance, tangibility, reliability, sincerity, personalization, and formalization.
(Shekarchizadeh, Rasli, & Hon-Tat, 2011)	Hospital	SERVQUAL Gap analysis	Tangibility, reliability, professionalism, hospitality, and commitment.
(Kumar, Kee, & Charles, 2010)	Banking	SERVQUAL Gap analysis	Tangibility, reliability, competence, and convenience.
(Bhat, 2012)	Tourism	SERVQUAL Gap analysis (empathy excluded)	Responsiveness, tangibility, assurance and reliability.
(Santouridis & Trivellas, 2010)	Telecommunication	SERVPERF	Network, value-added, device, customer service, pricing, and billing

2.4.3 Various Concepts of Service Quality for Automotive After-sales Service

One of the objectives of this research is to examine the relationship between service quality and customer loyalty with the emphasis on combining the various concepts of service quality in the literature and consequently develop a comprehensive and specific dimensions of service quality as measurement of service quality in automotive after-sales service. Based on the previous empirical works reviewed regarding dimensions of service quality and also the suggestions found in the literature on the needs to further evaluate the service quality paradigm, this current study is extending the knowledge content by regrouping the SERVQUAL and considers back office assistance of support service as one discrete dimension and categorised those dimensions as customer service, support service, technical and tangibility for measuring service quality in automotive after-sales service. The justifications for each of the proposed dimensions are delineated as follows:

2.4.3.1 Automotive After-sales Service Quality - Customer Service

The popularity of SERVQUAL as a measure for service quality has been established in the literature (Caruana, 2002; Etemad-Sajadi & Rizzuto, 2013; Roberts et al., 2003). In relation to that, this current study which mainly examines the service quality in car after-sales service which involves customer-service provider transaction in the process of service delivery has employed SERVQUAL dimensions as measures. Notably, the SERVQUAL dimensions as developed by Parasuraman et al. (1988) consists of five dimensions categorised as responsiveness, assurance, tangible, empathy and reliability. However, as suggested by the major scholar such as Taylor and Cronin (1994), for a more reliable and valid multidimensional scale of service quality measurement, service quality needs to be adapted to different context of study.

Indeed, a more recent study also advocated for the same point when Lai (2015) further proposed for the future study to examine service quality as a multidimensional construct to match with particular study‘s different settings and industry. From the literature reviewed, a similar study on service quality in car after-sales service by Bouman and Wiele (1992) has regrouped and tested the SERVQUAL, and concluded that in car service industry, the SERVQUAL should be regrouped into two distinct dimensions which comprise of responsiveness, assurance, empathy and reliability as one dimension, and tangibility was examined as single dimension indirectly influenced customer loyalty through customer kindness (Bouman & Wiele, 1992).

Moreover, another study in car service industry by Yieh et al. (2007) also examined service quality using SERVQUAL dimensions also regrouped the SERVQUAL dimensions and left tangibility as one separate dimension. The similar concept was also found in a study on relationship quality and customer loyalty in retail relationship by Wong and Sohal (2003) where the findings revealed a very similar mean values for the four dimensions of service quality with the exception of tangible while the author further indicates that the four dimensions were mainly associated with the nature of intangible element of service. Importantly however, Wong and Sohal (2003) emphasized on service quality in relation to customer-service provider relationship and as pointed out by Grönroos (1994), relationship marketing is concerned on the functional quality which dominates the relationship.

Even though the above studies (Grönroos, 1994; Wong & Sohal, 2003) have shown the importance of service quality and the process of service delivery involved in customer-service provider relationship, the study by Andreassen and Olsen (2008) concluded that customer service matters in delivering excellent service; but less

research has focused on it. Thus, to achieve consistency with the similar study in the literature on service quality especially in the same car after-sales service business and in relation to the gaps on the conflicting views regarding SERVQUAL as service quality measurement, and also the gap on the limited study that examined customer service in relation to relationship quality, this current study has adapted and regrouped the SERVQUAL dimensions and rename the four dimensions; responsiveness, assurance, empathy and reliability as customer service, and retain the tangibility as one discrete dimension.

2.4.3.2 Automotive After-sales Service Quality - Tangibility

Since the foregoing four dimensions of responsiveness, assurance, empathy and reliability have been named as customer service and were integrated into one dimension to represent the intangible elements of service process, the tangibility is examined as one discrete dimension to differentiate it as a tangible element of service process. Due to the intangible nature of service, customer used other tangible attribute to perceive the quality of service delivered by the service provider. Tangible evidence normally comes in term of physical surroundings in the service environment or the instruments used to deliver the service (Brady & Cronin, 2001). Also, even though service is a subjective element related to intangibility, the literature has recognised the importance of tangible factor as part of evaluation of service quality especially in service management (Yieh et al., 2007).

In automotive after-sales service, tangibility is one of the important factors worthy of investigation (Yieh et al., 2007). Accordingly, most service industries provide a combination of intangible and tangible service to their customers but the ratio might vary depending on the industry (Yieh et al., 2007). Further, the importance of

tangibility as measurement for service quality has been proven by Parasuraman et al. (1988) where tangibility was also one of the dimensions among five measures. Another major scholar such as Brady and Cronin (2001) offered the first empirical evidence that considered service environmental in combination with outcome and interaction quality as perceptions for service quality. This is agreed by a study in banking industry where tangibility was found as indicator of service quality (Siddiqi, 2011). For these reasons, this study considers the tangible factor as one the important dimensions in automotive service industry.

The literature has given different description on tangibility. A study on service quality in public service has operationalized tangibility in consideration of décor, physical ambience, technology and physical equipment (Agus et al., 2007), however, a different picture describing tangibility has been given by a study on service quality in banks where tangibility refers to the bank‘s premise and staff‘s appearance (Siddiqi, 2011). The tangibility in restaurant was described based on environment‘s cleanliness, decorations and comfort, and the environment positively contributes to satisfaction and subsequently customer loyalty (Hyun, 2010). Similar to a study in hospitality industry, tangible and intangible factors were examined in relation to customer loyalty and the tangible factor was represented by environment and food quality (Kim, Lee, & Yoo, 2006). However, Kim, Lee, and Yoo (2006) captured something different when they found out that only food quality positively influences relationship quality and consequently customer loyalty but physical environment did not influence customer loyalty directly or indirectly.

As indicated in SERVQUAL, tangibility is part of important dimensions measured in functional process of service delivery. Consistent with the service quality model

internationally used in the study of service quality, the current study is measuring service quality of both tangible and intangible dimensions. However, instead of examining each SERVQUAL dimensions individually, this current study is dividing the SERVQUAL into new grouping of tangible and intangible dimensions and the finding will reveal the relative importance of each dimension between tangible and intangible dimensions of SERVQUAL. The tangible factor which refers to the physical surroundings of service process is examined as one dimension of tangible part of service process and interaction between the customer and service provider as well as their organizations.

The similar study on car service industry by Bouman and Wiele (1992) found that the tangible dimension indirectly influences customer loyalty and the intangible dimensions which comprise of the other four SERVQUAL dimensions has direct effect on customer loyalty. Being guided by the literature on service quality in car after-sales service which reclassified the SERVQUAL into tangible and intangible dimensions (Bouman & Wiele, 1992; Yieh et al., 2007), this current study is extending the literature by examining the other dimensions such as technical quality and also support service as dimensions of service quality together in one comprehensive conceptual framework.

2.4.3.3 Automotive After-sales Service Quality - Technical Quality

Service quality has been measured according to various concepts and mostly based on two schools of thought namely Nordic and American. The Nordic school basically measures service quality from technical and functional dimensions. As explained by Gronroos (1984), the technical quality measures the outcome of the service, that is, the technical part of ―what" process of service delivery is, whereas the functional part

of quality as measured by SERVQUAL explained ―how", that is, the functional aspect of the service process. Since the customer service and tangible quality dimensions above have emphasized on the functional aspects of delivery process, this technical quality dimension focuses on the outcome of the service performance that is the aspect of ―what" of the service (Kang & James, 2004) which mainly described the effectiveness of the repair and zero problem that arises as a result of effective technical quality delivered by the service provider (Ooi et al., 2011).

2.4.3.4 Automotive After-sales Service Quality - Support Service

One of the objectives of this current study is to expand the SERVQUAL as measures to evaluate quality of service provided by car after-sales service specifically Malaysian national car. As suggested by Andreassen and Olsen (2008) in their study on varying level of customer service as perceived by customer, the future researcher must consider the support system as the necessary factor to provide excellent quality of service beside customer service itself. Additionally, a study by Bhat (2012) on service quality in tourism and which involved professional service provider equally concluded that SERVQUAL's five dimensions were insufficient to meet the criteria as service quality measurement scale. Further, the SERVQUAL five dimension is not a generic measure for service quality and service quality measurement needs industry-specific dimension (Babakus & Boller, 1992). Along with that, a recent study by Kashif et al. (2014) also proposed for additional dimensions to present service quality.

Moreover, support service plays an important role to influence customer loyalty other than the personal relationship or customer-service provider interaction (Ulaga & Eggert, 2006). Further, to secure highly loyal customers, firm must be highly responsive to service recovery especially during unforeseen circumstances (Jones &

Sasser, 1995). As described further by Jones and Sasser (1995), the customers in car after-sales service expect a very minimum inconvenience when they defined high quality of service starting from picking up their car at their office or home, giving loaner car, repair competently, cleaning and waxing the vehicle, and returning the car back to the customer in good condition at their convenient place and time.

The whole transaction involves not only the service provider and the customer but includes all the support system and support staff as the support service is capable of changing the neutral customer to a highly loyal customer (Jones & Sasser, 1995). However, according to a study by Cater and Cater (2009) that examined support service as one of the dimensions for relationship value, support service lack empirical evidence to describe the relationship between support service and customer loyalty. Furthermore, according to Jones and Sasser (1995), most of the service organizations have overlooked on the factor of support service whether by failing to redesign, introduce new technology or by reengineering of service delivery. More importantly, technical assistance is one of the major activities that must be considered in after-sales service industry but remain as a gap in the literature and therefore it needs to be researched further (Saccani, Johansson, & Perona, 2007).

In a study on quality and effectiveness of web-based customer support system, other than measuring the aspects of service quality, the response time and accessibility are among the critical factors identified for quality measures (Negash et al., 2003). Currently, a study in airline industry, the service quality was also measured in terms of support system such as web-site availability (Llach et al., 2013). As such, as the contribution to the literature on customer support service in automotive after-sales service quality, this current study is measuring the support service in terms of back

office support systems assisting the process of service delivery; for example the accessibility towards the mobile phone or web-site as communication media to book for car service or to answer any customer‘s enquiry. Also measured is the response waiting time in the case of emergency (Ladhari, 2009) where the support staff is assigned to attend break down cases.

Thus, to contribute to the knowledge content especially the literature on service quality in after-sales service and to answer the research question discussed earlier in chapter one, this current research intends to revisit the service quality dimensions especially its numerous concepts and consequently regroup the dimensions as the service quality dimension for automotive after-sales service.

2.4.4 SERVQUAL versus SERVPERF

Service quality as an intangible and elusive construct requires a complex measurement for a reliable evaluation. In the evaluation process, customers have made comparison between prior expectation and the actual performance that resulted from service experience. Based on the expectation and actual performance, Parasuraman et al. (1985) has developed SERVQUAL, service quality measurement model which comprises of initial ten dimensions and later on due to overlapping of the dimension, it has been reconceptualised to become five dimensions of SERVQUAL. However, the five distinct dimensions still capture the ten facet of original dimensions (Parasuraman et al., 1988). SERVQUAL model represents by five dimensions; responsiveness, assurance, tangibility, empathy and reliability measure service quality in two parts; 22 items for expectation and 22 items for performance.

Literatures have shown SERVQUAL as a dominant measurement scale for service quality and most of the studies on service quality applied SERVQUAL instruments in measuring service quality (Kang & James, 2004; Lenka et al., 2010; Murali et al., 2016; Roberts et al., 2003). Indeed, studies that applied technical and functional service quality from Gronroos (1984) concept still utilised SERVQUAL instrument for functional aspects of service quality, for example, Clottey et al. (2008). Due to several deficiencies, SERVQUAL has been criticised by some researchers for example Bhat (2012), Cronin and Taylor (1994) and Teas (1993). Among the disadvantage of SERVQUAL is the segregation of expectation and performance items into two parts and which has brought confusion for the respondents in answering the instruments (Bouman & Wiele, 1992). In addition, the efficacy of expectation is also being questioned (Cronin & Taylor, 1994).

Table 2.2
Critics on SERVQUAL

Critics on SERVQUAL (perception-minus-expectation scores)	
Difference scores	The separation of expectation and performance items into two different parts has created confusion to the respondents, and therefore leads to less reliability.
Predictive validity	Relatively lower ability in predicting overall service quality.
Emphasis on process	Too much emphasize on process (i.e —how dimension") rather than outcome (i.e —what dimension").
Single generic scale	SERVQUAL is insufficient in diverse service industries.
Applicability in certain cultural contexts	SERVQUAL dimension is unstable across cultural contexts.

Source: Ladhari (2009)

In response to the critics, Cronin and Taylor (1994) introduced SERVPERF to measure service quality as an alternative to SERVQUAL. For the purpose of differentiating between SERVQUAL and SERVPERF, the SERVQUAL model identifies ―gaps" between expectations and actual service performance whereas the SERVPERF only emphasizes the perceptions of actual performance. The authors such as Cronin and Taylor (1994), and Wong and Sohal (2002) empirically showed that the SERVQUAL's performance items are more capable to explain the variance in service quality and demonstrated stronger correlation compared to SERVQUAL's difference score. In fact, performance scores outperformed the gap scores of SERVQUAL. SERVQUAL's performance items also known as SERVPERF only measures the performance experience and exclude the questions on expectation, and thus reduces the problem of confusion. Besides, SERVPERF considers both the ―how dimension" and ―what dimension" including service environment.

As concurred by Teas (1993), the performance-based evaluation of service quality and specifically SERVPERF is appropriate and warranted. Indeed, pilot interviews done in car service industry based on questionnaires contain separate parts for expectations and performance and it was found that customer were unable to distinguish between those two factors (Bouman & Wiele, 1992). In this regard, Taylor and Cronin (1994) noted that SERVPERF is also worthy of further investigation because previous multi-industry studies found that it lacks of consistency and factor structure generalizability. Therefore, in order to acquire a better understanding on service quality in car after-sales service of Malaysian national carmakers, a quantitative study applying SERVPERF is undertaken by this current research.

2.5 Relationship Quality versus Relationship Marketing

The literature reviewed commonly refer to the definition of relationship quality according to the one given by Hennig-thurau and Klee (1997) who suggest relationship quality as ―the degree of appropriateness of the relationship to fulfil the needs of the customer associated with the relationship". Relationship marketing and relationship quality are the two variables working interdependently with a single objective of enhancing customer loyalty (Caceres & Paparoidamis, 2007). Conceptually, they are not contradicting each other because relationship quality as a concept is studied in the area of relationship marketing and the main objective is to drive customer loyalty (Hennig-Thurau et al., 2002; Kim et al., 2006; Ndubisi, 2007a). In order to achieve the objective of relationship marketing, the literature on relationship marketing has agreed on the general importance of high quality relationship towards relationship marketing practices (Caceres & Paparoidamis, 2007).

In the same vein, the successful relationship marketing strategy is determined by the quality of relationship between the parties involved (Skarmeas & Robson, 2008). In the situation of highly intense competition, marketing activities were not only involved in selling and delivering products but the focus must be channelled towards developing and maintaining of a successful long-term high quality beneficial relationship (Athanasopoulou, 2013). Traditional marketing has failed to serve organization's interest in the sense of higher cost in attracting new customer compared to customer retention (Buttle, 1996). In fact, traditional marketing only focuses on four Ps of marketing (product, price, promotion and place) and concern on hit-and-run transaction which denied serving customer's best interest. As a result, the

researchers and practitioners tend to develop a mutually successful long-term high quality relationship between firm and customer and named it as a relationship marketing (Grönroos, 1994). Thus, relationship marketing is actually a transformation in the way of doing business from transactional marketing to relational marketing.

Moreover, Morgan and Hunt (1994) have given a broad definition of relationship marketing which refers to ―all marketing activities that are directed towards establishing, developing and maintaining successful relational exchanges". To establish, develop and maintain the successful relationship, organizations need to measure the strength of existing relationship to gain mutually beneficial relationship and subsequently retain more loyal customers. The importance of assessing the quality of relationship to gain higher level of customer loyalty has motivated the researchers to evaluate the role of relationship quality in relation to customer loyalty (Caceres & Paparoidamis, 2007; Doaei et al., 2011; Kim et al., 2006; Wong & Sohal, 2006). Motivated by the theoretical concept of customer loyalty as the outcome of relationship quality and service quality as the prerequisite for relationship quality and customer loyalty, this current study is examining all the variables in a conceptual framework and empirically proves the relationship between the variables.

2.5.1 Relationship Quality as a Source of Competitive Advantage that Drives Loyalty

The transformation from transactional marketing to relational marketing has placed relationship quality as the focal point and source of competitive advantage for many organizations (Caceres & Paparoidamis, 2007; Doaei et al., 2011; Vieira, 2013). For instance, competing in the red ocean market where there are a lot of competitors

offering slightly close products to competitors, the strong buyer-seller relationship that captures loyalty might curtail customer to switch to competitors albeit they have to pay premium price for the service acquired (Chen & Myagmarsuren, 2011). Agreed by Cannière (2010), the fierce market competition is one of the reasons for marketers to develop high quality customer-firm relationship, and Inguanzo (2009) further suggested that organization with high rate of retention will contribute to higher market share and increased profitability. The literature has emphasized the important role of high quality buyer-seller relationship as determinant construct in gaining customer loyalty (Foster & Cadogan, 2000; Herington & Weaven, 2007; Prasad & Aryasri, 2008).

Thus, as argued by Grönroos (1994), customer retention and satisfaction alone are insufficient for the long-term profitability unless coupled with long-lasting high quality relationship. The good relationship between existing customer and the service provider might cause the customer to buy or acquire the service repeatedly from the same service provider and the customer also might influence people in their life to do the same through their positive word-of-mouth. This idea is agreed by Kim et al. (2006) who suggested that customer with greater loyalty will spread positive word-of-mouth on the beneficial relationship. Thus, on the basis of important role played by relationship quality in influencing customer loyalty especially in retaining the customer to stay in a relationship, this current study is interested to examine the relative role of relationship quality as the mediator between service quality and customer loyalty in the context of Malaysian after-sales service involves national pride Malaysian national carmakers.

2.5.2 Inconsistencies on Definition and Dimensions of Relationship Quality

Relationship quality examined in this current study refers to the measurement of relationship strength between the service provider of national carmakers, specifically the after-sales service provider with their existing customers who sent their vehicle for service maintenance and repair. The service provider in this current study refers to the employee who directly deals with the customer at the service counter, also the other employees of the service centre including the service centres itself. As for existing customer, this current study refers to the customers who come to the service centre of national carmakers for service maintenance and repair and their vehicles are still under free service warranty period for at least three years after vehicle registration date. On top of that, those customers who still return to the service provider after the expiry of warranty are also existing customers.

As postulated by Athanasopoulou (2009) in a review of sixty four studies on relationship quality, the importance of relationship quality in relationship marketing stream study has encouraged Dwyer and Oh to look at the quality of the relationship, and their work was further established by Crosby et al. (1990). Their early research works have created plenty of publications on relationship quality and the importance of this construct has received major attention by researchers whose their study mostly appeared in highest ranking marketing papers (Athanasopoulou, 2009).

Albeit of its importance and series of publications, the previous researchers still do not have a mutual understanding on the definition of relationship quality and until recently there were no universal model developed to fully describe relationship quality and this limitation has placed relationship quality study as underexplored area

(Athanasopoulou, 2013; Ndubisi, 2007b). From the literature reviewed, relationship quality has been established in empirical research as an important element to ensure long-term business relationship, however, the researchers still cannot establish a common model to describe its definition, dimension or even the factors that influence quality of relationship between transacting parties (Athanasopoulou, 2009).

As a result, the researchers have given various definitions to describe relationship quality according to the context of study and some relate it to relationship marketing concept to describe relationship magnitude or depth (Dant, Weaven, & Baker, 2013). In contrast, study on exporter-importer relationship offers a slightly different definition for relationship quality when they relate it to conflict and accordingly defined relationship quality in relation to lower level of conflict perceived in exporter-importer relationship which combines with the superior level of satisfaction, trust and commitment to the exporter (Skarmeas & Robson, 2008). Millennium year has manifested a new understanding of relationship quality from customer's perspective when relationship quality is seen as a dynamic and consistent long-term quality formation of customer relationship (Athanasopoulou, 2013). Besides, relationship quality was also interpreted in accordance with accumulated value gained during a high quality interaction between a firm and their customer (Segarra-Moliner, 2013). Another recent definition has seen relationship quality from a bigger perspective which comprises of various components and described it as a meta-construct that reflects the relationship between the parties as a whole (Aziz, 2013).

As a result of the non-consensus, a number of researchers such as Ali and Ndubisi (2011), Athanasopoulou (2013), Auruskeviciene, Salciuviene, and Skudiene (2010), Clark, Vorhies, and Bentley (2013), Dant et al. (2013), Han and Hyun (2012), and

Hyun (2010) have continuously tried to determine the dimensions, including antecedents and its consequences in various contexts. Back to the early years, study in service context considered only satisfaction and trust as the predictor of the good quality relationship (Crosby et al., 1990). However, the satisfaction was examined as antecedent instead of dimension and the difference in the measurement of relationship quality was due to the industry needs and objective of study (Crosby et al., 1990). Additionally, a study on relationship quality in wood and timber industry measured relationship quality based on trust and commitment and being influenced by eight determinants such as adaptation, relationship bonds, relationship termination costs, shared values, communication, opportunistic behaviour, satisfaction and cooperation (Zineldin, 2000).

On a contradicting note, a study by Ali and Ndubisi (2011) on the quality of service in pharmaceutical industry did not consider any dimensions but rather measure relationship quality as an overall construct perceived by customers. Besides, there were some other studies that also measured relationship quality in one single dimensions for example Ali and Ndubisi (2011), Cannière et al. (2010), Crosby et al. (1990), Ndubisi et al. (2007), and Wong and Sohal (2002,2006). The justification for measuring relationship quality as a single measure was given in relation to the inability of those three dimensions to form the relationship quality construct that described the sources related to relationship quality and furthermore, those three dimensions also lack overall assessment of relationship quality (Wong & Sohal, 2002, 2006). Another researcher also agree with this single dimension concept where Cannière et al. (2010) argued on the validity and reliability of the three-component

and further posits that the single construct of relationship quality is more parsimonious and better fit the data.

However, in a review of studies on relationship quality, Barry and Doney (2011) reported that the three dimensions; satisfaction, trust and commitment are capable of predicting a successful and high quality relationship and even another recent study by Athanasopoulou (2013) equally concurred to these three dimensions. Therefore, as guided by the above justified studies, this current study is also measuring relationship quality as indicated by the three dimensions; satisfaction, trust and commitment. On another note, Athanasopoulou (2009) posited that most of the previous studies were more interested on the antecedents of relationship quality and conceptualized it in various contexts relevant to their research needs. The antecedent factors might involve as many as seven variables (Athanasopoulou, 2013) and eight factors (Zineldin, 2000), while the simple factor only examined one antecedent which is relationship value (Ulaga & Eggert, 2006).

The significant difference between the numbers of antecedent in the study of relationship quality has contributed to the motivation of exploring more and more findings on relationship quality research. Also, the assumptions made by market practitioners show the needs for further empirical testing which may contribute to the established model to help the practitioners to improve business performance and guide the academics for future research (Athanasopoulou, 2009). Each research works on relationship quality have examined various types of relationship such as relationship in market research firm, banks, fitness centre and each of the studies is important for most accurate prediction of relationship quality (Athanasopoulou, 2013). Until currently, the dynamics in the study on relationship quality has urged the

researchers to further investigate its role in many perspective including quality of relationship between charities and beneficiaries in non-profit organization (Bennett & Barkensjo, 2005) and also in other disciplines such as psychology and consulting (Hawkins, Blanchard, Baldwin, & Fawcett, 2008; Maslyn & Uhl-Bien, 2001).

Additionally, the dynamics in the study of relationship quality also can be seen when relationship quality was examined in an online purchase (Keating, Rugimbana, & Quazi, 2003) and accordingly, the rapid changes in the nature of business motivates the study on such quality of relationship in e-banking (Ndubisi, 2007b). Furthermore, the complexity of customer needs and expectation due to attractive alternatives offered by close competitors has attracted the current researcher to examine relationship quality in Malaysian national carmakers and to investigate how it does influence the customers to return for service and maintenance after the service warranty expiry. For that purpose, this study would consider the three established and commonly used measures of relationship quality; that are satisfaction, trust and commitment to indicate the high quality of relationship as an outcome of high quality of service between the customer and the service provider.

2.5.3 Relationship Quality as Measures of Customer-Service Provider Relationship

The literature on service quality and relationship quality shows that the increase in service quality perception will result in increase on the aspect of relationship quality (Caceres & Paparoidamis, 2007). The link between these two constructs is also supported by Roberts et al. (2003) who found that relationship quality is necessary to measure certain unique aspects of relationship not captured by service quality. They

further suggest that in order for relationship to exist, the customer must experience a good quality of service from the service provider. Relatedly, service industries involve a high degree of contact between the service provider and customers and the degree varies among industry (Yieh et al., 2007). These literatures are true by looking at the nature of business in automotive industry where each car sold by the car manufacturer or carmaker is provided with the free service warranty and the continuous interaction developed during that period creates something called relationship.

Service quality as described by Parasuraman et al. (1985) refers to overall customer's judgement or attitude resulting from their comparison between expectation and actual performance. The overall evaluation is reflected from the total service offering which covers both the transactional and relational features (Woo & Ennew, 2004). A literature by major scholar such as Grönroos (1994) has shown an interesting connection between service quality and relationship marketing. In his study, Grönroos (1994) suggested that in relationship marketing, the similar technical quality can be provided by several competing organizations; however, the functional quality is relatively more dominant than technical quality because the interaction process is more imperative in service quality perceptions. The repeated transactions in delivering the service lead to increased satisfaction and value at relational level of the interaction (Keating et al., 2003).

Service quality and relationship quality are the two distinct constructs and service quality in theory often regarded as the antecedent of relationship quality (Wong & Sohal, 2002). Having reviewed the literature, there are some issues to differentiate between the two variables and more empirical research is needed for a clearer

conceptualization of these two distinct but closely related constructs (Keating et al., 2003). However, a study by Crosby et al. (1990) might assist to differentiate the two constructs when they clearly wrote that service quality is necessary but inadequate to explain relationship quality. Accordingly, a study by Roberts et al. (2003) further explained that in order for relationship quality to be present, service quality must precede the relationship quality, however, the good quality of service does not promise high quality relationship.

In another words, the existence of relationship quality is by the influence of service quality. The common illustration used to explain the relationship found in the literature (Crosby et al., 1990; Roberts et al., 2003) is described based on the service rendered by hairdresser which brings about the satisfaction to the customer but that does not mean that the hairdresser and the customer have high quality of relationship. However, in order to develop high quality relationship with the hairdresser, customer needs the basic relationship foundation, that is service quality. The study by Keating et al. (2003) found that the respondents in online purchase also believed that the service quality and relationship quality are two different constructs where they suggested that good service quality is the prerequisite for high quality of relationship. The finding further described that the repeated transactions with good service will make customer return and that is where the relationship is developed.

Even though the literatures have delineated the important relationship between service quality and relationship quality, the review of extant literatures shows a very limited studies that examine the relationship between those two variables and furthermore, the nature of relationship between those two constructs are also uncertain (Pepur et al., 2013). Another study in this regard is that is a study on the two level of retail

relationship by Wong and Sohal (2002) where the finding shows a direct positive relationship between service quality and relationship quality, and the study further indicates that the customers are more concerned of employee‘s quality of relationship rather than company relationship. In contrast to the above findings and different to the concept proposed by Crosby et al. (1990), Woo and Ennew (2004) argued that relationship quality preceded service quality and are positively associated. Woo and Ennew (2004) considered cause-effect in examining the association between relationship quality, service quality, satisfaction and behavioural intentions.

Quite recently, the results of canonical correlation analysis on relationship quality in business to business relationship by Pepur et al. (2013) also found service quality as a construct that influences relationship quality. In a literature review done on relationship quality, Athanasopoulou (2009) discovered that service quality is one of the most frequently studied variable, however the studies that examined service quality and relationship quality in automotive after-sales service is very scanty especially in the context of Malaysian national car. Thus, to fill in the gap in the literature, this current study is looking at service quality in different dimensions from the previous studies in the literature and consequently examines its relationship with relationship quality.

2.5.4 Relationship Quality Measured in Three Interrelated Dimensions

Relationship quality is a concept applied in relationship marketing to indicate the strength of the interaction and relationship between the parties (Caceres & Paparoidamis, 2007). The high quality of relationship works as the tool to drive more loyal customer and subsequently promises long-term handsome profit for the firm

(Caceres & Paparoidamis, 2007; Doaei et al., 2011; Vieira, 2013). In order to benefit from the high-quality relationship, organizations need to identify the indicator or the measures that describe relationship quality. Those literature reviewed on relationship quality show various dimensions of relationship quality (Athanasopoulou, 2013; Barry & Doney, 2011; Roberts et al., 2003; Zineldin, 2000) and there are also studies that use one single dimension (Ali & Ndubisi, 2011; Cannière et al., 2010; Crosby et al., 1990; Ndubisi et al., 2007; Wong & Sohal, 2006). However, most of the extant literature has achieved consensus on the three dimensions to measure relationship quality; that is satisfaction, trust, and commitment (Athanasopoulou, 2009, 2013; Barry & Doney, 2011).

Study in the context of car after-sales service showed that customer satisfaction and trust were found positively related to customer loyalty (Yieh et al., 2007). However, Yieh et al. (2007) did not examine satisfaction and trust in relation to relationship quality but evaluated as two different constructs in the relationship between modified SERVQUAL and customer loyalty. Therefore, considering the continuous customer-service provider relationship built during the frequent transactions within the period of free service warranty, this current study is extending the literature in automotive after-sales service by examining the influence of satisfaction, trust and commitment as one relationship quality construct to indicate the role of customer relationship.

Consistent with the previous study, Athanasopoulou (2009) in the review of literature on relationship quality involved sixty four studies published from 1987 to 2007 highlighted that most of the researchers mainly considered satisfaction, trust and commitment as the three dimensions of relationship quality. In assessing the quality of relationship, these three dimensions are interrelated or intertwined to one another

(Smith, 1998) and satisfaction was identified as the core variable in accomplishing trust and commitment (Zineldin, 2000). Even the recent researchers such as Athanasopoulou (2013), and Barry and Doney (2011) also agreed on this three predictors as dimensions to indicate relationship quality and along with that, the three dimensions are described in the below sub-sections.

2.5.4.1 Satisfaction

Satisfaction is the vital criterion for long-term relationship continuity and achieves the level of high quality relationship because dissatisfied customer will defect and result in relationship termination (Storbacka, Strandvik, & Grönroos, 1994). Satisfaction in the context of relationship marketing is defined by Storbacka et al. (1994) as customer‘s evaluation from both cognitive and affective judgements and made based on customer‘s own experience across all service episodes within the relationship. Satisfaction of the customer‘s need is the main concern in relational exchange because unsatisfied customer will not return to develop an on-going relationship (Roberts et al., 2003). In relation to the satisfaction towards the service provided by the national automotive after-sales service, the summary on cumulative satisfaction will determine the repeat visit for the service after the service warranty expires. As highlighted by Crosby et al. (1990), the evaluation on the quality of service from the past interactions between customer and the service provider will determine the expectation on quality of future interaction and which will make the customer to return.

Definitely, the level of satisfaction accomplished by customer indicates the level of relationship quality (Moliner, Sánchez, Rodríguez, & Callarisa, 2007). A satisfied customer will be willing to have a stronger relationship with the service provider which in turn impacts the longer tenure of relationship and subsequently leads to

higher level of customer loyalty (Storbacka et al., 1994). Thus, based on the preceding discussions, satisfaction in the context of this current study refers not only to satisfaction from one off purchase or episodic transaction but concerns on the cumulative satisfaction developed from a series of service episode along with the relationship.

2.5.4.2 Trust

Trust as the foundation in loyalty study has received wide attention in social exchange literature and trust is also recognised as the core element to maintain a long term beneficial relationship (Morgan & Hunt, 1994). Indeed, the new paradigm in relationship marketing study has put forward the important role of trust in nurturing stronger customer-service provider relationship (Sirdeshmukh, Singh, & Sabol, 2002). The impact of trust on customer loyalty is observed in the sense that the service provider must gain customer‘s trust in order to gain their loyalty (Reichheld and Schefter, 2000: as cited in Sirdeshmukh et al., 2002).

Crosby et al. (1990) defined trust as the belief and confidence to rely upon a service provider and service organization to behave in serving the long-term interest of the customer. Trust is therefore considered as the thrust in customer-service provider relationship (Berry & Parasuraman, 1991). From customer‘s point of view, high quality of relationship is achieved when the customer perceived that sales person is able to minimize the level of uncertainty (Roloff & Miller, 1987; ZeithamI 1981). Indeed, a high level of certainty that reflects the future rewards is important to develop trust in relational exchange where the customer searches for anticipated and mandatory behaviour of the partner in the relationship (MacNeil, 1980).

Generally, literatures have shown trust in two emotional dimensions (Moliner et al., 2007). First is related to integrity which refers to customer‘s belief that the service provider will keep their words or promises and followed by their capacity to perform as believed whereas the second component of trust refers to the benevolence of the service provider and described as the customer‘s belief that the service provider is truly concerned on the customer‘s welfare and well-being (Morgan & Hunt, 1994; Roberts et al., 2003). Guided by the preceding literature discussed, this current study is measuring consumer trust on the basis of the above two strong affective emotional evaluations on the characteristics of the service provider; integrity and benevolence.

2.5.4.3 Commitment

Storbacka et al. (1994) described commitment in relation to the intention of both parties in the relationship to act including the presence of attitude during the interaction between each other. In relation to social exchange theory (SET), Morgan and Hunt (1994, p. 23) defined commitment as the believe that the exchange partners recognize the importance of the on-going relationship and are willing to invest maximum effort in ensuring indefinite enduring relationship. Researchers have generally accept commitment as an important indicator showing the health of the relationship (Roberts et al., 2003). Other than serving as indicator, commitment is also capable of working out problems being faced in a relationship and which makes the relationship to endure and subsequently distinguishes between successful and unsuccessful relationship (Morgan & Hunt, 1994).

The literature on organizational commitment has discussed three types of commitment; namely affective commitment which relates to feeling of attachment towards an organization, continuance commitment which is related to switching cost

and normative commitment that is concerned with the obligation to remain in the relationship (Meyer, Allen, & Smith, 1993). Among the various type of commitment discussed, affective commitment explains mostly the influence and willingness towards maintaining the existing relationship with a firm (Roberts et al., 2003). As supported by Berry and Parasuraman (1991), the relationship is developed upon mutual commitment between parties that interact in a service relationship. Consistent to the context of this current study which examines the role of relationship quality between the service provider and customer who interacts in an exchange relationship and its influence towards customer loyalty, mutual commitment is an important element in maintaining the high quality of long-term beneficial relationship (Panda, 2013).

2.6 Alternative Attractiveness as Competition Factor

Alternative attractiveness basically refers to the guess made by the customer on the possible satisfaction that exists in alternative relationship (Ping, 1993). As a general understanding, it refers to the positive characteristics owned by the competing service organizations (Jones, Mothersbaugh, & Beatty, 2000). National carmakers are competing in the red ocean market together with all those companies providing similar car service maintenance and repairs. Their rivals are also equipped with all the attractive bullets to attract more customers engaging in car service maintenance and repairs. The alternative‘s attractiveness is an important competition factor that influences the existing customers to continue or leaving the relationship.

The rival‘s attractiveness such as better service, relatively lower total price, free service vouchers, lucky draws are positive characteristics that influence customers to

terminate the existing relationship with current service provider and chose alternative workshops for routine car service maintenance and repairs. However, the competitor‘s bullet to attract customer such as price was not always regarded as successful because service setting is not purely driven by price mechanism (Wulf & Odekerken-Schröder, 2001). There are special services elements that serve as the barrier for the customer to switch to competitor for instance wedding planner‘s service which in a way is regarded as competitive advantage. Thus, there are other elements than price that are conducive in building long-term relationship (Wulf & Odekerken-Schröder, 2001), and in the context of this current study perhaps refers to the high quality of customer-service provider relationship, resulting in higher levels of customer loyalty.

Most of the literature on alternative attractiveness conceptualised alternative attractiveness as the factor that diminish the positive relationship between the two variables for example between business relationship function and relationship quality (Song et al., 2012). In their B2B study, the researcher measured alternative attractiveness as a moderator using single item and proposed that the buyers will likely be more powerful and perceived that the quality of relationship with the supplier is not that important when there are more alternative suppliers. Kang, Oh, and Sivadas (2013), the alternative attractiveness might act as the poison that leads to relationship termination and subsequently reduces the loyalty level and retention rate. More choices and options or the more the attractiveness of the alternatives offered by the competing service provider, the more it will lead to higher possibility of defection by the customer from the current service provider (Sharma & Patterson, 2000).

Similarly, the study by Sharma and Patterson (2000) considered the role of alternative attractiveness as strengthening or weakening factor in the association between trust

and service satisfaction with relationship commitment. Their study in the context of professional consumer service involved financial planning consultation revealed that the high number of attractive alternative had stronger impact on the link between satisfaction and relationship commitment, and the relationship might be less important when there are low alternatives (Sharma & Patterson, 2000). On one hand, in less satisfactory relationship with higher alternative attractiveness, the customer is less motivated to continue the relationship and results in relationship termination (Sharma & Patterson, 2000).

Another study by Chiu, Yen, Chu, & Tseng (2013) also underscored the importance of alternative attractiveness as a moderator in consumer‘s decision for relationship continuity. They employed the similar concept when they argued that there are higher possibilities to stay in the existing relationship while viable alternatives are lacking, whereas lower probabilities to stay while viable alternatives are met. Contrary to the above studies, Abdullah et al. (2014) examined alternative attractiveness as independent variable in the relationship with customer loyalty where relationship quality represented by trust serves as a mediator. However, their study was only a concept paper and they did not empirically test the relationship between variables.

Even though the above previous studies conceptually tested alternative attractiveness as a moderator that poison the existing relationship, this present study examines alternative attractiveness as a moderator with a different concept consistent with the social exchange theory (SET). As guided by the social exchange theory (SET), the element of relationship is material to ensure the development of high quality mutually benefit customer-service provider relationship that resulting in higher level of loyalty. In service setting, the material element such as price is not the only factor that

determined the successful relationship (Wulf & Odekerken-Schröder, 2001). The special characteristic of relationship might serve as a competitive advantage to motivate the customer to stay in the current relationship.

Being guided by the social exchange theory (SET) and the suggestions of previous academic researchers (Athanasopoulou, 2009; Aydin & Özer, 2005; Jones & Taylor, 2007; Santouridis & Trivellas, 2010), this current study is examining alternative attractiveness as a moderator in the linkage between relationship quality and customer loyalty.

2.7 Chapter Summary

This chapter provides a comprehensive review of social exchange theory (SET) that supports the research framework. Also, numerous past studies have been reviewed in respect of fundamental of service quality, relationship quality, alternatives attractiveness and customer loyalty. The main purpose of this literature review is to ascertain the variables, its concept, significant findings including the significant of study then resulting to the development of conceptual framework.

CHAPTER 3

CONCEPTUAL RESEARCH FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Introduction

This chapter introduces the current research conceptual framework by crystallising a detail relationship that occurs between service quality, relationship quality, alternative attractiveness and also customer loyalty. It also visualizes theoretical threads of social exchange theory (SET) related to the variables that are relevant to this current study and formed a diagrammatic current study‘s research framework which contain hypotheses to be explored and tested for confirmation.

3.2 Conceptual Framework

This current study develops a conceptual model based on the identification of certain variables from related literature review which focuses on the factors that may influence the level of customer loyalty towards Malaysian national carmakers. The current research model suggests that customer‘s decisions to stay loyal to the national carmakers are affected by their perception of service quality. Additionally, the conceptual framework that is guided by social exchange theory (SET) suggests relationship quality as an intervening variable, to show how the high quality of service can ensure existing customer to return and develop the high quality of a relationship that promises higher customer loyalty. Besides, the model also suggests the role of competitor variable that is alternative attractiveness and how it works as a moderator that affects the positive association between relationship quality and customer loyalty as the dependent variable. The researcher came up with a more comprehensive

framework that integrates several variables from past studies which would be studied and analysed further.

According to social exchange theory (SET) (Blau, 1960), the parties involved in a few repeated transactions may return to develop a longer term of relationship when their mutual benefits are fulfilled. In order to develop a successful high quality of a relationship, customers expect to receive a high quality of service and in return, the organizations are expected to be rewarded with the higher level of loyalty. Relatedly, empirical findings revealed that the high quality of service is the antecedent for relationship development and subsequently leads to higher loyalty (Crosby et al., 1990; Roberts et al., 2003).

A mediator exists to explain the relationship between the predictor and criterion variable. To establish the mediation effects of relationship quality on service quality–customer loyalty link, the researcher also follows the procedure of Baron and Kenny (1986). They suggested four criteria to satisfy the mediation model. In the first stage, there must be an established relationship between the predictor variable that is service quality and customer loyalty as the criterion variable. In relation to this current study, many of the previous studies have established the connection between service quality and customer loyalty (Bell, 2005; Caceres & Paparoidamis, 2007; Clottey, Collier, & Stodnick, 2008; Curry & Gao, 2012; Ismail, Haron, Ibrahim, & Isa, 2006; Radder & Han, 2013; Wong & Sohal, 2003; Yieh et al., 2007). In the second stage, the predictor variable should affect the mediator (relationship quality) and accordingly, the past studies have shown the positive relationship between service quality and relationship quality (Ou et al., 2011; Wong & Sohal, 2002).

In the third stage, there is a direct effect between mediator variable and criterion variable that is the association between relationship quality and customer loyalty (Caceres & Paparoidamis, 2007; Lin & Ding, 2005; Prasad & Aryasri, 2008; Roberts et al., 2003; Wong & Sohal, 2006). Fourth, the mediator (relationship quality) should be associated with the criterion variable (customer loyalty) with the predictor variable (service quality) being added to the third equation. Following the application of these four stages, the researcher found the positive significant relationship among the variables from stage one to stage three. In addition to those criteria, the review of literature also shows very limited studies have examined relationship quality as mediator between service quality and customer loyalty (Caceres & Paparoidamis, 2007; Hyun, 2010; Roberts et al., 2003; Wong & Sohal, 2006); even though relationship quality has been established as the source of competitive advantage against competitors (Caceres & Paparoidamis, 2007; Doaei et al., 2011; Vieira, 2013).

Moderator is different from a mediator, and the major distinction between moderator and mediator is that the moderator displays when specific effects will occur between two variables whereas the mediator shows how or why the effects occur. In other words, a moderator is a qualitative or quantitative variable that changes the direction or the relationship strength between independent and dependent variable (Baron & Kenny, 1986). In relation to the moderation effects, the detail review of the literature revealed that the competition factor such as availability of alternatives has been suggested by many previous researchers (Aydin & Özer, 2005; Jones & Taylor, 2007; Santouridis & Trivellas, 2010) to be analysed further in the study on relationship quality and customer loyalty. Hence, the moderating role of alternative attractiveness related to relationship quality and customer loyalty is an important topic that has not

received sufficient consideration in the literature especially in the context of automotive after-sales service.

Based on the above justifications, the conceptual framework of this study is developed. Each variable will be supported by relevant literature complete with detailed hypothesis which will be used to test and confirm the relationships among variables selected in the framework and consequently contribute to the knowledge content by examining the constructs of service quality, relationship quality, and attractiveness of alternative singularly and collectively for their effect on customer loyalty. Figure 3.1 below is the illustration of conceptual framework to guide this current study.

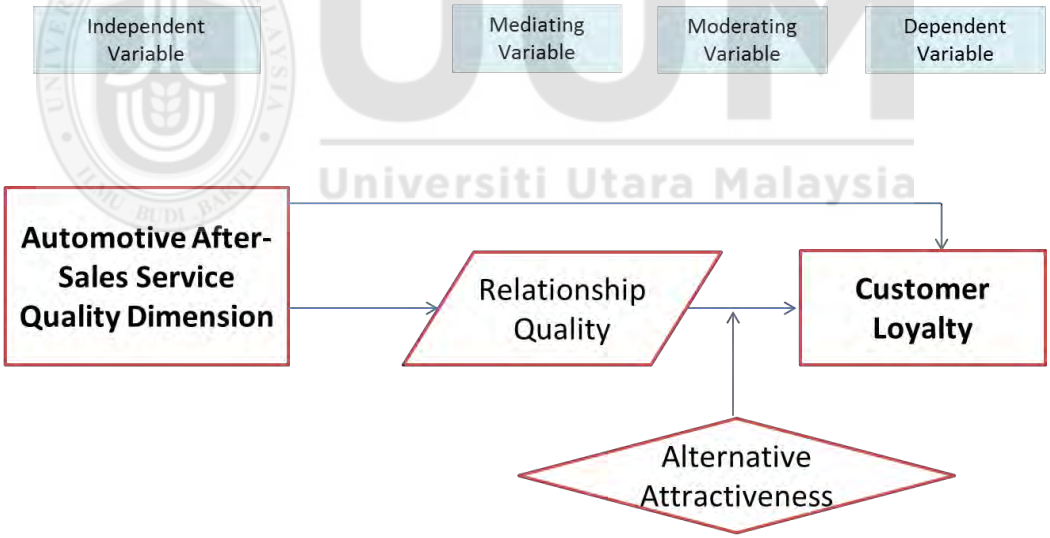

Figure 3.1
Conceptual Framework

From the above conceptual framework developed based on literature review discussed in the previous chapter, there are five empirical relationships to represent the overall framework and those relationships are outlined as per below detail:

i. The relationship between automotive after-sales service quality and customer loyalty.
ii. The relationship between automotive after-sales service quality and relationship quality.
iii. The relationship between relationship quality and customer loyalty.
iv. The relationship between automotive after-sales service quality and customer loyalty mediates by relationship quality.
v. The association between relationship quality and customer loyalty is moderated by alternative attractiveness; where the more attractive the alternatives, the stronger the association between relationship quality and customer loyalty.

3.2.1 Relationships between Variables of the Study and Social Exchange Theory (SET)

Service organizations such as national carmakers after-sales service are those automotive organizations involved much with the concept explained by social exchange theory (SET). Applied to the context of this current study, service provider who represents the service organization is the one facing the customer in delivering the high-quality service. The series of transactions between customer and service provider in the service delivery process has developed into an interpersonal relationship.

Accordingly, social exchange theory (SET) has been widely used in the context of an interpersonal relationship (Dwyer, Schurr, & Oh, 1987). It is involved in an on-going relationship in serving the vehicle‘s free warranty period, at least. Furthermore, the repeated customer-service provider transactions may lead to a relational outcome such as customer loyalty (Chahal & Kumari, 2011). Service quality is the prerequisite for relationship development and only good quality of service will make customer return (Keating et al., 2003). The relationship between service quality and relationship quality has been highlighted by Crosby et al. (1990) and Roberts et al. (2003) when they postulated that service quality is the antecedent of relationship quality because, without the good quality of service, the customer will not return to allow for the relationship to develop. In this context, social exchange theory (SET) mainly focuses on the relationship development process where the relationship continuity is determined by the series of transactions where the outcome from the preceding transaction will be the input for the future transaction (Cropanzano & Mitchell, 2005).

Thus, the quality of service from the last service encounter will determine the possibility of future transaction (the act of loyalty behaviour). Indeed, during the period of continuous interaction, an exchange relationship is developed where the customer is expected to provide their loyalty which contributes to long-term organization‘s profitability, and as a reward customer will receive less perceived risk, simplified service process, and also feeling of emotional comfort developed from a high quality reciprocal relationship (Williams, 2012).

The functional process of service delivery which draws upon SERVQUAL service quality dimensions mostly involved interaction between customer and service provider besides support from the back office employees as when required. During

the process and interaction, both customer and service provider are responsible for a successful exchange (Sierra & McQuitty, 2005). As suggested by social exchange theory (SET), customer and service provider are the two interdependence exchange partners forming the pillar of social exchange theory (SET). In fact, car service is concerned with the repeated transactions within the free warranty period and the series of episodic service transactions will result in relationship development process. Only good quality service will make customer to return and which allows for a long-term exchange and subsequently leads to loyalty after the warranty expires. Thus, in line with the context of this current study which evaluates service quality as the factor influencing the level of loyalty, and drawing upon reciprocity concept delineates by social exchange theory (SET), customers are expecting high quality of service as the reward for the commitment given to maintain the relationship and consequently contributes to the higher loyalty towards the service organizations.

As explained in the earlier part of the chapter, literatures have established the three interrelated dimensions as measures for relationship quality; satisfaction, trust and commitment. Each of the three core dimension is not standing on its own but rather dependent on one other in a way that satisfaction influences trust which in turn effect the commitment towards the relationship outcomes (Hennig-Thurau et al., 2002; Ki & Brown, 2013). This current study has hypothesized association between relationship quality and customer loyalty on the basis supported by social exchange theory (SET). This theory has outlined the basis of trust and commitment as the intangible factors regulating the successful relational exchange. Indeed, trust and commitment are the key factors for successful relationship marketing and are capable of resisting

competitor‘s attractive influences and besides, assure the customers of the service provider‘s trustworthiness (Morgan & Hunt, 1994).

Trust as applied to the context of this current study, related in the point that it is important as the basis to gain customer‘s loyalty (Berry, 1993: as cited in Morgan and Hunt, 1994). Accordingly, the relationship between customer and service organization itself requires trust (Berry & Parasuraman, 1991). Social exchange theory (SET) suggests that the higher the trust towards the service provider, the higher the likelihood for relationship continuation (Shemwell, Cronin, & Bullard, 1994). The customer has to place a greater trust on the service provider to surrender their car for service. Trust in relation to social exchange theory (SET) has been positioned as the mediator in social exchange and subsequently breeds commitment (Cropanzano & Mitchell, 2005). In line with ―ommitment-trust theory of relationship marketing", trust is posited as an antecedent for commitment (Morgan & Hunt, 1994). Similar to trust, commitment also suggests as the thrust in relationship marketing and central in social exchange (Blau 1964; Thibaut & Kelley 1959). The stronger level of commitment towards the relationship will reduce the perceived risk and increase the likelihood to stay in the relationship (Shemwell et al., 1994).

Social exchange theory (SET) is employed in this current study to explain alternative attractiveness which is operationalized as the positive characteristics own by the rival competitor who also provides similar service maintenance and repair for vehicles (Jones et al., 2000). One of the assumptions of social exchange theory (SET) is relationship outcome which is concerned with relationship maintenance and growth. The evaluation of relationship maintenance and growth is based on the comparison level which describes as the quality of experience from similar relationship and also

comparison level of alternatives which refers to quality of best alternatives available (Thibaut & Kelley, 1959). Along with that, Blau (1960) highlighted the competition aspect in social exchange theory (SET) on the point that the customer will stay loyal to the after-sales service firm and remain in the current relationship as long as the offer from national after-sales service is more attractive than the alternatives.

In the situation of high number of alternatives, the high quality of relationship plays more important roles to influence loyalty and when the alternative‘s offer is less attractive, the relationship quality is less important to impact loyalty. This current study examines price as one of the items evaluated by respondents in comparison to competitors. However, in service settings, relatively lower price is not the only factor that motivates the customer to stay loyal in existing relationship (Wulf & Odekerken-Schröder, 2001). Consistent with social exchange theory (SET), the non-material elements such as recognition or prestige may also serve as the important reward for the customers to maintain the existing relationship. Accordingly, this current study examines price as one of the items evaluated by respondents in comparison to competitors.

The proposed framework of this current study which comprised of service quality in affecting relationship quality in automotive after-sales service explains the social exchange theory (SET) assumptions that the reciprocity concept has made the customer to expect a better service from the service organization as the reward for the loyalty given beside the high quality of relationship developed on the basis of satisfaction, trust and commitment of the transacting parties. The quality of experience gained from the similar relationship and also the quality of alternatives available determined the relationship maintenance and growth. Indeed, social

exchange theory (SET) has established a mutually benefit relationship between customer and service provider through the process of reciprocity which subsequently lead to antecedents and consequences, therefore, social exchange theory (SET) is employed as the main theory underpinning this current study.

3.3 Hypotheses Development

A provisional idea involves true or false relationship or phenomenon which requires academic evaluation is called a hypothesis. Hypothesis, as defined and described by Sekaran (2003) refers to an academic assumption about the relationship between two or more variables stated in a form of testable statement. On the basis of theoretical framework, findings and debates in extant studies and guidance from social exchange theory (SET), the hypotheses are developed in examining the linkages between variables identified and explained in the previous chapters, and the conceptual model with hypotheses is illustrated in figure 3.2 below.

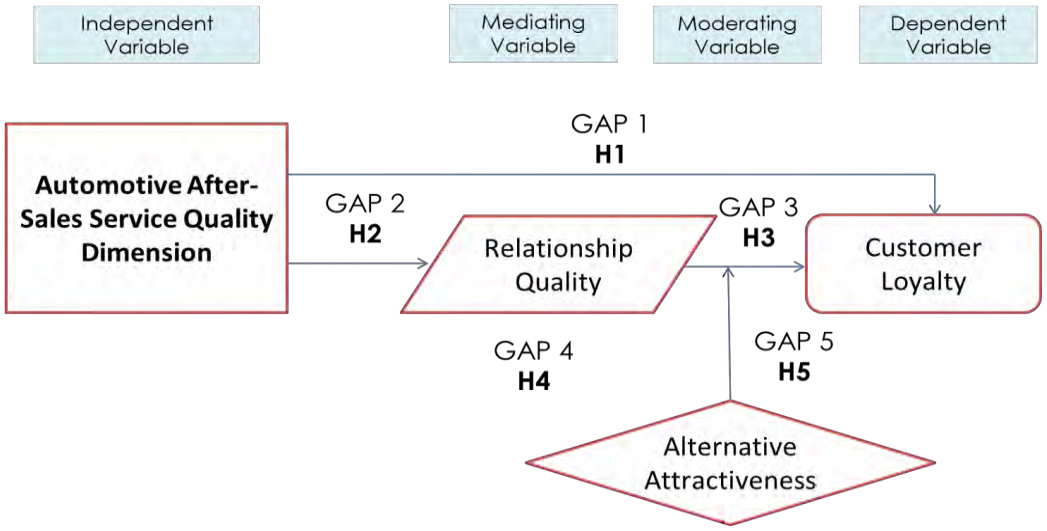

Figure 3.2
Conceptual Model with Hypotheses

3.3.1 The Relationship between Automotive After-sales Service Quality and Customer Loyalty.

Service quality has been established in the literature as the factor that contributes positively to customer loyalty (Curry & Gao, 2012; Etemad-Sajadi & Rizzuto, 2013; Lai, 2015; Radder & Han, 2013; Yieh et al., 2007). Even though SERVQUAL has been widely accepted as measures for service quality in evaluating its relationship with customer loyalty, the criticisms and arguments on SERVQUAL have encouraged the researchers to revisit the SERVQUAL either by modifying it (Agus et al., 2007; Bhat, 2012; Bouman & Wiele, 1992; Kashif et al., 2014; Kumar et al., 2010; Shekarchizadeh et al., 2011; Yieh et al., 2007) or testing the totally new dimensions to measure service quality (Aydin & Özer, 2005; Santouridis & Trivellas, 2010). Technical quality is one of the models developed by Gronroos (1984) to measure service quality pairing with functional quality. While functional quality concerns on how the service is being delivered to the customer, technical quality measures the ―what" aspect which refers to the outcome of the service delivered (Gronroos, 1984).

A study by Bell (2005) shows positive and significant relationship between technical quality and customer loyalty. However, due to the lack of literature that offered a specific item for measurement of technical quality similar to the functional quality measured by SERVQUAL items, Bell (2005) has adapted four-item scale from a study on technical quality in financial service industry by Sharma and Patterson (1999). Different from the findings of Bell (2005), a study on service quality in advertising agency and how it influences the loyalty of companies hiring their service shows that functional factors are more important compared to technical factor (Caceres & Paparoidamis, 2007). The finding on the relative importance between

technical and functional quality also shows that technical quality has significant effect on behavioural intention and not the functional quality (Maiyaki, 2012).

In the context of automotive after-sales service, a study by Bouman and Wiele (1992) also relates those four SERVQUAL items to human performance or relational elements of service and found that these four dimensions named as customer kindness influenced customer loyalty directly. An important study to note on the relationship between service quality SERVQUAL and customer loyalty can be traced to Wong and Sohal (2003) that found positive relationship between service quality and customer loyalty. The relationship between service quality and customer loyalty was examined in two level; company level and interpersonal level (Wong & Sohal, 2003). For company level, the tangible is the strongest dimension which indicates customer loyalty whereas at interpersonal level, empathy shows the most significant relationship with customer loyalty (Wong & Sohal, 2003). The findings also revealed a very similar mean values for the four dimensions (responsiveness, assurance, empathy and reliability) with the exception of tangible which further indicates that the four dimensions were mainly associated with the nature of intangible element of service (Wong & Sohal, 2003)

In a study on service quality in fast food restaurant in China, tangibles and reliability dimensions are the most significant indicator for customer loyalty compared to the other dimensions (Etemad-Sajadi & Rizzuto, 2013). Another study which examined service quality as one single dimension also shows positive relationship with customer loyalty (Wong & Sohal, 2006). Since this current study is intended to revisit the SERVQUAL dimensions with identification of specific dimensions for automotive after-sales service (as explained in chapter two), and subsequently

evaluate service quality as a multiple conceptualization, the testable statement is expressed as follows:

H1: There is positive relationship between automotive after-sales service quality and customer loyalty.

3.3.2 The Relationship between Automotive After-sales Service Quality and Relationship Quality

Review of previous literature indicates that very limited studies have focused on examining the relationship between service quality and relationship quality and consistence with suggestion by Pepur et al. (2013), service quality and relationship quality are the two variables that received limited attention by researchers. Few studies that explored the relationship between these two variables, for example Caceres and Paparoidamis (2007), Wong and Sohal (2002) and Woo and Ennew (2004) have not achieved consensus on the nature between these two concepts (Pepur et al., 2013). Service quality and relationship quality are related concept in the sense that service quality is insufficient for a high quality relationship (Crosby et al., 1990). In order for relationship quality to present, the customer must perceive that the service is of good quality, and it is only then they can be satisfied, develop trust and be committed to the relationship (Crosby et al., 1990).

In relation to that, a few researchers have made an attempt to examine the relationship between service quality and relationship quality in various service settings. A study by Wong and Sohal (2002) examined each five SERVQUAL dimensions to explore the relationship with relationship quality and found that there is a positive relationship

between service quality and relationship quality. The finding also shows that empathy is the most important contributor to a high quality of relationship between customers and employees as well as organization level. Another study that looked at loyalty program also found positive and significant relationship between service quality and relationship quality (Ou et al., 2011). The above discussions have underscored the relationship between service quality and relationship quality from the previous findings. Therefore, based on the gaps and the findings of a few studies in the literature, the testable statement is formulated as follows:

H2: There is positive relationship between automotive after-sales service quality and relationship quality.

3.3.3 The Association between Relationship Quality and Customer Loyalty

As denoted in chapter two, the literature on relationship marketing has accepted relationship quality as the source of competitive advantage that differentiates a service provider from other competitors. Literatures have shown significant influence of relationship quality and customer loyalty (Caceres & Paparoidamis, 2007; Lin & Ding, 2005; Prasad & Aryasri, 2008; Roberts et al., 2003; Wong & Sohal, 2006). Organizations are depending on loyal customers for long-term profitability and to secure the loyal customer, developing a good quality of relationship may help the organizations to achieve the economic goal of relationship which is highly loyal customer (Grönroos, 1994). Along with that, literature has established the important role of relationship quality as mediator, however, according to Kim et al. (2006), a few important issues on the predictors of relationship quality and customer loyalty have not been fully addressed and remained in question.

Furthermore, high relationship quality is a minimum condition to guarantee customer advocacy and must be met for positive word-of-mouth communications (Macintosh, 2007). Word-of-mouth is one of the activities used to describe loyalty from attitudinal dimensions. Therefore, to add further explanation on the role of relationship quality towards increasing the level of customer loyalty, there is a need to examine the connection between relationship quality and customer loyalty (Roberts et al., 2003). Guided by the above literatures, this current study is examining the relationship between relationship quality and customer loyalty and proposes testable statement as below:

H3: There is positive relationship between relationship quality and customer loyalty.

3.3.4 Relationship Quality as Mediator between Automotive After-sales Service Quality and Customer Loyalty

Service quality has been posited as the precursor of a subsequent relationship between customer and service provider. However, in order for the customers to develop the relationship, they need to be served with high quality service (Crosby et al., 1990). Service quality must exist prior to the existence of relationship but good quality service does not promise the existence of high quality relationship, as such, service quality must be the factor to influence relationship quality and the basis for the relationship to exist (Roberts et al., 2003). The increase in service quality perception will result in greater increase in the aspect of relationship quality (Caceres & Paparoidamis, 2007). Relationship quality is essential to capture the unique and intangible aspect of relationship that is not reflected by service quality (Roberts et al., 2003). Looking at the nature of business in automotive after-sales service, the sales of

the vehicle is just the starting point to a longer tenure of relationship when the vehicle is offered with the free warranty service for at least three years period. During the period, the organization may strengthen the customer-service provider relationship for long-term business opportunity far beyond the warranty period. At this stage, good service quality is important to ensure the customer returns for a longer tenure of customer-service provider relationship (Yieh et al., 2007).

Along with that, some of the previous researchers have emphasized on the important role of relationship quality on customer loyalty. Prasad and Aryasri (2008) for example, highlighted that relationship quality and customer loyalty is the two ingredients for business excellence. Moreover, customer loyalty is the outcome of relationship building (Hennig-Thurau et al., 2002). A study on loyalty in advertising business revealed a significant finding between relationship quality and business loyalty (Caceres & Paparoidamis, 2007). Additionally, Wong and Sohal (2006) examined customer loyalty in retail environment also discovered a high positive correlation between relationship quality and customer loyalty.

Based on the discussion in previous chapters, it is clearly demonstrated that service quality and relationship quality are the two variables that always been associated with customer loyalty. The finding of study by Lin and Ding (2005) found that investment in service benefited the organization by increasing both relationship quality and customer loyalty. Indeed, the study by Prasad and Aryasri (2008) and Wong and Sohal (2006) have labelled relationship quality as attitudinal outcomes and customer loyalty as behavioural outcomes. Some of the previous researchers have also examined relationship quality as mediator with various independent variables to increase customer loyalty (Al-alak, 2010; Caceres & Paparoidamis, 2007; Huang,

Weng, Lai, & Hu, 2013; Hyun, 2010; Kim et al., 2006; Lin & Ding, 2005; Prasad & Aryasri, 2008; Roberts et al., 2003; Wong & Sohal, 2006).

However, the previous researchers have not fully emphasised on examining the relationship between service quality, relationship quality and customer loyalty in a framework simultaneously (Roberts et al., 2003). Furthermore, less studies have examined the relationship between service quality and relationship quality (Pepur et al., 2013). Indeed, the previous research has placed very little focus on examining the relationship element between customer and the service provider in after-sales service (Egonsson et al., 2013). As suggested by Vanniarajan (2011), after-sales service carries vital role in relationship building and therefore must be examined accordingly. In relation to the preceding findings, this current study with service quality as independent variable proposed testable statement as follows:

H4: Relationship quality mediates the relationship between automotive after-sales service quality and customer loyalty.

3.3.5 Alternative Attractiveness as Moderator between Relationship Quality and Customer Loyalty

As described in the earlier chapter, alternative attractiveness refers to the positive characteristics which the competitor offering the similar service possesses. In view of increased competition, the literature reviewed on relationship quality by Athanasopoulou (2009) suggested for future researchers to consider this competition factor as of how it impacts the customer loyalty. Furthermore, alternative attractiveness also has been recommended as one of the variables that underwrite to a

universal view of customer loyalty (Jones & Taylor, 2007; Santouridis & Trivellas, 2010). Another study by Aydin and Özer (2005) also suggested that future study should examine the impact of situational factors such as alternative attractiveness on behavioural and attitudinal loyalty.

In addition, this current study is guided by the social exchange theory (SET) which emphasized on the high quality of relationship to make customer return to developing mutually benefit customer-service provider relationship. In view of that, alternative attractiveness in this current study is a customer‘s perceptions regarding the extent to which viable competing alternatives are available to provide the similar service maintenance and repair for their vehicle. When customers perceived few viable alternatives, the perceived benefits offered by the alternatives should be relatively low, resulting in higher level of customer loyalty. In relation to social exchange theory (SET), the influence of a high-quality customer-service provider relationship might motivate the customer to appreciate the existing relationship and increase the level of loyalty even in the existence of few viable alternatives.

Drawing upon the above suggestions and the social exchange theory (SET) underpinned this study; an evaluation to look at the impact of competition variable on the role of high-quality relationship in making the existing customer return for a longer relationship is required. In light of the above suggestions and also guided by the social exchange theory (SET), this current study is examining alternative attractiveness as moderator in the linkage between relationship quality and customer loyalty, and the following testable statement is formulated:

H5: Alternative attractiveness moderates the relationship between relationship quality and customer loyalty; where the positive relationship between relationship quality and customer loyalty is stronger in organization with higher alternative attractiveness than the one with lower alternative attractiveness.

3.4 Summary of the Chapter

To summarise, this chapter presented the conceptual framework of the study which consists of four variables. Each variable was discussed comprehensively showing three direct relationships between independent variable and dependent variable, and also two indirect relationships (between mediator and moderator with dependent variable). Accordingly, this chapter has also formulated five testable statements with respects to customer loyalty of Malaysian national carmakers. The following chapter that is chapter four will discuss extensively the methodological aspect of the study.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter presents the research methodology of the study in few sections. It starts with the steps of research design then followed by detail explanation on population and sampling in determining the respondents, and the entire process is illustrated in Figure 4.1. The next section in this chapter mainly focuses on instrument development. Then, the last section explains the method of data analysis which is Partial Least Squares Structural Equation Modeling (PLS-SEM).

4.2 Research Design

A research design is a blueprint that guides the researcher in collecting, measuring and analysing the collected data, and a comprehensive research design must be able to answer the research questions and provides the solution to the research problem (Sekaran & Bougie, 2013). There are several research design frameworks that are capable of answering the research questions, and they can be divided into three types which are descriptive, exploratory and causal. This current research employs a descriptive correlational method to answer the research question. The purpose of a correlational study is to examine the type, existence, and level of the relationship between two or more quantitative variables. If the variables are highly correlated, the score for the first variable can be the predictor for the second variable.

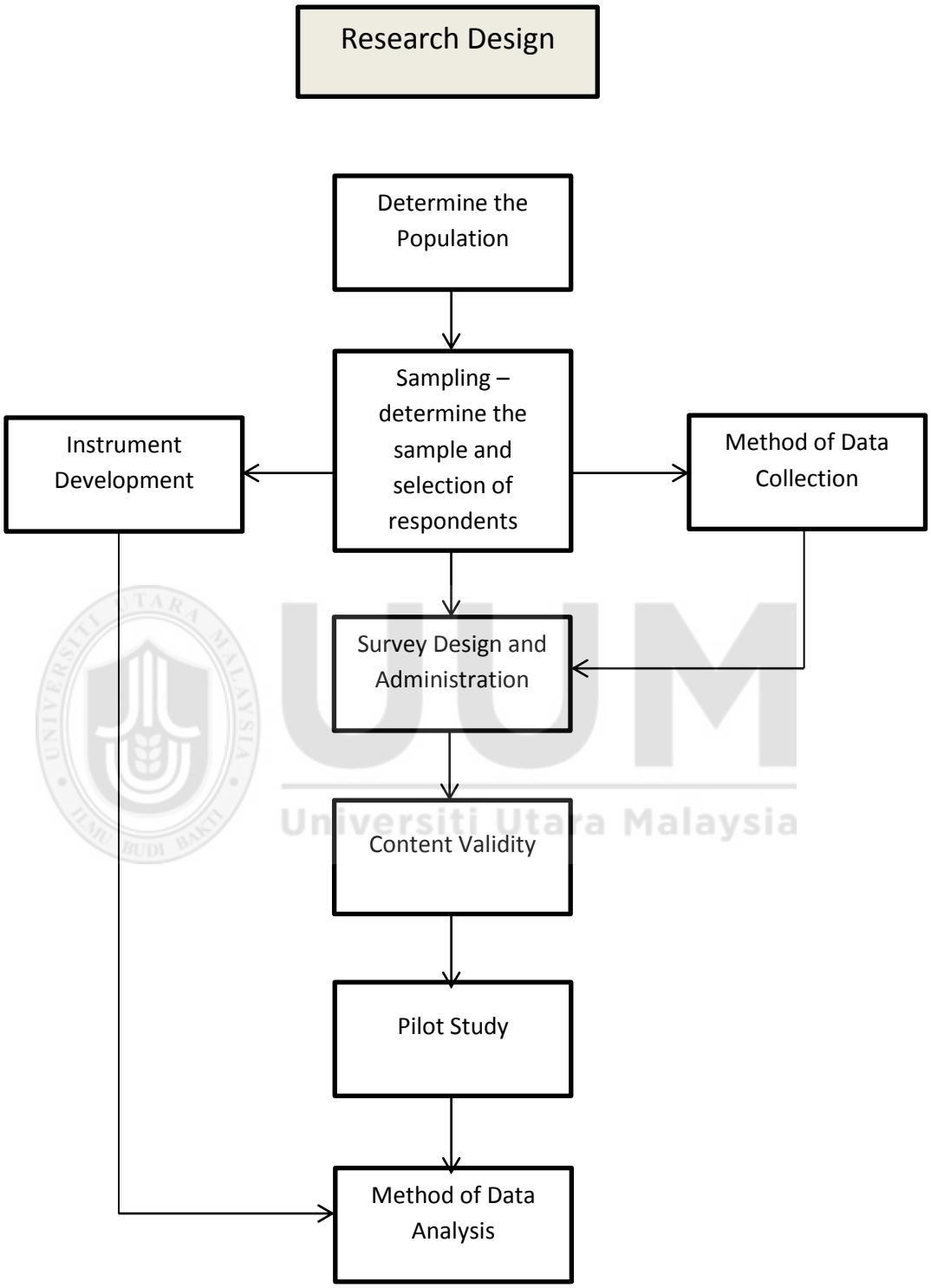

Figure 4.1
Steps of Research Design

The main objective of this current study is to investigate the customer's perception of service quality dimensions and its impact in influencing customer loyalty towards Malaysian national carmakers. Also, the researcher intends to examine the quality of the relationship between customer and service provider and the impact of competition factor towards customer loyalty. Accordingly, the question –whether the high quality of service and quality of the relationship between customer and the service provider impact the level of customer loyalty" has to be tackled. Thus, a correlational research that is done in a natural environment (car service centre) is appropriate to develop the kind of associations between the variables of this study.

4.2.1 Time Horizon of Study

Rather than opt for longitudinal study which requires longer time and higher cost, the researcher uses the cross-sectional study to answer the research questions where the collection of data happened only once in a period of three months (Sekaran & Bougie, 2013). Furthermore, reviewing the literature in the area of customer loyalty and relationship quality shows that previous researchers have also used cross-sectional data in their analysis (e.g. Chiu et al., 2013; Jahanshahi, Gashti, Mirdamadi, Nawaser, & Sadeq Khaksar, 2011; Kandampully & Suhartanto, 2000; Kaur & Soch, 2013; Lai, 2015; Qayyum et al., 2013; Wieseke et al., 2014). Indeed, the previous study that examined service quality in car after-sales service also employed cross-sectional survey (Bouman & Wiele, 1992).

4.2.2 Unit of Analysis

The unit of analysis as being defined by Sekaran and Bougie (2013) refers to the level of accumulation or aggregation done on the collected data during the stage of data

analysis. The unit of analysis is determined based on the research question and it also explains on what or who is being analysed in a research. Since this current study is analysing customer loyalty towards Malaysian national carmakers in the context of after-sales service, the ‗what' is being analysed in this study is customer loyalty whereas the ‗who' is being analysed refers to existing customer of national carmakers.

Thus, the individual existing customer is the unit of analysis that refers to the person who visits the service centre for routine service maintenance and/or repairs of all model of national car. In the context of this study (after-sales service), the person who visits the service centre for routine service maintenance and/or repairs is deemed to be the existing customer because the predetermined schedule of free warranty for at least three years requires the vehicle to be serviced at the service centre of national carmakers. That means the customer engaged with the national carmakers since the first point of vehicle purchase until repeated service transactions during the free warranty period.

4.3 Population

The sampling process for this research started with the determination of study's population. By definition, population refers to the whole group which may consist of people or events or objects that capture the interest of researchers' as subject of investigation whereas sampling is a process of choosing only the correct persons, events or things to represent the entire population and thereby helps in refraining from error which may result from huge elements involved in the large population (Sekaran & Bougie, 2013).

In relation to that, the main focus of this study is the loyalty of existing customers who purchased the vehicles and their vehicles are subject to the pre-scheduled service maintenance needed for the car at least in three years period. Within the three years period, the customers are the one who involved in the service delivery process and the repeated transactions subsequently developed into a relationship between the customer and the service provider. As such, this study evaluates whether existing customer will stay in the current relationship and continue the vehicle service maintenance with the same service provider after warranty expiry as such continuity indicates behavioural loyalty. Importantly, such continuity can bring about recommendations and positive word-of-mouth which indicate positive attitude and support towards the products (Hallowell, 1996; Jacoby et al., 1978; Rundle-Thiele, 2005).

Justified by that situation, this current study considers the total registration for both national car (Proton and Perodua) for the last four years as the population of study; that is for the year 2012, 2013, 2014 and 2015. It is the objective of this current study to evaluate whether the existing customers will return after the expiry of free warranty period. The standard warranty period given by the manufacturer for all models is normally three years after vehicle‘s registration date and there are also vehicles covered for a longer period due to extended warranty package. Since the data was taken in the year 2016, the four years back registration (since 2012) will cover all the existing customers for standard warranty and extended warranty period. On top of that, the evaluation of loyalty also considers customers above the warranty period because they are also the existing customers who may return on the next service visit.

Based on the above justification, the computation of sample size is illustrated in the below Table 4.1:

Table 4.1
Total Population

Year	Market Share (MS) Proton (%)	Total Registration Proton (unit)	Market Share (MS) Perodua (%)	Total Registration Perodua (unit)	Total Registration for National Car (unit)	Total Industry Volume (TIV) (unit)
2015	15	102,180	32	213,310	315,490	666,674
2014	17	113,299	29	193,275	306,574	666,465
2013	21	138,753	30	196,071	334,824	655,793
2012	23	141,120	30	189,137	330,257	627,753
Total Registration for 4 years					1,287,145	

Source: MAA report

To determine the sample size with sufficient statistical power, G*Power provides a program with the graphic solution that able to calculate a wide variety of statistical test including F-tests (refer appendix C). Accordingly, the required sample size determined for this study that met the requirement of G*Power is only 129 respondents. To ensure that this suggested number of 129 is achievable, the researcher needs more respondents as the sample to represent the population. As such, to guide the researcher on the minimum sample size above 129, this study also employed Krejcie and Morgan‘s (1970). This method provides a scientific calculation of minimum sample size and widely used in social science study. For a given population of above 75,000 (refer appendix B), the sample size required for analysis as determined by Krejcie and Morgan‘s (1970) is 384. Hence, 384 respondents are required to represent customers‘ of national carmakers who visit service centres for service maintenance and repair.

On top of that, besides using the above G*Power and Krejcie and Morgan‘s (1970) scientific calculation, this study also considered the power calculation proposed by Chin (1998). Using that procedure, the researcher multiplied the number of a path leading to the endogenous construct by 10 times. Since most paths leading to the endogenous construct of customer loyalty were four, a minimum sample size of 40 would consider sufficient. By comparison, the current study‘s sample size of 384 was considered enough to reach an acceptable level of statistical power in PLS. The sample size of 384 also complied with the rule of thumb by Roscoe (1975: as cited in Sekaran, 2014), who stated that the appropriate sample size for most research should be larger than 30, but smaller than 500. In fact, drawing upon Hair, Black, Babin, and Anderson (2010), the recommended sample size for a survey research should be between 200 to 400 and the number of above 400 opens the possibility of significance happening by chance and also creates room for more error.

4.4 Sampling and Data Collection

Further to determine the sample size from the calculated population, the researcher proceeds with the data collection process. As indicated by Sekaran and Bougie (2013), data for analysis can be collected in many ways depending on research settings and among the most used methods are interview, observation and questionnaire administration.

The similar study in automotive after-sales service also used questionnaire method for collecting data and further suggested that personally administered questionnaire is good in the sense that customer feels high involvement and willing to give their time to answer the questionnaire (Bouman & Wiele, 1992; Yieh et al., 2007). Furthermore,

the customer who has experience from the last service or currently waiting for the vehicle to complete the service may give the fresh response which is free from any bias due to the time lag. Also, questionnaire method benefited the researchers in terms of less cost, as well as time and energy efficiency (Sekaran & Bougie, 2013).

The data collection for this study involved the branches of national carmakers in the northern region of Malaysia. The cluster of northern region is selected to represent the whole populations because each service provider from each region delivers the service in accordance with the homogenous service delivery standards (SOP). Furthermore, the selection of northern region may indicate more heterogeneity among groups to reveal some findings on different consumer behaviour and expectation of rural (Kedah) and urban (Penang and Perak) area. On another note, this study only considers the service branches of national carmakers and not the dealers because those service branches are owned by the principal company which is national carmakers and therefore all of the branches are in direct control of the principal companies in terms of any directions, communications, management practices and standard operating procedure (SOP). As such, it confirms homogeneity in service delivery process and it also reduces the possibility of the huge discrepancy in perceptions towards service quality and the service provider.

Altogether, there are sixty branches located in the peninsular of Malaysia; of which 22 are Proton‘s service branches and another 38 are Perodua branches. Of those sixty branches, only eleven branches of after-sales service are located in the northern region of Malaysia. To ensure fair evaluation from the selected area (northern region), the sample size of 384 was allocated equally among the eleven branches and resulted in 35 respondents from each branch. To collect the data in the situation where the exact

daily customer coming in for service repair and maintenance on a particular day is unknown, this study employed intercept survey method to get the required 384 samples. In intercept survey method, the potential respondents were approached by the researcher to interview them about their experience in public area or business outlet (Gates & Solomon, 1982; Hornik & Ellis, 1988; Ong, Salleh, & Yusoff, 2016, 2015).

Next, the selection of respondents is also based on systematic sampling where the sampling is done by drawing every *n*th element based on pre-determined population starting from randomly chosen element between 1 and *n* (Sekaran & Bougie, 2013). For this current study, the target respondents are those customers of national carmakers who come to the service centre for the purpose of vehicle service maintenance and repair. Based on the number of crowds as reported by the service outlet manager, the intercept survey method using self-administered questionnaire was used as the medium to collect the data where every three customers were intercepted to answer the self-administered questionnaire (Gates & Solomon, 1982). The completed questionnaires were then collected before the respondents left the service centres.

Further to that, this study is evaluating the factor of a competitor (alternative attractiveness), therefore, the respondents also filtered accordingly to those who only have experience of service maintenance and repair with other ordinary workshops. The ordinary workshops as explained to the respondents are referring to the main workshop mostly visited by them for vehicle service, maintenance and repair works. In addition to that, only those respondents having experience dealing with the service provider at least once in their prior visit was considered to participate as it indicates

their evaluation on the relationship with the service provider for relationship quality construct. Also, even though the respondent evaluated the service delivered by the service provider in after-sales service, the impact on the level of loyalty is mainly towards the whole organization as the name it represents; that is national carmakers. Thus, to ensure the correct understanding of the concept of customer loyalty, the respondents were briefed accordingly.

The below Figure 4.2 summarizes the flow of sampling and data collection process.

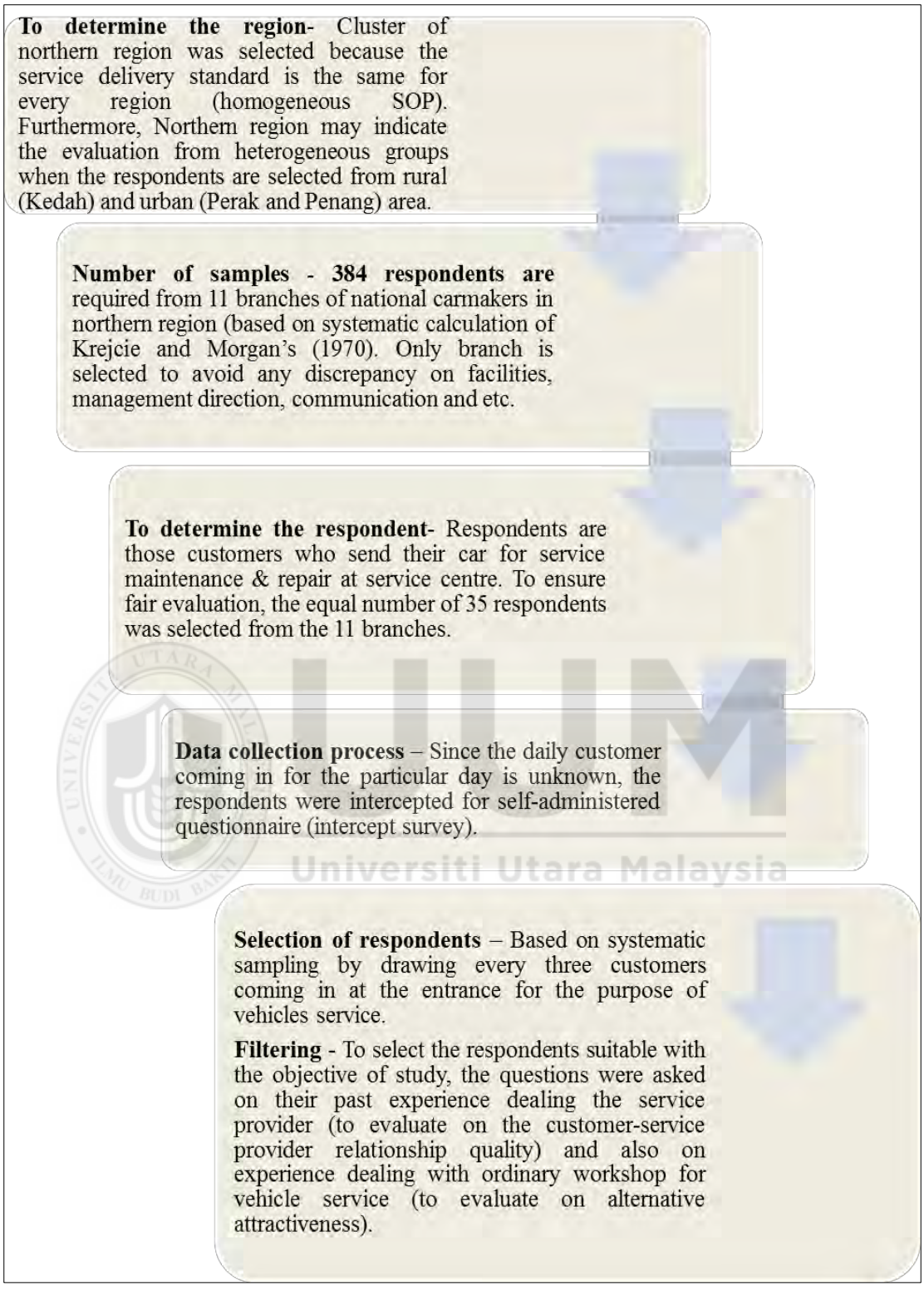

Figure 4.2
Flow on Sampling and Data Collection Process

4.5 Instrument Development

Research instruments must be able to answer the research question and at the same time developed to capture the target respondent‘s common understanding. The main purpose of developing an instrument is to obtain measures for each research constructs. Since this current study is a quantitative study using questionnaire as the medium for data collection, the development of instruments for every variable is guided by the extant literature related to the study‘s conceptual framework. Furthermore, to ensure validity and reliability of construct, the questionnaire-plagiarism is highly suggested in social science research (Sudman & Bradburn, 1987). Also, in order to ensure the clarity of questionnaires distributed, the opinion of industry experts and academicians was engaged to verify the items developed for analysis.

4.5.1 Operationalization and Measurement of Variables

Operational definition as described by Zikmund, Babin, Carr, and Griffin (2010) refers to the ―what" and ―how" of the variables or in other words related to what are the variables being studied and how are the variables being measured. The correct operational definition is important for valid measures and the operationalization of variables involved its definition, conceptual, dimensions, elements and measures (Sekaran and Bougie, 2013). After a thorough literature review delineated in chapter two and in accordance to the conceptual framework illustrated in chapter three, the researcher has outlined a list of operational definition for the purpose of measurement of variables such as service quality dimensions represented by customer service, support service, technical and tangibility, and followed by relationship quality, alternative attractiveness, and then customer loyalty.

The conceptual framework for this current study as established in chapter three comprises of customer loyalty as dependent variable, service quality dimensions represented by customer service, support service, technical and tangibility as independent variable, relationship quality as mediating variable and the moderator is alternative attractiveness. Further, all the variables evaluated by the respondents are based on their perceptions of service experience. Relatedly, the evaluation of service quality can be done in the absence of prior personal experiences for example through word-of-mouth and advertising (Taylor & Cronin, 1994).

On another note, an interval scale compared to nominal and ordinal scale is considered more powerful because it provides a more detail information on the variables (Sekaran & Bougie, 2013). As such, this current study is utilising the interval scale with six-point numerical rating scale ranging from point one to point six which indicates by the range from strongly disagree to strongly agree (1=strongly disagree and 6=strongly agree). Reason for using six-point rating scale is to evade from the possibility of neutral response given by respondents. The neutral response does not clearly show the respondent‘s feedback either positively or negatively on the variables evaluated. In relation to that, compared to Western respondents, Asians are more likely to choose neutral or middle-point in answering the questionnaire (Si & Cullen, 1998). Accordingly, to express the respondent‘s optimal level of confidence in their evaluation, the use of six-point scale was recommended (Tang, Shaw, & Vevea, 1999). On top of that, it has been reported that even number scales possessed higher reliability and validity compared to odd number scale (Birkett, 1986). Also, even number response may encourage the respondents to evaluate based on the content of the question asked and also minimizes bias on selecting the middle-point (Garland,

1991). Justified by the above, the following sections continue with the detail questionnaire development according to the variables described earlier.

4.5.1.1 Dependent Variable – Customer Loyalty and its Dimensions

Customer loyalty has been generally accepted as multidimensional construct which is commonly measured from behavioural and attitudinal dimension (Callarisa Fiol et al., 2009). Chapter two of this current study has thoroughly explained the various sources available in the literature on the measurement of customer loyalty. In this current study, the researcher operationalized customer loyalty according to composite loyalty which comprises of behavioural loyalty and attitudinal loyalty. The similar measurement for customer loyalty was also found in the past studies (Callarisa Fiol et al., 2009; Hyun, 2010; Lai, 2015; Wong & Sohal, 2006).

In particular, this current study is focusing on the loyalty captured within the period of repeated transactions that happen after the registration of the vehicle. The pre-schedule service maintenance and warranty require the customer to visit the service provider or otherwise their warranty is void. After-sales service is the best platform for the national carmakers to provide the good quality service and at the same time develop the high quality of relationship to capture higher level of customer loyalty. Service quality and relationship quality are the sources of competitive advantage that differentiate the national carmakers from its rival (Sharma & Patterson, 1999; Vieira, 2013). After-sales service provides longer period for service delivery process and relationship development compared to sales which is just one-off-purchase transactions. The customer may express their loyalty behaviour through their positive word-of-mouth, recommendations and good publicity which may improve the perception of the public towards the national carmakers. As suggested by Saccani et

al. (2006), the after-sales service provides a good platform to capture the higher level of customer loyalty.

In measuring customer loyalty, literatures have posited that the single dimension of customer loyalty is insufficient to describe the genuine loyalty (Caceres & Paparoidamis, 2007; Cater & Cater, 2009; Hallowell, 1996; Jacoby et al., 1978; Oliver, 1999; Prasad & Aryasri, 2008; Srinivasan et al., 2002). Thus, consistent with the previous studies and also considering the factor of dynamics in measuring customer loyalty, this current study combined dimensions to describe customer loyalty from holistic measurement. Based on six-point rating scale, respondents are asked to answer the questionnaire on customer loyalty towards the national carmakers. Table 4.2 indicates the details of the items to represent customer loyalty.

Table 4.2
Items Used to Measure Customer Loyalty

Dimensions	No.	Items	Sources	Adapted/Adopted
Customer loyalty	1	I say positive things about the service provider to other people.	(Cater & Cater, 2009), (Wong & Sohal, 2006)	Adapted
	2	I recommend the service provider to someone who seeks my advice.	(Cater & Cater, 2009), (Wong & Sohal, 2006), (Callarisa Fiol et al., 2009), (Hennig-Thurau et al., 2002)	Adapted
	3	I encourage friends and relatives to service and repair their car at this service centre.	(Cater & Cater, 2009), (Wong & Sohal, 2006)	Adapted
	4	I consider this service centre as my first choice in the next visit.	(Cater & Cater, 2009), (Wong & Sohal, 2006)	Adapted
	5	I have a very strong relationship with this service provider.	(Hennig-Thurau et al., 2002)	Adapted

Table 4.2 (Continued)

Dimensions	No.	Items	Sources	Adapted/Adopted
	6	The chances for me to stay in this relationship are very good.	(Bell, 2005), (Callarisa Fiol et al., 2009)	Adapted
	7	I do not mind to pay more in exchange of the good relationship with this company.	(Callarisa Fiol et al., 2009)	Adapted

4.5.1.2 Independent Variable – Service Quality

Service quality is an intangible evaluation towards service provider and important to influence customer loyalty (Bell, 2005; Clottey et al., 2008; Lai, 2015; Wong & Sohal, 2006). As discussed in chapter two, service quality is a multidimensional construct which comprised of numerous dimensions. However, to contribute differently to service quality literature and to fill in the gaps, this current study considers four dimensions which combine the various concepts of service quality with the expectation for the strength of one to offset the weakness of another. The dimensions of service quality for this current study consist of customer service, support service, technical and tangibility. To measure the respondent‘s perception on service quality delivered by national automotive after-sales service organizations, this current study used a six-point rating scale from strongly disagree to strongly agree. Altogether, there are 31 questions related to service quality dimensions.

4.5.1.2.1 Customer Service

Customer service is developed based on interaction or exchange between customer and service provider. This current study operationalized the customer service dimensions based on responsiveness, assurance, empathy and reliability, and the description of each sub-dimension is similar to SERVQUAL. During the processes

which involved a repeated and continuous interaction due to the routine service scheduled for vehicle sold, the human related factor has been expressed by both parties. The most prominent service quality scholar such as Parasuraman et al. (1985) has described the process of service delivery from the service provider to the customer as functional quality in the aspect of ~~h~~ow" the service is being delivered.

As explained in chapter two, the SERVQUAL concept which widely used as measures for service quality comprises of five dimensions; responsiveness, assurance, tangibility, empathy and reliability. However, due to the consideration of intangibility and tangibility of service and consistent with the similar study in the car after-sales service, this current study is examining the four of SERVQUAL dimensions with the exclusion of tangibility as customer service. According to finding in a study on car after-sales service (Bouman & Wiele, 1992), the human related factor described by the four of SERVQUAL dimensions; responsiveness, assurance, empathy and reliability is viewed as one single factor by the customers of car after-sales service business. Thus, Table 4.3 specifies the four dimensions of SERVQUAL which consist of responsiveness, assurance, empathy and reliability as customer service and the items are adapted accordingly from SERVQUAL instruments.

Table 4.3
Items Used to Measure Customer Service

Dimensions	No.	Items	Sources	Adapted/Adopted
Customer Service - responsiveness	1	The service provider provides prompt services.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003)	Adapted
	2	The service provider shows willingness to help the customer.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003)	Adapted
	3	The service provider is respectful and polite.	(Ismail et al., 2006), (Cronin, Brady, & Hult, 2000)	Adapted

Table 4.3 (Continued)

Dimensions	No.	Items	Sources	Adapted/Adopted
	4	The service provider never looked too busy to respond to my requests.	(Parasuraman et al., 1988), (Wong & Sohal, 2003)	Adapted
Customer Service - assurance	1	The service provider is consistently courteous with me.	(Parasuraman et al., 1988)	Adapted
	2	I have confidence in dealing with the service provider.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003)	Adapted
	3	The service provider has optimal knowledge to answer enquiries about vehicle.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003)	Adapted
	4	The service provider is technically competent to perform the service.	(Ismail et al., 2006), (Cronin et al., 2000)	Adapted
Customer Service - empathy	1	The service provider is sympathetic and supportive towards my problems.	(Ismail et al., 2006)	Adapted
	2	The service provider does provide me with individual and personalized attention.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003)	Adapted
	3	The service provider knows and understands my specific needs.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003), (Cronin et al., 2000)	Adapted
	4	The service provider always put my best interest at heart.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003)	Adapted
Customer Service - reliability	1	The service delivered and completed within certain time frame as promised.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Wong & Sohal, 2003), (Cronin et al., 2000), (Callarisa Fiol et al., 2009)	Adapted
	2	The service required performed as promised (as per job order given to customer).	(Cronin et al., 2000)	Adapted
	3	The service provider performs the job or service right the first time.	(Parasuraman et al., 1988), (Wong & Sohal, 2003), (Callarisa Fiol et al., 2009)	Adapted
	4	The service provider keeps me informed on when the service will be performed.	(Parasuraman et al., 1988), (Ismail et al., 2006)	Adapted

Table 4.3 (Continued)

Dimensions	No	Items	Sources	Adapted/Adopted
	5	The service provider provides accurate information (e.g itemized invoice).	(Wong & Sohal, 2003), (Callarisa Fiol et al., 2009)	Adapted

4.5.1.2.2 Support Service

As indicated by Ulaga and Eggert (2006), other than personal interaction between the customer and service provider, service support also plays important role to increase behavioural loyalty. The support service examined as dimension for service quality in this current study is associated with the internal organization's support system provided as additional helping hands for service excellence. It involves the back office support staff other than the service provider or any staff at the counter who delivers the service to the customer for example during emergency breakdown and also included are the systems occupied to serve the customers for example mobile phone to communicate with the customers by call and text message, and the online webpage available for service booking or any inquiry.

However, interesting to note, a study by Cater and Cater (2009) pointed out that the empirical evidence to describe the relationship between support service and customer loyalty is very scant. As one of the contributions of this current research and consistent with the objective of this current study which is to revisit the service quality dimensions and develop an alternative service quality dimension for car after-sales service, this current study is employing the items used by the previous study in the literature in other industry. Thus, the review of literature shows that in a study on e-quality of online booking in airline industry, Llach et al. (2013) has adapted items

from Parasuraman et al. (2005) as measures for system availability. Another research by Negash et al. (2003) which study the web-based system quality and its effectiveness also measured the support service associated with the system and other personnel. Thus, guided by the available instruments used in the literatures, the table 4.4 below has adapted the below items as measures for support service in car after-sales service.

Table 4.4
Items Used to Measure Support Service

Dimensions	No.	Items	Sources	Adapted/Adopted
Support Service	1	Support service staff quickly response to me even during the busy hours of the day or during late night time (e.g emergency breakdown during late night time).	(Negash et al., 2003), (Cronin et al., 2000)	Adapted
	2	It is easy to contact the support service staff during emergency breakdown.	(Negash et al., 2003), (Cronin et al., 2000)	Adapted
	3	It is easy to get through to customer support service for any information or assistance (e.g customer call center, website).	(Negash et al., 2003), (Cronin et al., 2000)	Adapted
	4	The site for online booking must be consistently available as it is important for my convenient and saves my time.	(Llach et al., 2013), (Parasuraman, Zeithaml, & Malhotra, 2005)	Adapted

4.5.1.2.3 Technical Quality

Unlike functional quality which is measured by most researchers in accordance with SERVQUAL dimensions (Caceres & Paparoidamis, 2007; Caruana, 2002; Clottey et al., 2008; Curry & Gao, 2012; Etemad-Sajadi & Rizzuto, 2013; Ismail et al., 2006; Lee & Lambert, 2008; Radder & Han, 2013; Roberts et al., 2003; Wong & Sohal, 2003; Yieh et al., 2007), technical quality does not have specific measures and most

of the researchers were using various measurement to operationalize its concept according to their objective of study and industry needs (Kang & James, 2004). As a prove, the study on service quality in woman‘s apparel industry has measured technical quality according to the product quality of the attire (Clottey et al., 2008).

A study on technical and functional aspects of service quality in financial service industry by Bell (2005) adapted four-item scale developed by Sharma and Patterson (1999) specific for financial service industry to measure the technical service quality construct whereas in a study on service quality in hospital, Che Rose et al. (2004) measured technical quality in accordance to clinical quality which relates to the skill and professionalism of the medical officer as the outcome. Similar to study by Callarisa Fiol et al. (2009), the product quality offered by supplier measured as technical quality and related to the operational definition of technical quality that guides this current study, the spare part quality is part of the outcome of service process delivered by the service provider and the quality of spare part also might determine the quality of service outcome which is effectiveness of the service or repair.

Therefore, as guided by the literatures on service quality, this current study is measuring the technical quality as the outcome of the service (Sharma & Patterson, 1999) which specifically refers to the effectiveness of the repair and zero problems given after a routine service schedule. The items are listed in the below Table 4.5.

Table 4.5
Items Used to Measure Technical Quality

Dimensions	No	Items	Sources	Adapted/Adopted
Technical Quality	1	The service provider has assisted me to solve problems associated with my vehicle.	(Sharma & Patterson, 1999)	Adapted
	2	The service provider has performed well in doing their job resulting in free problems to my vehicle.	(Sharma & Patterson, 1999)	Adapted
	3	The service jobs normally completed successfully without interruption.	(Kang & James, 2004)	Adapted
	4	The service jobs performed by the service provider portray good image of the company.	(Auruskeviciene et al., 2010)	Adapted
	5	The spare parts offered by this service centre are genuine and of best quality.	(Callarisa Fiol et al., 2009)	Adapted

4.5.1.2.4 Tangibility

In most service industries especially in car after-sales service, tangibility is one of the most important factors that complements intangible service (Yieh et al., 2007). Due to service intangibility, customers are looking for tangible factor such as physical evidence to evaluate service quality (Che Rose et al., 2004). Consistent with another study also in similar industry, tangibility was found as an important element that contributes to service quality in after-sales service industry (Bouman & Wiele, 1992). Therefore, guided by the similar study in the literature on service quality in after-sales service industry, the table 4.6 below shows the items measuring tangibility dimension of service quality.

Table 4.6
Items Used to Measure Tangibility

Dimensions	No	Items	Sources	Adapted/Adopted
Tangibility	1	The service provider provides clean and comfortable lounge for customers.	(Parasuraman et al., 1988), (Yieh et al., 2007), (Cronin et al., 2000)	Adapted
	2	The service provider provides up-to-date physical facilities and equipment (e.g customer's parking, computer, wifi, television, refreshment and etc.)	(Parasuraman et al., 1988), (Ismail et al., 2006), (Yieh et al., 2007)	Adapted
	3	The service provider provides environment free from danger, risk, or doubt.	(Cronin et al., 2000)	Adapted
	4	The service provider is well dressed and appears neat to show professionalism.	(Parasuraman et al., 1988), (Ismail et al., 2006), (Cronin et al., 2000)	Adapted
	5	The service provider used proper material and documentation during performing the service.	(Parasuraman et al., 1988)	Adapted

4.5.1.3 Mediating Variable – Relationship Quality

The mediation model introduced by Baron and Kenny (1986) has outlined four criteria for mediating variable in a framework. The detailed review of the literature has found the positive relationship between the predictor of this study (i.e service quality) and the criterion variable (i.e customer loyalty). Service quality also positively associated with relationship quality and relationship quality has shown direct positive relationship with customer loyalty. Accordingly, this present study has fulfilled all the stages required for mediating model and the detail criteria for mediating to occur has been thoroughly explained in section 3.2 of this current study.

Relationship quality which refers to the strength of the relationship between parties that interact in an exchange has been measured using established dimensions of satisfaction, trust and commitment (Athanasopoulou, 2009). However, there are studies in the literatures that examined relationship quality as one overall construct for example Ali and Ndubisi (2011), Cannière et al. (2010), Crosby et al. (1990), Ndubisi et al. (2007), and Wong and Sohal (2002,2006). The justifications given by the previous studies were mainly related to the single attribute of relationship quality where according to Wong and Sohal (2002, 2006), the three-dimension only explains the sources related to relationship quality and those dimensions do not form the construct of relationship quality itself. Another researcher also agrees with this concept where Cannière et al. (2010) argued on the validity and reliability of the three-component and further posits that the single construct of relationship quality is more parsimonious and better fit the data.

Additional to that, one of the objectives of this current study is to examine the relationship between service quality dimensions which combines the various concepts of service quality and relationship quality that carries unique aspect of relationship not captured by service quality (Roberts et al., 2003). According to Roberts et al. (2003), the service quality and relationship quality dimensions might be similar to a certain extent and which leads to unavoidable redundancies in operationalization of both constructs. However, the two constructs emphasized on two different measures; service quality measures firm‘s performance based on transactional dimensions in one-off encounters whereas relationship quality dimensions measure intangible in the relational aspects related to on-going interactions (Roberts et al., 2003).

Based on the differences, Roberts et al. (2003) developed a specific scale for measurement for relationship quality in service sectors and further suggest satisfaction, trust and commitment as well as conflict as dimensions to describe a good quality of relationship. In their study, they proposed trust as a distinct concept for relationship quality (different to the concept of reliability, assurance and empathy in service quality dimensions) represented by trust on service provider‘s credibility and benevolence. Thus, guided by the above literature and consistent with the objective of study, this current research examines relationship quality as a three dimension construct and it is operationalized in the form of satisfaction, trust and commitment (Roberts et al., 2003) and the three dimensions were described earlier in chapter two of this current study. The below table 4.7 indicates the items to measure quality of relationship between customer and service provider or the service organization itself.

Table 4.7
Items Used to Measure Relationship Quality

Dimensions	No.	Items	Sources	Adapted/Adopted
Relationship Quality – satisfaction	1	I am delighted with performance of the service provider.	(Roberts et al., 2003), (Hennig-Thurau et al., 2002)	Adapted
	2	I am very satisfied towards my relationship with the service provider.	(Sharma & Patterson, 2000)	Adapted
	3	I feel good when dealing with the service provider.	(Sharma & Patterson, 2000)	Adapted
	4	Overall, I am satisfied with the service provider.	(Callarisa Fiol et al., 2009), (Hennig-Thurau et al., 2002)	Adapted
Relationship Quality – trust in service provider‘s integrity	1	My service provider performed with full of honesty.	(Roberts et al., 2003), (Hennig-Thurau et al., 2002)	Adapted
	2	My service provider performed with high integrity.	(Roberts et al., 2003), (Hennig-Thurau et al., 2002)	Adapted

Table 4.3 (Continued)

Dimensions	No	Items	Sources	Adapted/Adopted
	3	My service provider is trustworthy.	(Roberts et al., 2003), (Hennig-Thurau et al., 2002)	Adapted
	4	My service provider never hides any information with the intention to cheat me for their own benefit.	(Crosby et al., 1990)	Adapted
Relationship Quality – trust in service provider's benevolence	1	My service provider is concern about my happiness.	(Roberts et al., 2003)	Adapted
	2	I believe my service provider will respond with understanding towards my difficulty.	(Roberts et al., 2003)	Adapted
	3	I can depend on my service provider based on their action that might affect me personally.	(Roberts et al., 2003)	Adapted
	4	The service provider has expressed their willingness to help me even it did not benefit them.	(Crosby et al., 1990)	Adapted
Relationship Quality – commitment	1	I feel emotionally attached to the service provider.	(Roberts et al., 2003)	Adapted
	2	I am very committed to my relationship with the service provider.	(Sharma & Patterson, 2000), (Hennig-Thurau et al., 2002), (Morgan & Hunt, 1994)	Adapted
	3	I intend to maintain and continue this relationship indefinitely.	(Roberts et al., 2003), (Sharma & Patterson, 2000), (Morgan & Hunt, 1994)	Adapted
	4	The service provider has expressed his/her desire to establish long-term relationship with me.	(Crosby et al., 1990)	Adapted
	5	I have a strong sense of loyalty towards the service provider.	(Sharma & Patterson, 2000)	Adapted
	6	My relationship with the service provider is very important to me	(Hennig-Thurau et al., 2002)	Adapted

4.5.1.4 Moderating Variable – Alternative Attractiveness

A moderator refers to a variable that changes the direction or the strength of the relationship between independent and dependent variable (Baron & Kenny, 1986). The relationship between the two variables; the strength or the direction differs according to the moderator‘s level. Moderation is said to occur when the relationship between the two variables depends on the third variable. The section 3.2 of this current study provides a detail explanation on the moderating. One of the objectives of this current study is to examine the impact of competition variable on the level of customer loyalty with the element of customer-service provider relationship being part of the subject of evaluation. In relation to that, this current study is focusing on the customer-service provider relationship in car service sector and therefore would like to evaluate the competition variable of alternative attractiveness in the context of business to customer as suggested in the literature (Aydin & Özer, 2005; Jones & Taylor, 2007; Santouridis & Trivellas, 2010).

As being described in chapter two of this current study, alternative attractiveness refers to the positive characteristics which the close competitors possess. In this current study, a close competitor refers to ordinary workshops that provide the similar service maintenance and repair in car service industry. Meanwhile, the ordinary workshops in this current study refers to those personally own workshops that provide the similar service for car maintenance and repair and they do not represent one particular brand name of any automotive company. The review of literature shows that most of the previous studies that examined alternative attractiveness as variable normally involved business to business context (Sharma & Patterson, 2000; Song et al., 2012). In a study on business to business relationship, Song et al., (2012)

examined availability of alternative by using single item measurement where the respondents were just asked to respond to a statement of easiness to replace the supplier.

However, the study by Sharma and Patterson (2000) which examined the alternative attractiveness in financial industry has thoroughly measured alternative attractiveness by proposing a few items to clearly measure the alternative attractiveness as moderator between product-norm experience, trust and satisfaction, and its relationship with relationship commitment. Guided by that study, this current research is adapting the items to evaluate the impact of alternative attractiveness on the relationship between relationship quality and customer loyalty in car after-sales service industry. Table 4.8 below clearly lists the items used to measure alternative attractiveness as moderator for this current study.

Table 4.8
Items Used to Measure Alternative Attractiveness

Dimensions	No.	Items	Sources	Adapted/Adopted
Alternative attractiveness	1	Ordinary workshop would be cheaper than this service centre.	(Sharma & Patterson, 2000), (Callarisa Fiol et al., 2009)	Adapted
	2	Ordinary workshop offers better discounts.	(Callarisa Fiol et al., 2009)	Adapted
	3	Ordinary workshop offers a more flexible and convenient mode of payment.	(Callarisa Fiol et al., 2009)	Adapted
	4	Ordinary workshop benefited me more compared to this current service centre.	(Sharma & Patterson, 2000)	Adapted
	5	Ordinary workshop is located closer to me compared to this current service centre.	(Sharma & Patterson, 2000)	Adapted

Table 4.3 (Continued)

Dimensions	No	Items	Sources	Adapted/Adopted
	6	I would feel more satisfied with the service of ordinary workshops than I am with this current service centre.	(Sharma & Patterson, 2000)	Adapted

4.6 Translation of Questionnaire

In data collection survey, this study uses the questions which were initially developed in English. To ensure that the respondent understands the questionnaire, the questions were then thoroughly translated into the Malay language. Drawing upon the procedure of back-translation for survey across different language by Brislin (1970), the original questionnaire in English version was translated to Malay language. That was done with the assistance of a senior English lecturer from Universiti Utara Malaysia (UUM) who is also expert in Malay language. After that, the Malay translated question was then translated back (back-translation) to English questionnaire by another senior Bahasa Melayu lecturer from the same university, who is also expert in English language. Both English and Malay versions were then checked for consistency. Any discrepancies between the versions were then referred to the translators until mutual consensus was reached.

4.7 Content and Face Validity

This process involves a systematic evaluation on the ability of the scales to measure what it supposed to measure. The researcher must ensure that the measure contains sufficient and descriptive set of items that tap a certain concept. For that purpose, the researcher conducted content validity that involves consultation session with a group of panel experts including a few potential respondents to pass judgement on the

suitability and clarity of the construct as well as the selected items used to measure a particular concept (Sekaran & Bougie, 2013). It starts with a distribution of a draft instruments to the experts in the area of service quality in marketing and questionnaire design for the feedback related to appropriateness of the constructs, clarity of content, layout as well as sufficiency of the items designed to measure the construct under investigation. The experts involved comprise of an Associate Professor and Senior lecturers in the College of Business, Universiti Utara Malaysia (UUM).

Before proceeding with the pilot test, the researcher also conducted the pre-testing of questionnaire especially the validity of the items by distributing the questionnaires to two potential respondents, two experts from the automotive industry and two academics in marketing. Based on the feedback, a few questions required some modification in terms of re-phrasing or re-wording for appropriateness and understandable to the potential respondents. There were also cases where the questions look quite similar and therefore needs to be removed. The process of pre-testing the instruments through experts‘ and potential respondents‘ validation was completed within two weeks.

Based on the experts‘ and potential respondents‘ opinion, the researcher developed an improved revised version of the instrument, which meant for the pilot test. In statistics, to have higher chances of normal distribution data, central limit theorem suggests minimum of 30 samples. Hence, to achieve that number, with the assistance of some friends of researcher, a total of 40 copies of questionnaires were distributed, and 35 were returned. From those 35 copies, three were not properly completed and therefore excluded in the pilot test. As such, 32 copies of the questionnaires were considered for the pilot test. A high response rate of 87% was achieved possibly due

to the fact that the questionnaires were personally distributed and collected. The process was also completed in two weeks‘ time.

4.8 Pilot Test

Pilot test is actually a ―dress fitting‖ performed as a trial in a small-scale prior to the full-scale of the study. The purpose of the pilot test is two-fold. First is to test the validity and reliability of the instrument of the study. The validity is concerned with the ability of the instrument to measure only what it supposed to measure, meanwhile, the reliability of a measure demonstrates the extent to which the instruments are free from error or bias (Sekaran & Bougie, 2013). Second, the pilot test that is normally conducted with a minimum small sample size of 30 respondents offers an insight on the real conditions of the actual study and subsequently allows the researcher to anticipate the potential problems and accordingly adjust in the full-scale study.

For the pilot study, a face-to face interview guided by the questionnaire was conducted by interviewing a few industry experts and academicians, including the potential respondents who confirm on the validity of the content and questionnaire improvement. The questionnaire flexibility in face-to-face interview may give opportunity for the questionnaire to be adapted, adopted and changed according to the objective and context of study. Based on the above-mentioned purposes, the pilot test for this study focuses on reliability of the instruments with the expectation that the reliable instruments will be able to minimize the measurement error.

There are various types of reliability tests employed by researchers but the most commonly used is inter-item consistency reliability test which is measured with

Cronbach's alpha coefficient (Sekaran & Bougie, 2013). Cronbach's alpha also regarded as a perfectly adequate index for inter-item consistency reliability. Based on the abovementioned justification, this study employed Cronbach's alpha test in measuring the internal consistency of the instruments. The researcher uses SPSS version 23 for windows to run the data for the purpose of obtaining reliability of the data. The Cronbach's alpha coefficient showed that all the measures demonstrate a high reliability standard ranging between 0.853 and 0.978. According to Sekaran and Bougie (2013), the higher coefficient indicates a better measurement instrument. Specifically, the instrument with coefficient of 0.60 signifies average reliability and coefficient of 0.70 and higher shows highly reliable instruments (Nunnally, 1967; Sekaran & Bougie, 2010). The below table 4.9 depicts the summary result for reliability in pilot study.

Table 4.9
Summary of Reliability Test for Pilot Study

Constructs	Dimensions	Number of Item	Cronbach's Alpha
Service Quality	Four	31	0.978
	Customer Service	17	0.965
	Support Service	4	0.891
	Tangibility	5	0.952
	Technical Quality	5	0.911
Relationship Quality	Three	18	0.973
	Commitment	6	0.946
	Satisfaction	4	0.972
	Trust	8	0.966
Customer Loyalty	-	7	0.941
Alternative Attractiveness	-	6	0.853

4.9 Methods of Statistical Data Analysis

Statistical analysis is an essential tool used to comprehend the complex relationship in current social science research. Partial Least Squares Structural Equation Modeling (PLS-SEM) as one of the statistical methods under second-generation technique offers a number of advantages compared to other methods. First, the objective of this current study is explorative in the sense that it predicts and explains the variance of the endogenous variables by incorporating the modified dimensions and variables in the research model. In other words, this study is exploring on the modified service quality dimensions as well as the role of the moderator such as alternative attractiveness and how do they explain the variance in customer loyalty. Hence, PLS-SEM which emphasizes more on exploration offers a good alternative for theory testing (Hair, Hult, Ringle, & Sarstedt, 2014), specifically the extension of social exchange theory (SET) in the study of automotive after-sales service. Second, PLS-SEM possesses superior statistical power from the high efficacy in parameter estimation. Lastly, it allows simplifying a complex model of structural relationship by easily incorporates reflective and formative measurement models in a comprehensive research context of automotive after-sales service.

4.9.1 Partial Least Squares Structural Equation Modeling (PLS-SEM)

PLS refers to a path model concerns with two elements; a measurement model (outer model) and the structural model (inner model) (Hair et al., 2014). Figure 4.3 depicts the structural model with the constructs (circles) related to one another in a few path to show the relationship between the evaluated latent variables. The structural model of PLS-SEM only concerns on recursive relationships with no causal loops. As such, the path model shows the relationship between the construct with arrows heading in a

single direction. Next, the structural model as described by Hair et al. (2014) comprises of two constructs (1) exogenous construct and (2) endogenous construct. The ‗exogenous' refers to the independent variables that is described by the latent construct in the structural model with only arrows pointing out of them and none of the path relationship pointing at them. As for endogenous construct, it refers to dependent variable where in the structural model represents the latent target construct of other construct through path relationship.

Figure 4.3 also illustrated the measurement model that is used to measure or explains the relationship between the indicators (represented in the structural model as the rectangles) and each corresponding construct. Also showed in Figure 4.3 are the two measurement models described as reflective and formative indicators. According to Hair et al. (2014), the reflective indicators occur where the directional arrows pointing from the construct to the indicators demonstrate the assumption that the construct causes the indicators. It further demonstrates that the reflective indicators or items are highly correlated, exchangeable when it can be eliminated but not destroying the meaning of the construct. That means any changes in the latent construct are manifested by changes of the indicator variables. The reflective indicators and a construct are connected through loadings that are actually the bivariate correlation between them. In contrast to reflective indicators, the formative indicators depict the model with directional arrows pointing from the indicators to the construct and forming causal relationship and the relationship between the indicators and construct is considered as weights. Each indicator carries unique aspects of the construct and any alterations in the indicators may change the nature of the constructs being measured.

Due to that, it is extremely important to identify how the reflective and formative model is used as it reflects different modes of measurement model of the constructs. By that, according to Hair et al. (2014), the specification would depend on the conceptualization of the construct being measured and the objective of the study.

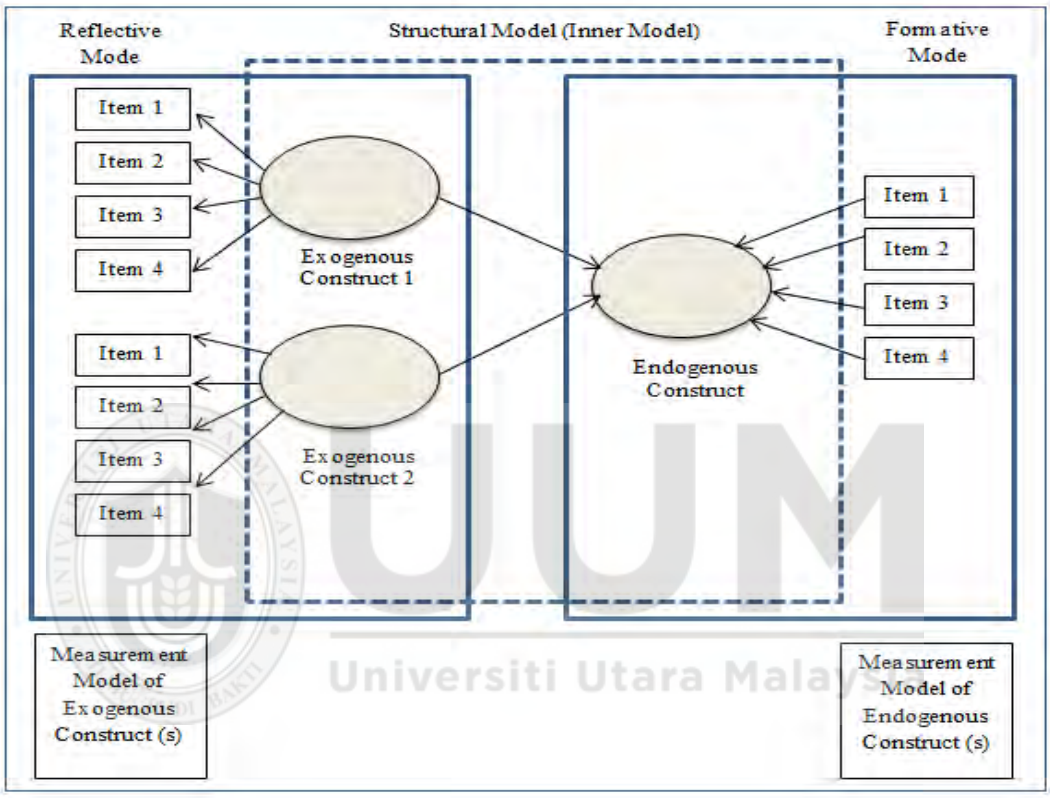

Figure 4.3
A Simple Path Model
Source: Hair et al. (2014)

On additional note, the formative and reflective model are also applied for measurement model of higher-order component (HOC) and lower order component (LOC) which involved two layers of constructs. The reflective relationship between LOCs and HOC is normally applied to explain the correlations of a more general factor among LOCs, whereas the formative is used to reveal the contribution of each

LOC in explaining HOC. In investigating and testing the reliability and validity of the measurement model, PLS focuses on the two measurement assessments 1) the assessment related to reliability and validity of measurement model (outer model) and 2) the assessment of relationship related to structural model (inner model) (Hair et al., 2014) and those assessments are described in the next section.

4.9.2 Assessing the Measurement Model - Outer Model of PLS-SEM

Assessment of measurement model basically concerns with validity and reliability of the indicators measuring the construct. Specifically, the purpose of measurement model is to assure that before investigating the structural relationship in the model, only the valid and reliable measures of constructs are employed. In assessing the measurement model, it requires different evaluation criteria and which depends on reflective or formative measured constructs.

According to Hair et al. (2014), the reflective measurement model ensures the reliability and validity through composite reliability, indicator reliability, convergent validity and discriminant validity. The first quality criterion is composite reliability (CR) which is related to internal consistency of indicator variables to represent the latent construct. The value of CR ranges from 0 to 1 where the higher value indicates higher reliability, and satisfactory value ranges between 0.70 and 0.90.

The second criterion in assessing reflective model is the assessment of convergent validity. In establishing convergent validity, two important elements need to be considered; indicator reliability and average variance extracted (AVE).The indicator reliability refers to the outer loading of all indicators which should be significant and

the value must be greater than 0.708. Relatedly, AVE describes the mean of the squared loadings of all indicators related to the construct and also known as communality. To establish convergent validity, the AVE value should be 0.50 or higher. Logically, the AVE above 0.50 indicates that, on average, the construct explains more than half of its indicator‘s variance and therefore the convergent validity is established.

The third quality criterion in assessing the validity of reflective measurement model is discriminant validity. Refers to Hair et al. (2014), this validity is concerned with the extent to which the constructs measured differs from one another through the degree of correlation with other constructs, and the indicators must only represent one single construct. Discriminant validity is established when the square root of the AVE of a construct is greater than its correlation with other constructs. There are three ways that can be used to determine discriminant validity of the constructs; cross loadings of the indicators, Fornell-Larcker criterion and Heterotrait-Monotrait ratio inference (HTMT inference).

Discriminant validity through cross loading is established when an item‘s outer loading of the construct is higher than all of its cross loadings i.e loadings of the other constructs. As recommended by Hair et al. (2010), the standardised loading estimates should be at least 0.5 and, value 0.7 and above is most ideal. The second method to establish discriminant validity is assessing the Fornell-Larcker criterion. This method suggests that the construct must share more variance with its indicators than with any other constructs, or in other words, the items should load stronger in their own construct than with any other constructs in the same structural model (Fornell & Larcker, 1981). To test the validity under this method, Hair et al. (2014) proposed that

the square root of AVE which represented by the values in the diagonal should be greater than each of the construct correlations which is represented by the values in the off-diagonal. For the third method of assessing discriminant validity, Henseler et al. (2014) proposed Heterotrait-Monotrait criterion. As suggested by HTMT $_{\text{inference}}$, the score range between -1 to 1 ($-1 < \text{HTMT} < 1$) indicates the two constructs are distinct to one another. Specifically, if the HTMT $_{\text{inference}}$ scores for all constructs are within the range of -1 to 1, the discriminant validity based on Heterotrait-Monotrait criterion is established.

Differ from reflective measurement model, the assessment of reliability and validity of formative model is more towards content specification and theoretical ground. In formative measurement model, the indicators cause the construct. As such, the indicators are not exchangeable as each of it carries specific aspect of the construct‘s domain to determine the meaning of the construct. Thus, there is no requirement for the items to be interrelated or correlated but they are supposed to be completely independent (Hair et al., 2014). In relation to that, indicator reliability, internal consistency and discriminant validity is not relevant as all of that are only meant for correlated measures.

Alternatively, PLS-SEM suggests these three quality criteria in assessing formative measurement model; 1) convergent validity, 2) collinearity issues and 3) weight significance. The first step is convergent validity that involved testing the correlation of the indicators that indicate the strength of path coefficient or contribution. Second step is validating that the formative measures are free from the collinearity issue. For the purpose of examining collinearity issue, the variance inflation factor (VIF) was referred to. Finally, to calculate the weight significance, the bootstrapping technique

was used. Table 4.10 provides summary of quality criteria in assessing the reflective and formative measurement model.

Table 4.10
Quality Criteria in Evaluating Measurement Model

Reflective Model	**Requirement**	**Formative Model**	**Requirement**
1st criterion: Composite reliability (CR) – internal consistency	CR should exceed the value of 0.70 (Hair et al., 2014)	1st criterion: Collinearity among indicators – variance inflation factor (VIF)	The VIF score should not be greater than 10 (Sarstedt & Mooi, 2014; Sekaran & Bougie, 2013, page 319).
2nd criterion: Indicator reliability – item's loading	Item's loading should exceed the value of 0.708 (Hair et al., 2014)	2nd criterion: Coefficient of outer weights	No minimum threshold value for indicator weights
3rd criterion: Convergent validity – average variance explained (AVE)	The AVE must be greater than 0.50 (Hair et al., 2014)	3nd criterion: Correlation indicators with the latent constructs	Significance of path-coefficients - *p< 0.05, **p < 0.01 (one-tailed)
4th criterion: Discriminant validity – cross loading, Fornell-Larcker criterion and Heterotrait-Monotrait ratio inference (HTMT inference)	Cross-loadings scores differ by 0.1 (Vinzi, Chin, Henseler & Wang, 2010) √AVE > r [Fornell & Larcker (1981), Hair et al. (2014)] (HTMT inference) Score range between -1 to 1 (-1 < HTMT < 1) Henseler et al. (2014)		

4.9.3 Assessing the Structural Model – Inner Model of PLS-SEM

Once the reliability and validity of the construct measures (outer model) is established, the next step to assess is the structural relationship as per hypothesis that involved inner model assessment. The purpose of structural model assessment is for hypothesis testing that involved the evaluation of relationship between the latent constructs within the structural model. The hypothesis testing of structural model was performed by running algorithm and bootstrapping in PLS-SEM (Chin, 2010). Since PLS-SEM has no assumption on normal distribution data, it is therefore relies on nonparametric bootstrapping procedure for significance testing (Hair et al., 2014). Bootstrapping is a resampling technique in which a large number of subsamples are randomly drawn from the sampling population (with replacement) to estimate the model.

By doing that, a large number of random subsamples (500 or more) can be used to compute the standard error for the estimates and subsequently determined the t values. Drawing upon Chin (1998), this study used 500 subsamples drawn from the original sampling population in which replacement is taking place for each next observation. The bootstrapping of 500 re-samples equally produced normal data to estimate a parameter. In assessing the structural model, the five-step procedure as proposed by Hair et al. (2014) can be used: 1) collinearity assessment, 2) path-coefficient, 3) coefficient of determination (R^2), 4) effect size (f^2) and 5) predictive relevance (Q^2).

4.9.3.1 Assessing the Collinearity

Step 1 assesses the structural model to ensure that it is free from collinearity issue. Collinearity in structural model refers to the high correlations between two or more

predictor constructs being measured. Collinearity is measured using variance inflation factor (VIF) which refers to reciprocal of the tolerance (Hair et al., 2014). According to Sarstedt and Mooi, 2014, and Sekaran and Bougie, 2013, page 319, the VIF score below than 10 is acceptable.

4.9.3.2 Path Coefficient

The second assessment of the structural model involves the structural model relationship among the constructs or path coefficients. Based on the hypothesized relationship, the path coefficient estimates describe the strength of the relationship. The path coefficient estimate standardized value ranges between -1 and +1, where the value close to +1 indicates strong positive relationship. In contrast, the estimated path coefficient shows the value close to -1 represents the strong negative relationship. The estimated coefficient close to zero indicates weaker relationship and normally non-significant.

The significance of a coefficient is determined by the standard error obtained from the bootstrapping where it allows for computation of t value. The bootstrap standard error permits for computation of empirical t value. Thus, in this study, the bootstrapping procedure assists to estimate the significance of the path coefficient linking the automotive after-sales service quality with customer loyalty and relationship quality, as well as the direct effect of relationship quality and customer loyalty. The significance level normally depends on the objective and field of study, and for marketing research, the assumption of significance level is at 5% (Hair et al., 2014).

The path coefficient in the structural model involves testing the direct effect of automotive after-sales service quality and customer loyalty as well as its direct

relationship with relationship quality. Besides, the evaluation of structural model path coefficient also involves mediating role of relationship quality inclusive the moderating role of alternative attractiveness. The result for significance of each structural model relationships is normally interpreted by the t value, p value or the bootstrapping confidence interval. In evaluation of direct relationship significance level, besides the significance relationship, it is important to examine the relevance of the significant relationship as it is crucial for result interpretation and conclusion related to the objective of the study.

For testing the mediating effect, PLS-SEM offers a more superior method compared to the one established by Baron and Kenny (1986). In this regards, PLS-SEM is able to test the hypothesized relationships between the variables instantaneously. Besides, the bootstrapping of PLS-SEM demonstrates higher level of statistical power than Sobel test. There are also argument that in order for mediation to occur, the significant total effect (counted as c) of a predictor variable towards the criterion variable is not required (Hair, Sarstedt, Ringle, & Mena, 2012) but the indirect effect is statistically more important component of mediation (Preacher & Hayes, 2004). Relatedly, failure to test the indirect effects in the nonappearance of a total effect may left over certain possible significant and valuable interesting mechanisms in which the predictor variables may execute some impact on the criterion variables (Hayes, 2009).

In addition, according to Preacher and Hayes (2008), path coefficient ~~–a~~" as well as ~~–b~~" are normally distributed but the ~~–c~~" which is the result of ~~–a~~*b" is not normal distribution and therefore will result in standard error. To tackle this issue of indirect effect of mediating variable, Hayes (2009), and Preacher and Hayes (2008) have introduced the bootstrapping of indirect effect. As PLS-SEM has no assumption on

normal data distribution patterns, this study employed the test of bootstrapping the indirect effect in testing the mediating effect of relationship quality between automotive after-sales service quality and customer loyalty.

To confirm the mediation effect in this study, the bootstrapping produces the t value for significance testing together with the value of path coefficient indirect effect in the form of bootstrapping confidence interval upper and lower level. The indirect effect 95% Bootstrapped Confidence Interval lower limit (LL) and upper limit (UL) did not straddle a 0 in between signifies there is mediation effect of relationship quality in the association between automotive after-sales service quality and customer loyalty. Besides, the result also reveals the significant mediating effect when t value > 1.96 ($p < 0.05$) and t value > 2.58 ($p < 0.01$).

Moderating effects are suggested by the systematic influence of other variables in which the other variables (moderator variables) may affect the strength or direction of a relationship between an independent (exogenous) latent variable and dependent (endogenous) latent variable of PLS path relationship. The PLS path model with moderator variable is also known as the simple effect. When modeling moderator variable, it requires the specification of simple effect of an exogenous variable, the simple effect of moderator variable and the interaction effect. The interaction effect which is derived from the interaction term concerns on the interrelation between the independent variable and the moderator variable, and in this study involves relationship quality construct and alternative attractiveness as moderator. Contrasting to mediating concept, moderation concept concerns on the change of R^2 by adding the interaction term to the moderator model.

PLS-SEM normally creates the interaction term based on two approaches; product indicator approach and two-stage approach. According to Hair et al. (2014), the two-stage approach is used if the exogenous variable or the moderating variable is measured in formative measurement model. Since both relationship quality as an exogenous variable and alternative attractiveness as a moderator variable are measured reflectively; this study applied the product indicator approach in testing the moderation effect of alternative attractiveness in the relationship between relationship quality and customer loyalty.

4.9.3.3 Coefficient of Determination (R^2)

Coefficient of determination or R^2 value is the third step or criteria commonly used to evaluate PLS-SEM structural model. The coefficient demonstrates the predictive accuracy of the model as well as the combined effects of exogenous variable on endogenous variable. The coefficient is derived from the correlation (squared) of actual and predicted values and thus, the R^2 actually indicates the variance in the endogenous variable explained by all the exogenous variables linked to it. The measure for R^2 ranges from 0 to 1, and the value close to 1 indicates higher level of predictive accuracy. The recommended value of R^2 as suggested by Cohen (1992;2013) is given at 0.26, 0.13, or 0.02 which indicates substantial, moderate and weak respectively, whereas for Chin (2010), the respective R^2 values of 0.75, 0.50 or 0.25 for endogenous variable demonstrate substantial, moderate and weak level of predictive accuracy.

4.9.3.4 Effect Size (f^2)

Another measure used to evaluate the structural model is the effect size of the particular exogenous construct on endogenous construct. In particular, the f^2 indicates

the impact of an exogenous construct on endogenous construct in its absence from the model. The rule of thumb of f^2 values is 0.02, 0.15, and 0.35 respectively represent small, medium, and large effects (Cohen, 2013), and the higher value signifies substantive impact of the exogenous construct towards the endogenous construct.

4.9.3.5 Predictive Relevance (Q^2)

Besides measuring the predictive accuracy of the model using R^2 value, PLS-SEM also evaluates the predictive relevance (Q^2) of the structural model. In other words, the model must be able to accurately predict the indicators of reflective measurement of the particular endogenous constructs. The Q^2 test is conducted using the blindfolding procedure which refers to the sample reuse technique that eliminate all *d*th data point of the endogenous construct's items and determine the parameter estimates using the remaining data points (Hair et al., 2014). The Q^2 is obtained from the difference of eliminated data points (real) and the predicted scores in which also depend on omission distance (D).

There are two different methods usually used in calculating the Q^2 value; the cross-validated redundancy approach and another one is cross-validated communality. As recommended by Hair et al. (2014), this study employed the cross-validated redundancy in assessing the Q^2 value. Accordingly, the Q^2 value greater than zero demonstrate that the model possesses the predictive capacity over certain endogenous construct. Table 4.11 exhibits the summary of the required criteria in assessing the structural model of PLS-SEM.

Table 4.11
Criteria for Structural Model Assessment

Criterion	Requirement
Colleniarity	VIF value not greater than 10 (Sarstedt & Mooi, 2014; Sekaran & Bougie, 2013).
Path coefficient estimates	The t-value for one-tailed test 2.33; ($p < 0.01$) and 1.645 ($p < 0.05$).
	The t-value for two-tailed test 2.58; ($p < 0.01$), and 1.96 ($p < 0.05$).
Coefficient of determination (R^2)	R^2 values of 0.26, 0.13, or 0.02 which indicates substantial, moderate and weak respectively (Cohen, 1992).
Effect size (f^2)	f^2 values of 0.35, 0.15, and 0.02 are measured large, medium and small respectively.
Predictive relevance (Q^2)	Q^2 value larger than zero indicates the model has predictive relevance for endogenous construct.

4.10 Summary of the Chapter

This chapter offers explanation on the methodology employed for this current study. This research is categorised as exploratory study and the data were collected using questionnaire through intercept survey method. Respondents from automotive after-sales service were selected based on probability systematic sampling to provide feedback on the level of service quality, relationship quality, alternatives attractiveness and how it impacts customer loyalty of Malaysian national carmakers. The questionnaires were distributed directly to the selected respondents who were waiting for their vehicle to be serviced. The content of the instruments has been validated by the industry experts and also academics in related area of study. Supported by the advantage of PLS-SEM, this current study uses PLS-SEM for analysis of data collected.

CHAPTER 5

ANALYSIS AND FINDINGS

5.1 Introduction

This chapter contains the report of the analysis and outcome of the study. The analysis was basically done based on the data furnished by the respondents through questionnaire survey. The first section in this chapter shows results of descriptive statistics and the characteristics of respondents, followed by the second section which demonstrates on the goodness of measure in measurement model. The third section maps the detail assessment of structural model which include the detail results of the hypotheses testing. The last section explains on the predictive relevance of the model, and then ended by the chapter‘s summary.

5.2 Response Rate of Questionnaires

The data of this study were collected from Malaysian national car after-sales service companies as described in the earlier chapter of this research. Since the main subject of evaluation in this study is service quality rendered by the national automotive after-sales service organizations and the quality of relationship between the customer and the service provider, a total of 384 sets of questionnaire were distributed to the customers of Malaysian national car after-sales service companies in northern region. As explained in the earlier chapter, the subject of evaluation is service quality delivered by the service provider which is homogeneous in nature due to the service provided are in accordance to the standard operating procedure (SOP) practiced by the organizations all over the country. Working on that reason, the area cluster sampling by selecting northern region is appropriate. The region consists of four states of Perak,

Penang, Kedah and Perlis. However, Perlis was excluded as none of the outlets hold the status as branch of national carmakers. On another note, the number of questionnaires distributed depends on the number of outlet in each state.

From the total of 384 questionnaires distributed to the customers, 19 questionnaires were not returned and which implies that only 365 questionnaires representing 95% response rate were finally collected. This is consistent to the similar study on service quality and customer loyalty in automotive after-sales service by Yieh et al. (2007) who also recorded 97.69% response rate. Next, after a thorough checking, the researcher found that 43 questionnaires were invalid due to cases of straight lining and 10 cases of outliers; which qualified to be removed from the data set (Hair et al., 2014). Hence, only 312 questionnaires were considered usable for further analysis. This thereby represents 81% usable questionnaires rate and in line with the study of Yieh et al. (2007) that equally recorded 76% for analysis purpose. This relative high response rate was achieved with great effort, hard work and extra financial cost. Table 5.1 and 5.2 illustrate the detail number of cases left for analysis and response rate discussed above.

Table 5.1
Summary on Sample and Cases left for Further Analysis

Details	Number of Questionnaire	Remarks
Sample	384	
Uncollected	19	
Sub Total	365	**Response rate of 95%**
Invalid	43	Due to straight lining
Sub Total	322	
Outliers	10	
Case Left for Analysis	**312**	**81% usable rate**

Table 5.2
Sampling and Response Rate

State	Total Number of Outlet	Distributed Questionnaire	Returned Questionnaire	Usable Questionnaire
Kedah	4	140	135	120
Penang	3	104	96	74
Perak	4	140	134	118
Total	**11**	**384**	**365**	**312**

Next after data collection is data preparation using IBM-SPSS version 23. It started with checking and treating missing value using Estimation Maximization (EM). This tool is used to optimize the accuracy of overall data analysis that allows for more valid inferences drawn from the data (Coakes, 2013). Important point to note, the method for data collection involved personally administered questionnaire in which the questionnaires were collected immediately before the respondents left the area. The researcher quickly checked the pages and returned it if there were any questions unanswered. This method reduces the occurrence of missing data cases. However, to reconfirm on the missing value, the SPSS probability of parameter estimates is used.

5.3 Data Screening and Editing

In conducting multivariate analysis, data screening and editing is of utmost importance as the initial data cleaning carries quality and a more expressive outcome of data analysis. Thus, the element of missing data and outliers were thoroughly checked and treated accordingly.

5.3.1 Missing Data

Missing data arise in the situation when the respondent fails to answer one or more questions. As suggested by Hair et al. (2014), when the missing data in a questionnaire exceeds 15%, it should be removed from the observation. The removal might omit certain group of respondents and therefore there is a possibility of the biased result. To avoid this problem, the researcher has taken a precautionary action right from the beginning. Upon receipt of the completed questionnaire, the researcher immediately checked through to ensure each question was properly completed. In the case of any uncompleted questionnaire, the respondent was immediately asked to complete it accordingly. This way significantly helps to avoid the case of missing data in the survey, and as a result, none of the questionnaires were found with any missing data. Besides, the preliminary descriptive statistics run in SPSS software subsequently helps to ratify on any cases of missing data.

5.3.2 Assessment of Outliers

Outliers are the extreme responses to a particular question or to all questions in which might influence the result of the regression analysis. Thus, the treatment of outliers is needed in multivariate analysis. The procedure is to run regression between each variable against dependent variable (customer loyalty) in SPSS software. Normally, in assessing the predictive power, the threshold is fixed at ± 3 standard deviations. The assumption on the outliers is identified based on the casewise diagnostics. The identified cases were then deleted and re-run until the casewise diagnostics does not appear to indicate any more outliers in the data set. In this study, 10 cases were found to be outliers, and therefore constituting multivariate outliers that qualified to be deleted from further analysis.

5.4 Descriptive Analysis of Study Variables

Descriptive analysis refers to the basic data information that provides meaning through frequency distribution, mean, and standard deviation, in which useful in identifying differences between groups.

5.4.1 Respondent's Profile

This section provides information and discussion on respondent's personal demographic profile through frequency distribution such as age, gender, income range and also includes information on the average cost paid for car services.

5.4.1.1 Respondent's Age

Table 5.3 shows the result of age of respondents according to the given categories. Almost 70% of the respondents fall under the second and third category of age between 26-45 years old. Meanwhile, the fourth group that comprises of 48 respondents are those of age between 46 to 55 years old (15.4%). The first category consists of relatively young respondents who fall within the range of 17 to 25 years old (11.6%). Only 5.4% of respondents aged above 55 years. Figure 5.1 graphically illustrates the age of respondent.

Table 5.3
Respondents' Age

Age of respondents	Frequency	Percentage (%)
17 to 25 years	33	10.6
26 to 35 years	107	34.3
36 to 45 years	107	34.3
46 to 55 years	48	15.4
Above 55 years	17	5.4
Total	**312**	**100**

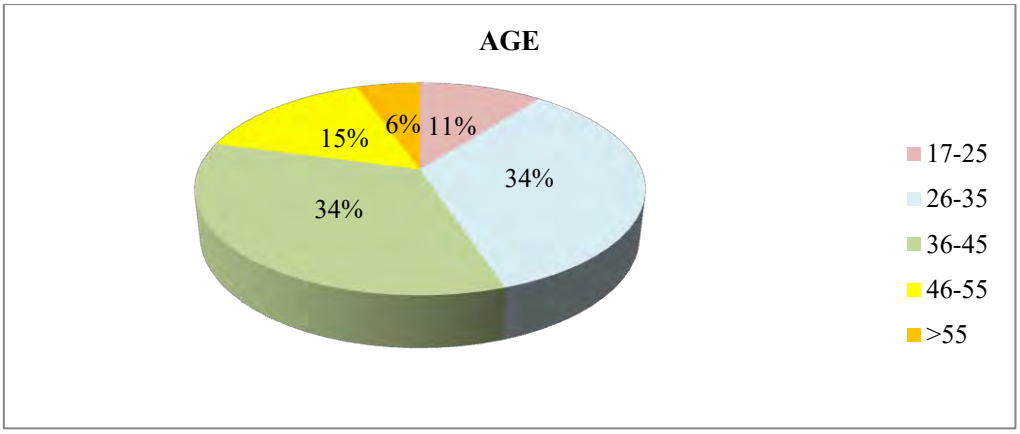

Figure 5.1
Age of Respondents

5.4.1.2 Respondents' Gender

Regarding the gender, Table 5.4 shows that male and female customers both recorded almost similar percentage of 54.2% and 45.8% respectively. Figure 5.2 graphically illustrates the age of respondent.

Table 5.4
Respondents' Gender

Gender of respondents	Frequency	Percentage (%)
Male	169	54.2
Female	143	45.8
Total	**312**	**100**

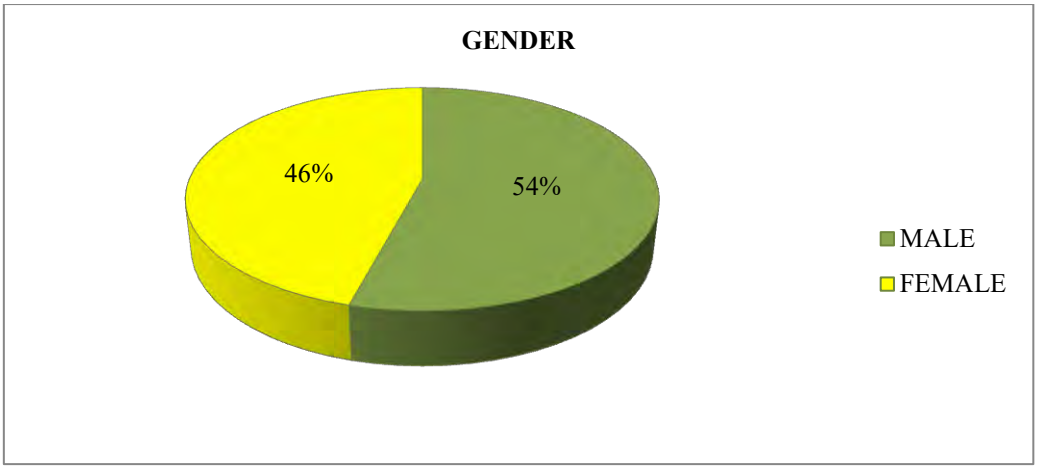

Figure 5.2
Gender of Respondents

5.4.1.3 Respondents' Income

Table 5.5 illustrates the results of respondents' income. Close to half of the respondents earned RM1,001 to RM3,000 (44.9%) income per month. The second group earned RM3,001 to RM5,000 (30.8%) and followed by the highest income group of more than RM5,000 which represents only 16.3% of the respondents. The fourth group earned below RM1,000 (4.8%) and only 3.2% of the respondents which are the students and housewife have no income. Figure 5.3 provides graphic illustration on the age of respondent.

Table 5.5
Respondents' Income

Income of respondents	Frequency	Percentage (%)
Below RM1,000	15	4.8
RM1,001-RM3,000	140	44.9
RM3,001-5,000	96	30.8
>RM5,000	51	16.3
No income	10	3.2
Total	**312**	**100**

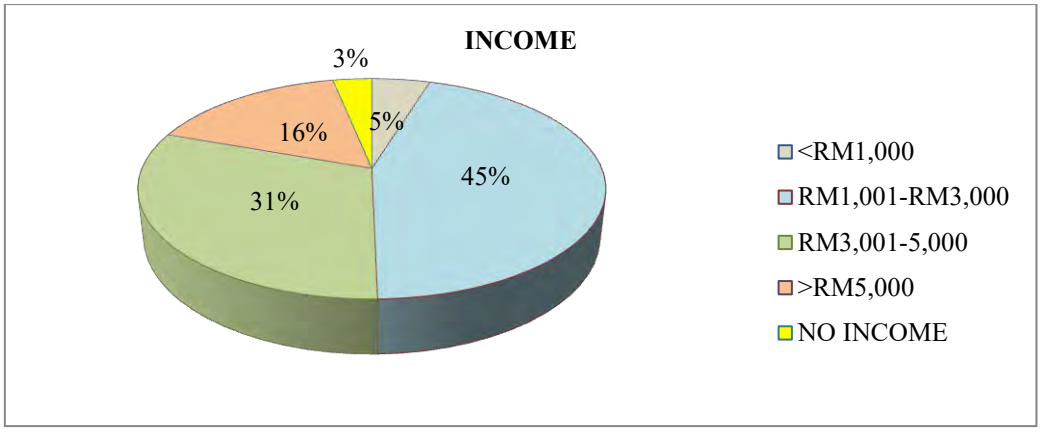

Figure 5.3
Average Income of Respondents

5.4.1.4 Average Cost Paid by Respondents

The average cost paid by each respondent may describe the average price of service, charged by the service provider. The Table 5.6 illustrates the perceptions of customers on the price charged for the service rendered. The result shows that only 21.8% of the respondents paid less than RM200. More than half of the respondents (51.9%) perceived that on the average they were charged RM201 to RM300 for each service visit. The third group with percentage of 17.9% was charged RM301 to RM400. There was 8.3% of respondents paid average RM400 and above for the service received. Figure 5.4 illustrates the average cost of service graphically.

Table 5.6
Average Cost of Service

Average cost of service	Frequency	Percentage (%)
Below RM200	68	21.8
RM201-RM300	162	51.9
RM301-RM400	56	17.9
Above RM400	26	8.3
Total	**312**	**100**

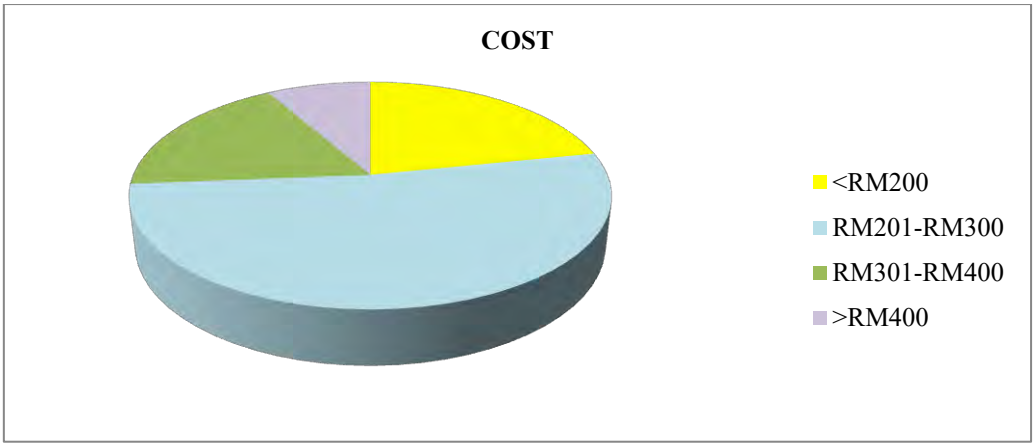

Figure 5.4
Average Cost of Service

5.4.2 Descriptive Statistics

The statistical characteristic of all study variables for both organizations is demonstrated in Table 5.7. The table reveals the mean and standard deviation for 312 valid cases of this study. The mean score above three was considered high and the score below three was considered as low (National Institute of Standard and Technology, 2010). Meanwhile, the standard deviation values of above three demonstrate variability within data set.

The results of the mean score of all variables above four indicate that most of the respondents express their agreement with the statement of items under each variable. Whereas the low values for standard deviation range between one and below demonstrate the consistency of answer in which most probably due to the high validity of instruments.

Table 5.7
Descriptive Statistics for National Carmakers

Variables	Organization	N	Mean	Std. Deviation	Std. Error Mean
Service Quality	Proton	140	4.5807	.85138	.07196
	Perodua	172	4.3322	.81944	.06248
Relationship Quality	Proton	140	4.6014	.90168	.07621
	Perodua	172	4.3593	.91290	.06961
Customer Loyalty	Proton	140	4.4684	.95718	.08090
	Perodua	172	4.1620	.99838	.07613
Alternative Attractiveness	Proton	140	4.1274	1.05629	.08927
	Perodua	172	4.0853	1.06520	.08122

5.5 Test of Non-response Bias

The non-response bias is normally tested using the wave analysis method in which it compares between the early and the late response (received after follow up) with assumption that the late respondents are more or less the same as non-respondents which indicates the non-response bias was of little concern (Samat, Ramayah, & Mat Saad, 2006). Relatedly, the technique of collecting data in this study involved personally administered questionnaire where the respondent was given the questionnaire after which upon completion, the questionnaire was returned to the researcher on the spot (Yieh et al., 2007). In this manner, there was no issue on the late response influence and therefore, the test of non-response bias was not necessary.

5.6 Testing Goodness of Measure

Before further analysis, it is important for the researcher to ensure that the measures used are accurately measuring the variables and indeed the concept intended to be

measured; because better instruments enhance the scientific quality of the research (Sekaran & Bougie, 2013). Hence, to ensure the consistency and accuracy of the concept measurement, this section of goodness of measure focuses on investigating and testing the reliability and validity of the various items in the instruments (questionnaire).

In PLS, there are two measurements involved: 1) the assessment related to reliability and validity of measurement model and 2) the assessment of relationship related to structural model (Hair et al., 2014). By using PLS-SEM's software namely SmartPLS 3.0 developed by Ringle, Wende, and Becker (2015), the researcher executed confirmatory factor analysis (CFA) to validate the outer model i.e measurement model by investigating the relationship between items/indicators and their related construct.

The model of this study consists of both first- and second-order construct (higher-order construct). As such, assessment model must also include both constructs. The first-order construct describes the association between the indicators (item) and its dimensions. Meanwhile, the second-order construct indicates the relationship between the dimension and their latent constructs as illustrated in Figure 5.5. The research model is shown in Figure 5.6, which exhibits the loadings for each item including beta values.

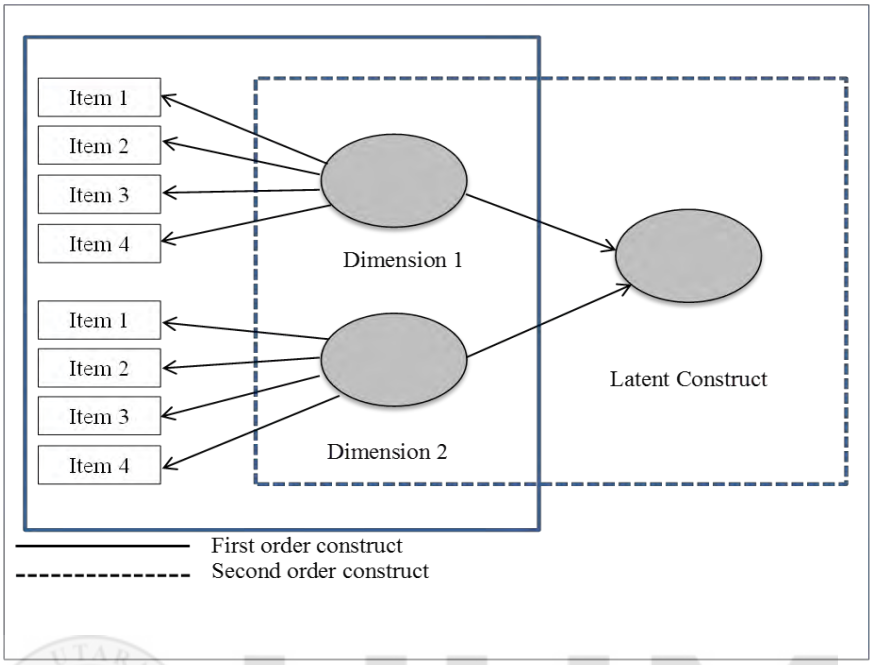

Figure 5.5
Example of first- and Second-order Construct
Source: Hair et al. (2014)

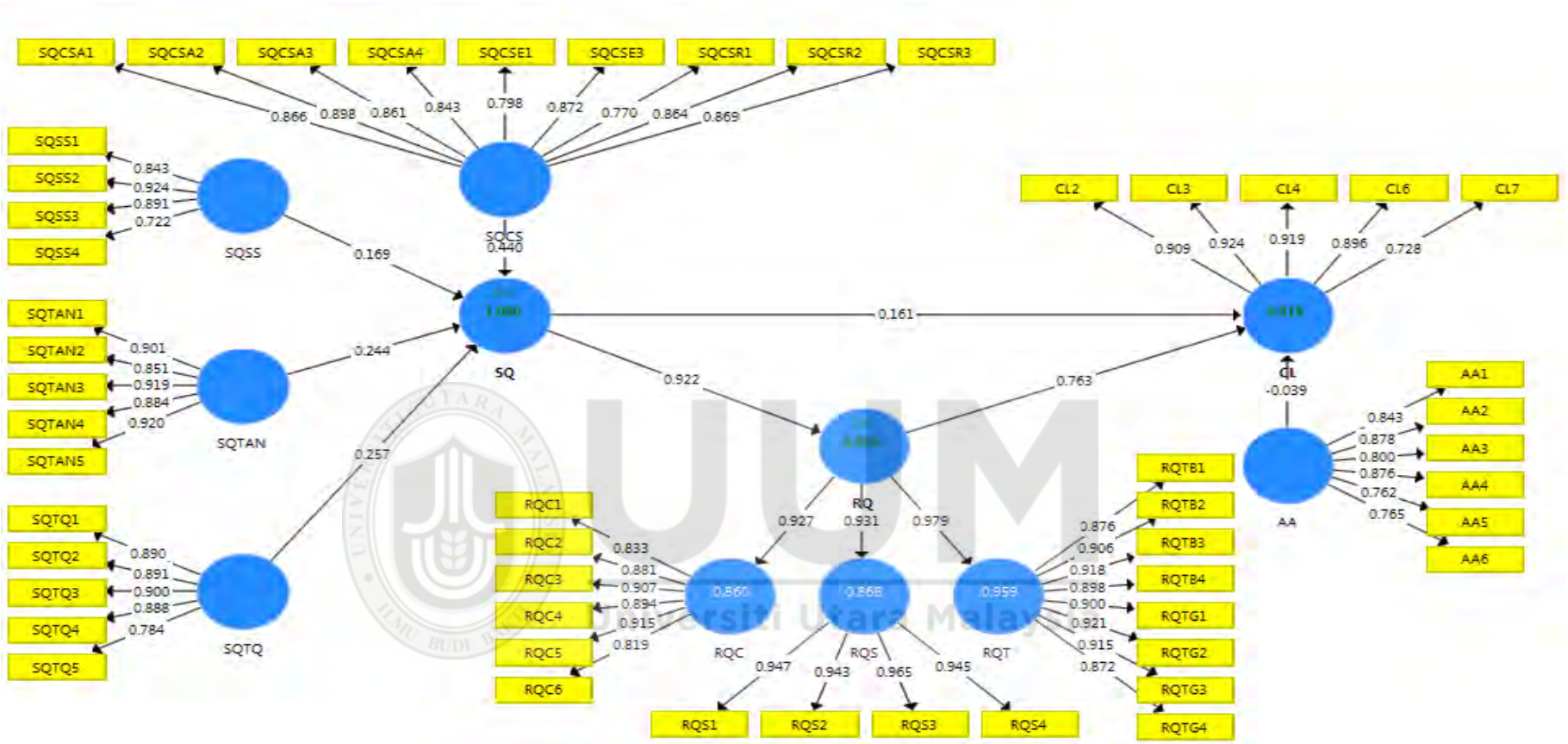

Figure 5.6
Research Model of the Study
Note: SQ – Service Quality; SQCS - Customer Service; SQTAN – Tangibility; SQTQ – Technical Quality; RQ – Relationship Quality; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQT – Relationship Trust; CL – Customer Loyalty; AA – Alternative Attractiveness

5.6.1 Assessment of Reflective Measurement Model

The measurement model explains how the constructs are assessed. The assessment of the reliability of each item/construct in PLS is accomplished by scrutinising the item loadings related to their respective latent construct (Hulland, 1999). The high loadings denote more variance shared between the construct and measurement rather than an error variance, whereas lower loadings indicate the small power to explain the model that reduces the estimated parameters linking the constructs (Hulland, 1999).

For reflective measurement model, all indicators are highly correlated and interchangeable to one another (Hair et al., 2014), and their reliability and validity should be reviewed and reported in detail. Hence, to assess the measurement model, both reliability and validity must be verified. Reliability was measured based on composite reliability whereas validity was evaluated through convergent and discriminant validity (Hair et al., 2014). Confirmatory factor analysis (CFA) was conducted with the purpose of assessing internal consistency through composite reliability, convergent validity using average variance extracted (AVE), and discriminant validity of the instruments checked through cross loading, Fornell-Larcker criterion and Heterotrait-Monotrait ratio inference (HTMT inference). The process confirms that the measurement model is reliable and valid and which allowed the researcher to proceed with the assessment of relationship in the structural model.

5.6.1.1 Composite Reliability

The first criterion to be evaluated in measurement model is internal consistency reliability which is determined by composite reliability. The composite reliability measures internal consistency which prioritizes the indicators based on discrete

indicators reliability (Hair et al., 2014). As recommended by Hair et al. (2014), all items loading for reflective construct were tested to exceed 0.5 and the value below 0.4 should be removed. Table 5.8 indicates all the items loading exceeded the recommended cut-off value of 0.5 with the loadings ranged from 0.722 to 0.965. This loading indicates adequate internal consistency when more than half of the variance in the observed variables is well explained by the construct.

For reflective indicators, the deleted items might not affect the conceptual meaning of the particular construct because the adequate internal consistency still remains. Furthermore, the direction of causality which flows from the construct to indicators showed that the items represent the effects. As such, it demonstrates that the items are highly correlated as it caused by the same underlying construct (Hair et al., 2014). In this study, as shown in Table 5.8, the internal consistency reliability result for all constructs was within the desirable range when the composite reliability values of four reflective latent constructs range from 0.911 to 0.974 exceeded the recommended cut-off value of 0.7 (Hair et al., 2010). Even though the composite reliability values were all above 0.90 which may indicate constructs measuring the same phenomenon (Hair et al., 2014), the VIF below the cut-off value of 10 proves that collinearity was not the major problem (Sekaran & Bougie, 2013; Sarstedt & Mooi, 2014) (Table 5.12 and Table 5.13). Hence, all constructs demonstrated high level of internal consistency reliability.

5.6.1.2 Convergent Validity

To evaluate convergent validity, the average variance extracted (AVE) was determined. As indicated in Table 5.8, the AVE values between the ranges of 0.676 to 0.902 demonstrate convergent validity for all latent constructs, and the values exceed

the acceptable threshold value of 0.5. The convergent validity denotes by AVE values that is greater than 0.5 showed that the latent constructs have explained more than 50 % of the variance of its indicators. The Table 5.8 summarizes the result of the measurement model especially the CR and AVE. The results showed that all the four main constructs namely service quality, relationship quality, alternative attractiveness, and customer loyalty were valid as measures of their respective constructs as confirmed through the parameter estimates and statistical significance (Chow & Chan, 2008). In essence, the model constructs had valid and sufficient convergent validity.

Table 5.8
Result for Internal Consistency and Convergent Validity of Constructs

First Order Construct	Second Order Construct	Scale Type	Items	Loadings	CR	AVE	Convergent Validity (AVE > 0.5)	Item(s) Deleted
Customer Service (CS)		Reflective	SQCSA1	0.866	0.959	0.722	Yes	SQCSE2 SQCSE4 SQCSR4 SQCSL1 SQCSL2 SQCSL3 SQCSL4 SQCSL5
			SQCSA2	0.898				
			SQCSA3	0.861				
			SQCSA4	0.843				
			SQCSE1	0.798				
			SQCSE3	0.872				
			SQCSR1	0.770				
			SQCSR2	0.864				
			SQCSR3	0.869				
Support Service (SS)		Reflective	SQSS1	0.843	0.911	0.720	Yes	None
			SQSS2	0.924				
			SQSS3	0.891				
			SQSS4	0.722				
Tangibility (SQTAN)		Reflective	SQTAN1	0.901	0.953	0.802	Yes	None
			SQTAN2	0.851				
			SQTAN3	0.919				
			SQTAN4	0.884				
			SQTAN5	0.920				
Technical Quality (SQTQ)		Reflective	SQTQ1	0.890	0.940	0.760	Yes	None
			SQTQ2	0.891				
			SQTQ3	0.900				

Table 5.6 (Continued)

First Order Construct	Second Order Construct	Scale Type	Items	Loadings	CR	AVE	Convergent Validity (AVE > 0.5)	Item(s) Deleted
			SQTQ4	0.888				
			SQTQ5	0.784				
	Second Order Construct	**Scale Type**	**Items**	**Weight**	**t- value**	**VIF**	**NA**	**Items Deleted**
	Service Quality (SQ)	Formative	SQCS	0.440	45.153	3.682		None
			SQSS	0.169	25.239	2.532		
			SQTAN	0.244	34.401	2.477		
			SQTQ	0.257	37.289	4.163		
First Order Construct	**Second Order Construct**	**Scale Type**	**Items**	**Loadings**	**CR**	**AVE**	**Convergent Validity (AVE > 0.5)**	**Item(s) Deleted**
Relationship Commitment (RQC)		Reflective	RQC1	0.833	0.952	0.767	Yes	None
			RQC2	0.881				
			RQC3	0.907				
			RQC4	0.894				
			RQC5	0.915				
			RQC6	0.819				
Relationship Satisfaction (RQS)		Reflective	RQS1	0.947	0.974	0.902	Yes	None
			RQS2	0.943				
			RQS3	0.965				
			RQS4	0.945				
Relationship Trust (RQT)		Reflective	RQTB1	0.876	0.972	0.812	Yes	None
			RQTB2	0.906				

Table 5.6 (Continued)

First Order Construct	Second Order Construct	Scale Type	Items	Loadings	CR	AVE	Convergent Validity (AVE > 0.5)	Item(s) Deleted
			RQTB3	0.918				
			RQTB4	0.898				
			RQTG1	0.900				
			RQTG2	0.921				
			RQTG3	0.915				
			RQTG4	0.872				
	Relationship quality (RQ)	Reflective	RQC	0.927	0.962	0.895	Yes	None
			RQS	0.931				
			RQT	0.979				
Alternative attractiveness (AA)		Reflective	AA1	0.843	0.926	0.676	Yes	None
			AA2	0.878				
			AA3	0.800				
			AA4	0.876				
			AA5	0.762				
			AA6	0.765				
Customer Loyalty (CL)		Reflective	CL2	0.909	0.944	0.771	Yes	CL1
			CL3	0.924				CL5
			CL4	0.919				
			CL6	0.896				
			CL7	0.728				

Note: AA – Alternative Attractiveness; CL – Customer Loyalty; SQ – Service Quality; RQ – Relationship Quality; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQTB, RQTG – Relationship Trust; SQCSA, SQCSE, SQCSR – Customer Service; SQSS – Support Service; SQTAN – Tangibility; SQTQ – Technical Quality.

5.6.1.3 Discriminant Validity

In this study, discriminant validity is assessed based on three measures. They were cross loading, Fornell-Larcker criterion, and Heterotrait-Monotrait ratio inference (HTMT inference). The first assessment on discriminant validity is the analysis on cross-loading of all indicators. In specific, an item‘s outer loading on the related construct should be higher than all of its cross loadings i.e loadings of the other constructs. As recommended by Hair et al. (2010), the standardised loading estimates should be at least 0.5 and, value 0.7 and above is most ideal. In addition, all measures of the construct should be significantly loaded onto their particular construct. As stipulated in Table 5.9, the outer loadings of the items in this study were higher than the cross-loadings of the other constructs and also higher than the ideal value of 0.7. As anticipated, all items loaded onto their constructs well, and suggesting no cross loadings existed among items.

Table 5.9
Loadings and Cross Loadings of Constructs

	AA	CL	RQC	RQS	RQT	SQCS	SQSS	SQTAN	SQTQ
AA1	**0.843**	0.150	0.204	0.210	0.199	0.192	0.085	0.272	0.241
AA2	**0.878**	0.140	0.226	0.200	0.185	0.192	0.079	0.267	0.218
AA3	**0.800**	0.206	0.258	0.193	0.200	0.187	0.130	0.213	0.230
AA4	**0.876**	0.116	0.193	0.152	0.127	0.155	0.117	0.194	0.200
AA5	**0.762**	0.128	0.188	0.160	0.127	0.178	0.129	0.212	0.195
AA6	**0.765**	0.044	0.132	0.033	0.070	0.055	0.045	0.095	0.085
CL2	0.178	**0.909**	0.796	0.768	0.826	0.755	0.675	0.687	0.781
CL3	0.164	**0.924**	0.779	0.762	0.811	0.725	0.611	0.681	0.756
CL4	0.157	**0.919**	0.772	0.768	0.804	0.740	0.646	0.653	0.765
CL6	0.158	**0.896**	0.816	0.711	0.788	0.719	0.637	0.603	0.739
CL7	0.127	**0.728**	0.623	0.548	0.598	0.543	0.558	0.427	0.544
RQC1	0.186	0.761	**0.833**	0.713	0.760	0.681	0.656	0.564	0.675
RQC2	0.257	0.739	**0.881**	0.672	0.745	0.697	0.590	0.649	0.685
RQC3	0.242	0.784	**0.907**	0.736	0.790	0.732	0.573	0.671	0.720

Table 5.9 (Continued)

	AA	CL	RQC	RQS	RQT	SQCS	SQSS	SQTAN	SQTQ
RQC4	0.218	0.738	**0.894**	0.666	0.726	0.657	0.583	0.581	0.662
RQC5	0.203	0.805	**0.915**	0.708	0.789	0.704	0.617	0.628	0.709
RQC6	0.259	0.716	**0.819**	0.591	0.695	0.623	0.569	0.607	0.605
RQS1	0.183	0.777	0.745	**0.947**	0.854	0.764	0.661	0.769	0.781
RQS2	0.199	0.749	0.721	**0.943**	0.825	0.746	0.610	0.737	0.759
RQS3	0.199	0.780	0.748	**0.965**	0.871	0.806	0.659	0.777	0.799
RQS4	0.234	0.792	0.747	**0.945**	0.862	0.776	0.629	0.772	0.812
RQTB1	0.146	0.810	0.786	0.793	**0.876**	0.747	0.675	0.663	0.748
RQTB2	0.166	0.825	0.794	0.810	**0.906**	0.781	0.732	0.673	0.781
RQTB3	0.181	0.821	0.826	0.796	**0.918**	0.778	0.672	0.719	0.789
RQTB4	0.174	0.783	0.781	0.765	**0.898**	0.775	0.644	0.707	0.744
RQTG1	0.189	0.772	0.722	0.856	**0.900**	0.752	0.636	0.745	0.764
RQTG2	0.213	0.787	0.757	0.856	**0.921**	0.766	0.641	0.765	0.797
RQTG3	0.212	0.790	0.786	0.836	**0.915**	0.793	0.639	0.774	0.766
RQTG4	0.178	0.731	0.733	0.760	**0.872**	0.710	0.571	0.705	0.726
SQCSA1	0.130	0.704	0.683	0.727	0.746	**0.866**	0.649	0.641	0.710
SQCSA2	0.209	0.689	0.683	0.745	0.742	**0.898**	0.636	0.653	0.723
SQCSA3	0.233	0.704	0.650	0.727	0.733	**0.861**	0.635	0.627	0.732
SQCSA4	0.208	0.703	0.652	0.695	0.718	**0.843**	0.618	0.609	0.742
SQCSE1	0.155	0.683	0.665	0.619	0.703	**0.798**	0.653	0.516	0.673
SQCSE3	0.190	0.729	0.737	0.701	0.778	**0.872**	0.673	0.636	0.726
SQCSR1	0.231	0.572	0.595	0.634	0.629	**0.770**	0.492	0.588	0.596
SQCSR2	0.149	0.676	0.681	0.708	0.733	**0.864**	0.578	0.654	0.680
SQCSR3	0.121	0.636	0.617	0.660	0.688	**0.869**	0.575	0.652	0.654
SQSS1	0.057	0.651	0.613	0.606	0.639	0.639	**0.843**	0.428	0.673
SQSS2	0.110	0.636	0.617	0.597	0.636	0.661	**0.924**	0.486	0.656
SQSS3	0.116	0.625	0.594	0.599	0.640	0.622	**0.891**	0.457	0.653
SQSS4	0.156	0.494	0.485	0.474	0.533	0.516	**0.722**	0.527	0.569
SQTAN1	0.254	0.624	0.626	0.726	0.704	0.679	0.499	**0.901**	0.680
SQTAN2	0.156	0.572	0.595	0.643	0.658	0.582	0.424	**0.851**	0.539
SQTAN3	0.256	0.623	0.639	0.721	0.713	0.661	0.507	**0.919**	0.653
SQTAN4	0.255	0.618	0.605	0.720	0.703	0.627	0.490	**0.884**	0.663
SQTAN5	0.285	0.700	0.686	0.783	0.788	0.709	0.564	**0.920**	0.749
SQTQ1	0.230	0.716	0.688	0.726	0.728	0.734	0.689	0.612	**0.890**
SQTQ2	0.210	0.727	0.676	0.723	0.745	0.702	0.708	0.578	**0.891**
SQTQ3	0.212	0.754	0.706	0.760	0.784	0.752	0.678	0.676	**0.900**
SQTQ4	0.247	0.726	0.678	0.705	0.740	0.709	0.604	0.680	**0.888**
SQTQ5	0.220	0.657	0.619	0.699	0.700	0.657	0.601	0.667	**0.784**

Note: Bold values indicate the loadings for each item which are above cut-off value of 0.7
AA – Alternative Attractiveness; CL – Customer Loyalty; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQTB, RQTG – Relationship Trust; SQCSA, SQCSE, SQCSR – Customer Service; SQSS – Support Service; SQTAN – Tangibility; SQTQ – Technical Quality.

The second analysis is conducted to assess Fornell-Larcker criterion. This criterion suggests that more variance is shared with its own indicators rather than with other latent construct in the same structural model (Fornell & Larcker, 1981). In the same vein, Hair et al. (2014) proposed that the square root of AVE (represented by the values in the diagonal) should be greater than each of the construct correlations which represented by the values in the off-diagonal. Table 5.10 shows discriminant validity for the first-order constructs. In the table, the values in the diagonal were AVE values that were square rooted and those values were greater than the other correlation values among the latent variables. These values demonstrate that the several constructs used in the measurement model are discrete entities and therefore the measurement model discriminant validity is accomplished.

Table 5.10
Fornell-Larcker Criterion Analysis for Examining Discriminant Validity of First Order Constructs

	AA	CL	RQC	RQS	RQT	SQCS	SQSS	SQTAN	SQTQ
AA	**0.822**								
CL	0.180	**0.878**							
RQC	0.259	0.865	**0.876**						
RQS	0.215	0.815	0.779	**0.950**					
RQT	0.203	0.877	0.859	0.898	**0.901**				
SQCS	0.212	0.798	0.780	0.814	0.847	**0.850**			
SQSS	0.128	0.713	0.683	0.674	0.723	0.721	**0.848**		
SQTAN	0.272	0.702	0.705	0.804	0.798	0.730	0.557	**0.896**	
SQTQ	0.257	0.823	0.773	0.830	0.849	0.817	0.753	0.737	**0.872**

Note: Bold values in the diagonal represent the square root of AVE while the other entries in off-diagonal represent the correlation between the constructs.
AA – Alternative Attractiveness; CL – Customer Loyalty; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQT – Relationship Trust; SQCS – Customer Service; SQSS – Support Service; SQTAN – Tangibility; SQTQ – Technical Quality.

The third analysis to assess discriminant validity is Heterotrait-Monotrait criterion. As suggested by Henseler et al. (2014), HTMT $_{inference}$ score range between -1 to 1 (-1 < HTMT < 1) indicates the two constructs are distinct to one another. As indicated in the Table 5.11, the HTMT $_{inference}$ scores for all constructs of this study are within the

range of -1 to 1, therefore, the discriminant validity based on Heterotrait-Monotrait criterion is established.

Table 5.11
Heterotrait Monotrait (HTMT $_{inference}$) Criterion for Discriminant Validity

	Original Sample (O)	Sample Mean (M)	Bias	5.00%	95.00%
CL -> AA	0.172	0.181	0.009	0.079	0.271
RQ -> AA	0.228	0.230	0.003	0.123	0.327
RQ -> CL	0.946	0.947	0.000	0.925	0.962
RQC -> AA	0.263	0.261	-0.002	0.153	0.371
RQC -> CL	0.928	0.929	0.001	0.899	0.954
RQS -> AA	0.204	0.210	0.006	0.106	0.305
RQS -> CL	0.860	0.861	0.000	0.822	0.892
RQS -> RQC	0.818	0.819	0.001	0.781	0.854
RQT -> AA	0.196	0.200	0.004	0.093	0.300
RQT -> CL	0.924	0.925	0.001	0.901	0.944
RQT -> RQC	0.901	0.901	0.000	0.868	0.924
RQT -> RQS	0.930	0.931	0.001	0.906	0.949
SQ -> AA	0.243	0.248	0.005	0.136	0.331
SQ -> CL	0.898	0.899	0.001	0.871	0.919
SQ -> RQ	0.945	0.945	0.001	0.928	0.957
SQ -> RQC	0.869	0.870	0.001	0.826	0.897
SQ -> RQS	0.910	0.911	0.000	0.879	0.929
SQ -> RQT	0.937	0.938	0.001	0.918	0.952
SQCS -> AA	0.211	0.216	0.005	0.112	0.303
SQCS -> CL	0.847	0.848	0.000	0.807	0.879
SQCS -> RQ	0.890	0.891	0.001	0.856	0.913
SQCS -> RQC	0.825	0.827	0.002	0.779	0.856
SQCS -> RQS	0.849	0.849	0.000	0.804	0.885
SQCS -> RQT	0.882	0.883	0.001	0.847	0.908
SQSS -> AA	0.140	0.152	0.012	0.073	0.242
SQSS -> CL	0.797	0.797	0.000	0.740	0.854
SQSS -> RQ	0.798	0.798	0.001	0.738	0.854
SQSS -> RQC	0.758	0.759	0.002	0.674	0.815
SQSS -> RQS	0.736	0.735	-0.001	0.672	0.795
SQSS -> RQT	0.791	0.792	0.001	0.735	0.847
SQSS -> SQCS	0.793	0.793	-0.001	0.742	0.836
SQTAN -> AA	0.271	0.272	0.001	0.149	0.370
SQTAN -> CL	0.747	0.748	0.001	0.692	0.793
SQTAN -> RQ	0.842	0.842	0.000	0.805	0.877

Table 5.9 (Continued)

	Original Sample (O)	Sample Mean (M)	Bias	5.00%	95.00%
SQTAN -> RQC	0.750	0.750	0.000	0.691	0.793
SQTAN -> RQS	0.843	0.845	0.002	0.803	0.883
SQTAN -> RQT	0.836	0.836	0.000	0.798	0.873
SQTAN -> SQCS	0.770	0.770	0.000	0.716	0.814
SQTAN -> SQSS	0.620	0.621	0.001	0.511	0.709
SQTQ -> AA	0.258	0.260	0.002	0.147	0.351
SQTQ -> CL	0.888	0.889	0.001	0.850	0.922
SQTQ -> RQ	0.908	0.909	0.001	0.878	0.935
SQTQ -> RQC	0.831	0.833	0.002	0.782	0.867
SQTQ -> RQS	0.881	0.882	0.000	0.839	0.914
SQTQ -> RQT	0.900	0.902	0.001	0.863	0.930
SQTQ -> SQCS	0.872	0.872	0.000	0.816	0.905
SQTQ -> SQSS	0.845	0.845	0.000	0.796	0.886
SQTQ -> SQTAN	0.791	0.792	0.001	0.739	0.832

Note: AA – Alternative Attractiveness; CL – Customer Loyalty; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQT – Relationship Trust; SQCS – Customer Service; SQSS – Support Service; SQTAN – Tangibility; SQTQ – Technical Quality.

Based on the three analyses of the discriminant validity, it was observed that all the three analyses have passed discriminant validity criteria. Hence, it is therefore proven that the measurement model of this study has shown good discriminant validity among constructs.

5.6.1.4 Assessment of Formative Constructs

As suggested by Ladhari (2009), this study has modelled service quality as second-order formative construct. The measurement for formative construct involved three steps: (1) test of weight significance; (2) test of multi-collinearity; and (3) the test of correlation indicators with the latent construct. The first step involved the assessment of weight of each first-order constructs using bootstrapping technique to obtain the significance of path coefficients. In PLS-SEM, the related coefficients for the formative relationships are named outer weight (Hair et al., 2014). In evaluation of formative relationship, the weight is interpreted as similar to beta coefficient in

standard regression model, and it is common for the weight to have lower value compared to loadings. In addition, there is no minimum threshold value set for weights. As such, each of the specified paths with the construct showed significant path coefficient. That significance of weights demonstrates the relative importance of indicators in forming a latent construct. As shown in Table 5.12, the bootstrapping results which indicate the weights and path-coefficients for all service quality attributes (Hair, Ringle, & Sarstedt, 2011) are significantly related to service quality formative second-order construct (t-value > 1.645). Customer service with weights of 0.440 is the most important dimension that contributes to service quality, and the support service which contributes only 0.169 weights was the least important among the dimensions. However, support service is still significant as service quality dimension (t-value = 25.239, t > 1.645) and the significance path-coefficient signifies its relative importance in forming service quality constructs.

Table 5.12
Path Co-efficient Assessment for Formative Second-order

	Direct Effect (β)	Standard Error	T-value	P-value
SQCS -> SQ	0.440	0.010	45.153	0.000
SQSS -> SQ	0.169	0.007	25.239	0.000
SQTAN -> SQ	0.244	0.007	34.401	0.000
SQTQ -> SQ	0.257	0.007	37.289	0.000

*p< 0.05, **p < 0.01 (one-tailed)
Note: SQ – Service Quality; SQCS – Customer Service; SQSS – Support Service; SQTAN – Tangibility; SQTQ – Technical Quality

The second step tested the multi-collinearity between indicators. As proposed by Sekaran and Bougie (2013), and Sarstedt and Mooi (2014), the VIF value should not be greater than 10. The analysis for VIF in this study showed the value of less than 10, indicating zero threat of multi-collinearity exist between the individual indicators.

The final test concerned on the correlation of indicators with its latent construct that indicates their absolute contribution. As expected, all items had significant weight and were correlated with their latent construct. In essence, all items in the formative construct were reserved for further analysis. Table 5.13 illustrates the detail results.

Table 5.13
Assessment of Second-order Formative Construct

Second Order Constructs	Scale Type	Items	Weight	t-value	VIF
Service Quality (SQ)	Formative	SQCS	0.440	45.153	3.682
		SQSS	0.169	25.239	2.532
		SQTAN	0.244	34.401	2.477
		SQTQ	0.257	37.289	4.163

Note: SQCS – Customer Service; SQSS – Support Service; SQTAN – Tangibility; SQTQ – Technical Quality

5.6.2 Establishing Higher-order Constructs

One of the main reasons to establish higher-order construct is to minimize the number of path that connecting the variables in the structural model, as such, the model is more parsimonious and less complex (Hair et al., 2014). In this study, service quality and relationship quality were conceptualised as second-order constructs with reflective scale. Both second-order constructs were assessed using the repeated indicator approach which considers all the first-order constructs as reflective measure for the second-order constructs. Specifically, the second-order constructs were measured directly by the first-order construct‘s indicators (Becker, Klein, & Wetzels, 2012). By repeating the same indicators in the second-order construct similar to the first-order model, it may give a better operationalization of the model (Chin, Marcolin, & Newsted, 2003).

Following Dant et al. (2013), Raskovic, Matevz, & Brencic (2013), Vieira (2013), and Wong and Sohal (2006), this current study conceptualised relationship quality (RQ) as a second-order construct which consists of three first-order constructs represented by relationship commitment, relationship satisfaction and relationship trust. On another note, relationship quality was conceptualised as second-order reflective construct where the three dimensions as first-order construct are interrelated and not independent to form the construct (Hennig-Thurau et al., 2002; Ki & Brown, 2013). Since relationship quality is one of the endogenous constructs (mediator) which is measured as second-order reflective construct (reflective-reflective type), the two-stage approach is not a must as if it being measured as second-order formative construct (reflective-formative type) (Becker et al., 2012; Wetzels, Odekerken-schröder, & Oppen, 2009).

Table 5.14 below demonstrates that all the first-order constructs for RQ (relationship quality) with reflective indicators were modelled right to the second-order constructs where the three first-order constructs served as reflective indicators. As demonstrated in Table 5.14, the high correlations between all three dimensions of RQ in the first-order construct indicated the existence of a second-order construct (Byrne, 2001). Besides, these three first-order constructs that are relationship commitment, relationship satisfaction and relationship trust were well explained by the second-order of RQ as specified by R squares of 0.860, 0.868 and 0.959 (see Table 5.14). All path coefficients from RQ to its dimensions were significant at $p < 0.01$ (Table 5.14). Accordingly, all three dimensions of RQ were measured to a second-order construct procedure (Wetzels et al., 2009).

Unlike relationship quality, service quality (SQ) was conceptualised as a second-order formative construct with four first-order constructs called customer service (SQCS), support service (SQCS), tangibility (SQTAN) and technical quality (SQTQ). This model is called reflective-formative type II (Becker et al., 2012; Chin, 2010). Treating service quality as second-order formative model was parallel to that given by previous researchers (Badri, Abdulla, & Al-Madani, 2005; Baldwin & Sohal, 2003; Gounaris, 2005; Kang & James, 2004). Table 5.14 demonstrates that all first-order constructs for SQ (service quality) with reflective indicators were modelled right to the second-order constructs with the four of first-order constructs in formative relationship. All path coefficients from SQ to its dimensions were significant at $p < 0.01$ (see Table 5.14). Relatedly, all four dimensions of SQ were measured to a second-order construct procedure (Wetzels et al., 2009). The weight values recorded for SQ as second-order construct were 0.440 (SQCS), 0.169 (SQSS), 0.244 (SQTAN), and 0.257 (SQTQ) which were significant at $p < 0.01$. Indeed, the VIF value for the four first-order constructs were not greater than 10, as shown in Table 5.15. As these values were below the recommended threshold, results revealed the goodness of measure for second-order formative construct.

Table 5.14
Second-order of SQ and RQ and Its Relationship with the First-order Constructs

Second-order Construct	**First-order Construct**	**R^2**	**Beta**	**t-value**
Relationship Quality (RQ)				
	Relationship Commitment (RQC)	0.860	0.927	P<0.01
	Relationship Satisfaction (RQS)	0.868	0.931	P<0.01
	Relationship Trust (RQT)	0.959	0.979	P<0.01
Second-order Construct	**First-order Construct**	**R^2**	**Weight**	**t-value**
Service Quality (SQ)		1.000	-	-
	Customer Service (SQCS)	-	0.440	P<0.01
	Support Service (SQSS)	-	0.169	P<0.01

Table 5.14 (Continued)

Second-order Construct	First-order Construct	R^2	Weight	t-value
	Tangibility (SQTAN)	-	0.244	P<0.01
	Technical Quality (SQTQ)	-	0.257	P<0.01

5.7 Assessment of Structural Model

Following the test of goodness of measure performed in the preceding section, the structural model assessment is required. As proposed in the literature, the PLS-SEM was used by running algorithm and bootstrapping procedure based on this five-step procedure (Hair et al., 2014) as illustrated in the Figure 5.7 below.

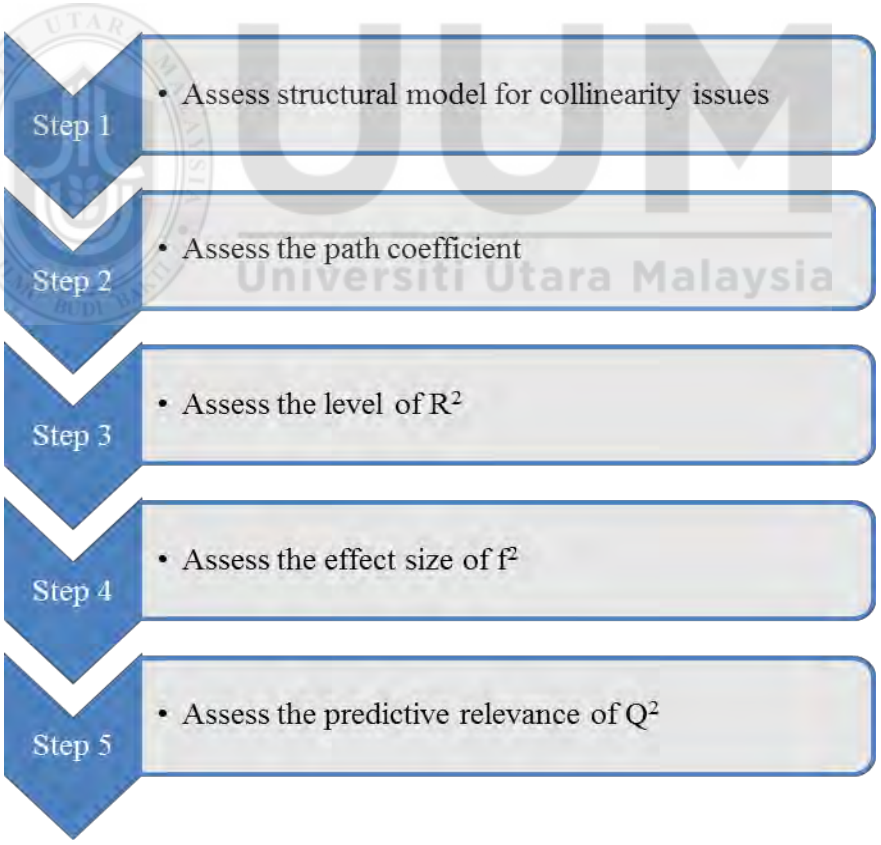

Figure 5.7
The Five-Step Procedure for Structural Model Assessment
Source: Hair et al. (2014)

5.7.1 Step 1: Assess the Structural Model for Collinearity issue

The result from the assessment of structural model may enable the researcher to determine whether the empirical data support the conceptual model. However, before evaluating the structural model, it is important for the researcher to ratify that there was no issue on the collinearity in the structural model. Table 5.15 shows the result of the collinearity test. The VIF score for each constructs is not greater than 10 (Sarstedt & Mooi, 2014; Sekaran & Bougie, 2013) suggesting that collinearity was not the major issues. Sekaran and Bougie (2013) also highlighted that for the study that emphasizes on prediction of endogenous construct, the multicollinearity issue is not a serious problem.

Table 5.15
Result of Collinearity Test

	AA	CL	RQ	SQ
AA		1.065		
CL				
RQ		6.683		
SQ		6.727	1.000	

Note: SQ – Service Quality; RQ – Relationship Quality;
CL – Customer Loyalty; AA – Alternative Attractiveness

5.7.2 Step 2: Assessment of Path Coefficient

5.7.2.1 Direct Relationship

Borrowing from Hair et al. (2014), the significant paths are those that provide empirical support to the proposed causal relationship, meanwhile the paths that are non-significant or those showing opposite direction signs towards the hypothesized, do not support the prior hypotheses. Prior to testing the mediating effect, the bootstrapping with a resample of 500 as proposed in SmartPLS 3.2.4 was run. This

process enables the researcher to get the t-value that indicates the significance of direct relationship. The bootstrapping result also demonstrates path coefficient value as illustrated in Table 5.16 and Figure 5.8.

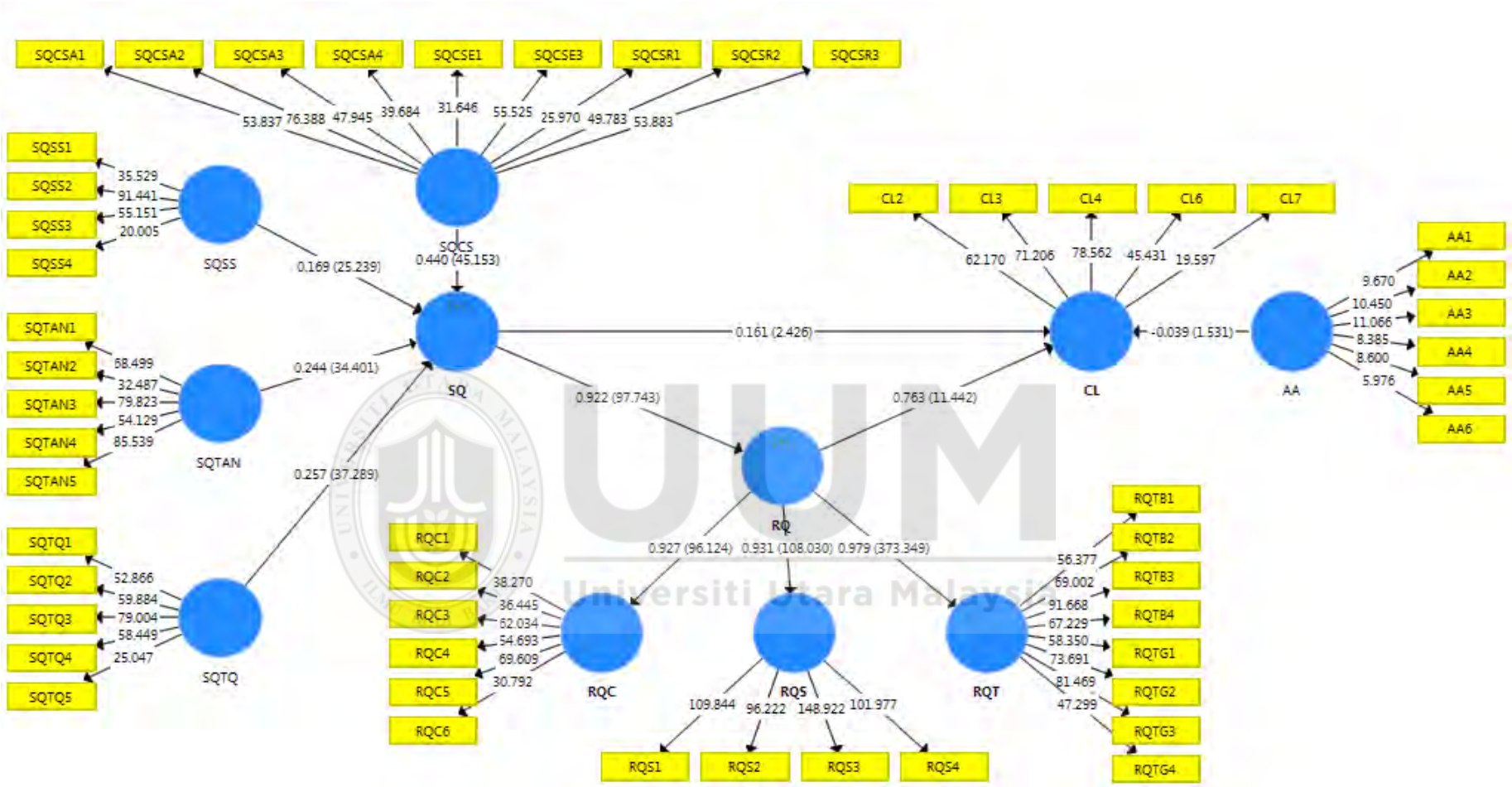

Figure 5.8
Direct Path Coefficient of the Structural Model
Note: SQ – Service Quality; SQCS - Customer Service; SQTAN – Tangibility; SQTQ – Technical Quality; RQ – Relationship Quality; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQT – Relationship Trust; CL – Customer Loyalty; AA – Alternative Attractiveness

Further to that, the detail results of direct relationship are discussed as follows:

H1: There is positive relationship between automotive after-sales service quality and customer loyalty.

The output from algorithm and bootstrapping showed a result of significant association between automotive after-sales service quality and customer loyalty ($\beta = 0.161$, $t = 2.426$, $p < 0.01$). Therefore, Hypothesis 1 is supported.

H2: There is positive relationship between automotive after-sales service quality and relationship quality.

The second hypothesis also showed a positive and significant relationship between automotive after-sales service quality and relationship quality ($\beta = 0.922$, $t = 97.743$, $p < 0.01$). Thus, Hypothesis 2 is also supported.

H3: There is positive relationship between relationship quality and customer loyalty.

As the path coefficient from relationship quality and customer loyalty was significant and positive ($\beta = 0.763$, $t = 11.442$, $p < 0.01$), Hypothesis 3 received empirical support.

Each of the three hypotheses on direct relationship shows significant findings. Below Table 5.16 summarizes the result of direct relationship.

Table 5.16
Summary Results of Direct Relationship

Hypotheses	Relationship	Beta	*SE*	t-value	Decision
H1	SQ -> CL	0.161	0.066	2.426**	Supported
H2	SQ -> RQ	0.922	0.009	97.743**	Supported
H3	RQ -> CL	0.763	0.067	11.442**	Supported

Note: *p < 0.05 (t > 1.645); **p < 0.01 (t > 2.33)

SQ – Service Quality; RQ – Relationship Quality; CL – Customer Loyalty; SE – Standard Error

5.7.2.2 Testing the Mediating Effect of Relationship Quality

After the relationships were tested, the test of mediation effect was executed. In assessing the effect, the PLS-SEM bootstrapping with a resample of 500 was performed. The bootstrapping produced the path coefficient indirect effect and t-value to test the mediation effect. To further confirm the mediation effect in this study, the bootstrapping was also performed in order to determine bootstrapping confidence interval upper and lower level.

H4: Relationship quality mediates the relationship between automotive after-sales service quality and customer loyalty.

As shown in Table 5.17, the bootstrapping analysis produced that the indirect effect (β= 0.702) was significant at t-value of 11.898. In addition, the indirect effect 95% Bootstrapped Confidence Interval (LL = 0.596, UL = 0.822), did not straddle an 0 in between, signifying there is mediation effect of relationship quality in the association between automotive after-sales service quality and customer loyalty. Besides, the result also revealed the significant mediating effect (β= 0.702, t-value = 11.898, p < 0.05) and thus, the hypothesis 4 was supported.

Table 5.17
Result for Mediating Effect

				Bootstrapped Confidence Interval		
Hypothesis	**Relationship**	**Indirect Effect**	**t-value**	**95% LL**	**95% UL**	**Decision**
H4	SQ -> RQ -> CL	0.702	11.898**	0.596	0.822	Supported

Note: *p < 0.05 (t > 1.96); **p < 0.01 (t > 2.58)
SQ – Service Quality; RQ – Relationship Quality; CL – Customer Loyalty; LL – Lower Limit; UL – Upper Limit

5.7.2.3 Testing Moderating Effect

Moderator which is also known as contingent variable usually helps changing the relationship between the two constructs; that is the predictor and the outcome according to the value or gradient of the moderator. Following Hair et al. (2014), the moderator has the potential to directly influence the relationship between the exogenous and endogenous latent variable. In this study, the alternative attractiveness is observed as moderating variable affecting the relationship between relationship quality and customer loyalty. Table 5.18 and 5.19 present the result of moderating effect and Figure 5.9 graphically illustrates the moderating effect plot. In addition, Figure 5.10 illustrates the test of moderating effect in a structural model.

H5: Alternative attractiveness moderates the relationship between relationship quality and customer loyalty; where the positive relationship between relationship quality and customer loyalty is stronger in organization with higher alternative attractiveness than the one with lower alternative attractiveness.

Since the assessment in this study involved a large number of questionnaires, the researcher employed product indicator approach in measuring the moderating effect of alternative attractiveness on the relationship between relationship quality and

customer loyalty. Subsequent to that, Table 5.16 showed the t-value of 2.123, which is greater than the cut-off value of 1.645 that indicates statistically significant result. As a result, the researcher successfully rejects the null hypothesis because there is evidence of moderating effect of alternative attractiveness on the relationship between relationship quality and customer loyalty ($\beta = 0.044$, $t = 2.123$, $p < 0.05$). Thus, H5 was supported.

Table 5.18
Result for Moderating Effect

Hypothesis	Relationship	Beta	t-value	Decision
H5	RQ * AA -> CL	0.044	2.123*	Supported

Note: *p < 0.05 (t = 1.645)
RQ – Relationship Quality; AA – Alternative Attractiveness; CL – Customer Loyalty

The moderating effect is also explained by the changes in R^2 value of customer loyalty as illustrated in Table 5.19. After moderating, the value of R^2 changed from 0.817 to 0.821; increased by 0.004 which indicates a small moderating effect.

Table 5.19
R-square Changes Due to Moderating Effect

	Before Moderating		After Moderating		R^2 Change
Construct	R^2	Result	R^2	Result	
Customer Loyalty	0.817	Substantial	0.821	Substantial	0.004

Indeed, the moderating plot as illustrated in Figure 5.9 also proves that there was small effect of alternative attractiveness on the relationship between relationship quality and customer loyalty. The gradient for high AA which is higher than low AA indicates that the changes in one unit of RQ will increase CL by higher value. It

means that the higher the level of alternative attractiveness, the stronger the relationship between relationship quality and customer loyalty.

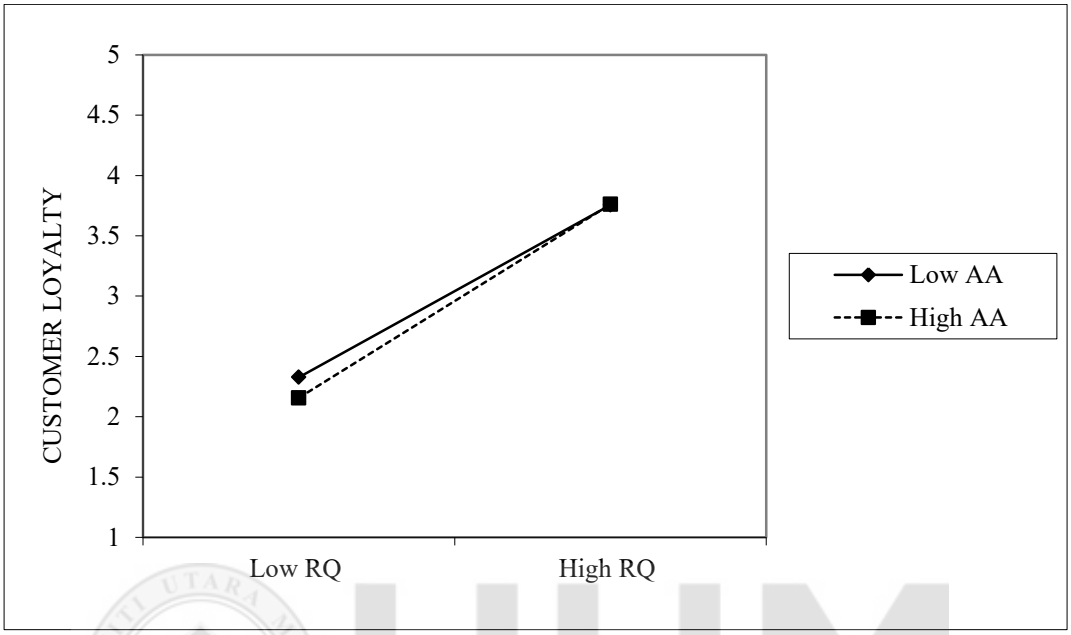

Figure 5.9
Moderating Effect of AA on the Relationship between RQ and CL
Note: AA – Alternative Attractiveness; RQ – Relationship Quality; CL – Customer Loyalty

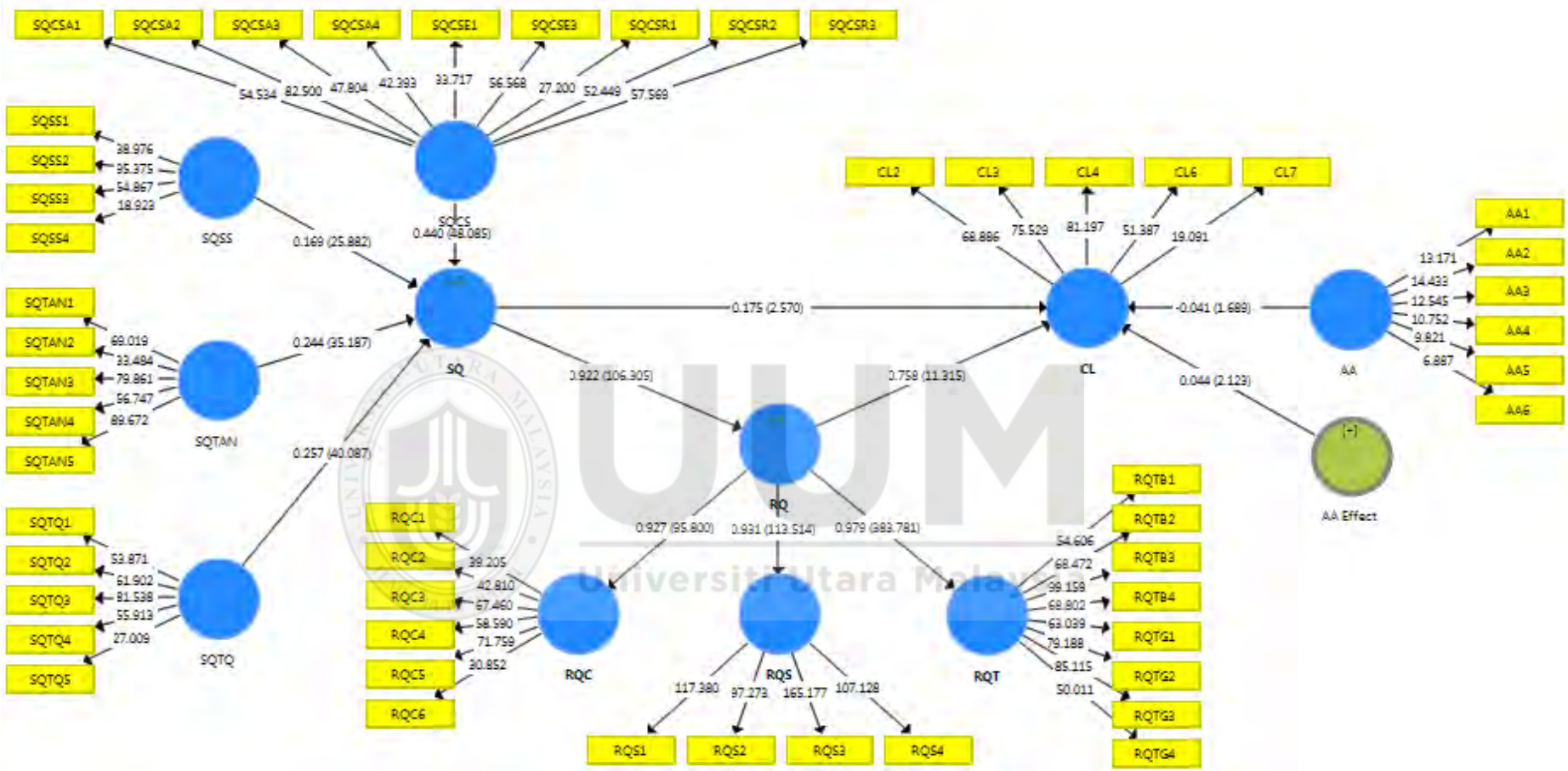

Figure 5.10
t-value of Moderating Effects in Structural Model
Note: SQ – Service Quality; SQCS - Customer Service; SQTAN – Tangibility; SQTQ – Technical Quality; RQ – Relationship Quality; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQT – Relationship Trust; CL – Customer Loyalty; AA – Alternative Attractiveness

Based on the assessment of structural model path coefficient that examined the relationship between the construct via bootstrapping procedure, the summary results of the hypotheses are presented in Table 5.20. As presented, each of the five hypotheses tested received empirical support.

Table 5.20
Summary of Hypotheses Results

Hypotheses	Statement of Hypotheses	Results
Results of Direct Relationship		
Hypothesis 1 (H1)	There is positive relationship between automotive after-sales service quality and customer loyalty.	Supported
Hypothesis 2 (H2)	There is positive relationship between automotive after-sales service quality and relationship quality.	Supported
Hypothesis 3 (H3)	There is positive relationship between relationship quality and customer loyalty.	Supported
Results of Mediation Effect		
Hypothesis 4 (H4)	Relationship quality mediates the relationship between automotive after-sales service quality and customer loyalty.	Supported
Results of Moderation Effect		
Hypothesis 5 (H5)	Alternative attractiveness moderates the relationship between relationship quality and customer loyalty; where the positive relationship between relationship quality and customer loyalty is stronger in organization with higher alternative attractiveness than the one with lower alternative attractiveness.	Supported

5.7.3 Step 3: Assessment of the Level of R^2

The third assessment involved the evaluation of predictive power of structural model using R^2 values (coefficient of determination) of endogenous construct (Chin, 2010; Henseler, Ringle, & Sinkovics, 2009). Table 5.21 demonstrates the R^2 values of each endogenous latent variables of this study. According to the rule of thumb described by

Cohen (1992) and Cohen (2013), R^2 values of 0.26 indicates substantial; 0.13 moderate, and 0.02 weak. Relatedly, the R^2 value of 0.850 for relationship quality was substantial. This indicates that exogenous construct of service quality contributed 85.0% of the variance in relationship quality and for every one unit changes in service quality; relationship quality changes by 85.0%. In addition, the R^2 value of 0.818 for customer loyalty was also substantial which means that service quality and relationship quality explained 81.8% of the variance in customer loyalty. The substantial result indicates the high influence of exogenous constructs in explaining the structural model.

Table 5.21
R-square of Endogenous Latent Constructs

Construct	R Square	Result
Relationship Quality	0.850	Substantial
Customer Loyalty	0.818	Substantial

Note: AA – Alternative Attractiveness; RQ – Relationship Quality; CL – Customer Loyalty

5.7.4 Step 4: Assessment of Effect Size f^2

Next, the researcher continued with assessment of predictor constructs which involved determination of the effect size of Cohen (f^2). Following Cohen (2013) and Hair et al. (2014), f^2 values of 0.35, 0.15, and 0.02 are considered large, medium, and small respectively. Table 5.22 presents the effect size (f^2) on both endogenous constructs; relationship quality and customer loyalty. The effect size (f^2) value of customer loyalty indicates small for service quality (SQ), large for relationship quality (RQ) and also small for alternative attractiveness (AA). Relationship quality shows the largest effect size; f^2 = 0.474 (without moderating) and f^2 = 0.479 (with

moderating) on customer loyalty, compared to service quality (f^2 = 0.019 without and f^2 = 0.025 with moderating), as well as alternative attractiveness (f^2 = 0.014). This indicates the importance of relationship quality in explaining customer loyalty.

In addition, the effect size of service quality as exogenous variable on relationship quality shows that service quality has larger effect (f^2 = 5.681) on relationship quality compared to its effect on customer loyalty (f^2 = 0.019). This indicates the importance of service quality in explaining relationship quality compared to customer loyalty. This range of effect sizes was reasonable as there were various factors that affect customer loyalty. Hence, it indicates that the estimated model fitted the data very well.

Table 5.22
Effect Sizes on Customer Loyalty and Relationship Quality

Construct	**Effect Size on RQ**		**Effect Size on CL**			
			f^2 (without moderator)		**f^2 (with moderator)**	
			f^2	**Effect Size**	**f^2**	**Effect Size**
SQ	5.681	Large	0.019	Small	0.025	Small
RQ	-	-	0.474	Large	0.479	Large
AA*RQ	-	-	-	-	0.014	Small

Note: AA – Alternative Attractiveness; RQ – Relationship Quality; CL – Customer Loyalty; SQ – Service Quality

5.7.5 Step 5: Assessment of the Predictive Relevance (Q^2)

To analyse the predictive relevance, one needs to examine the criterion of predictive accuracy. For this purpose, the Stone-Geisser's Q^2 value was employed (Geisser,

1974 & Stone, 1974: as cited in Hair et al., 2014) which involved the blindfolding procedure. Basically, Q^2 value can be obtained from two different approaches. They are (1) cross-validated redundancy and (2) cross-validated communality. Cross-validated redundancy approach develops path estimates for both; the path for structural model (scores of the predictors constructs) and the path for measurement model (target endogenous construct). Instead, the cross-validated communality approach only estimates the path for endogenous construct and excludes the structural model in anticipating the eliminated data points.

As recommended by Hair et al. (2014), this study thereby employed the cross-validated redundancy approach to measure Q^2 in which it considers the structural model (the main component of the path model) in predicting the omitted data points. The cross-validated redundancy (Q^2) of both endogenous constructs shows the value of more than zero (i.e. 0.627 for relationship quality and 0.630 for customer loyalty). These values indicate that service quality possess predictive capacity over relationship quality and customer loyalty, and therefore demonstrates sufficient predictive relevance for the model. Table 5.23 and Figure 5.11 illustrated the results for the predictive relevance of the model.

Table 5.23
Summary Result for Predictive Relevance (Q^2) of Endogenous Constructs

Constructs	Q^2	R^2	Result of Predictive Relevance
Relationship Quality	0.627	0.850	Yes
Customer Loyalty	0.630	0.818	Yes

Note: Omission distance 7

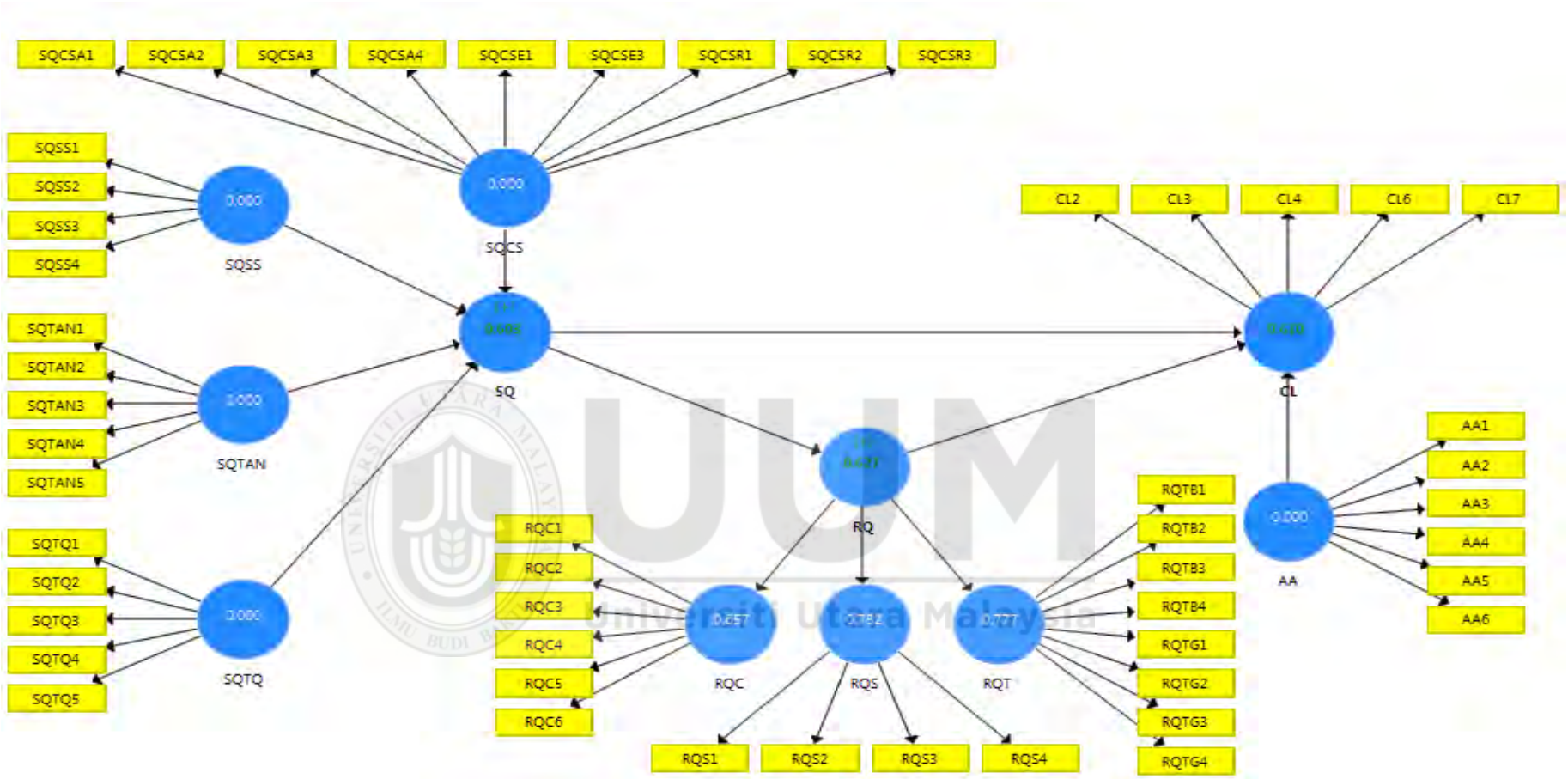

Figure 5.11
The Predictive Relevance (Q^2) of Endogenous Constructs
Note: SQ – Service Quality; SQCS - Customer Service; SQTAN – Tangibility; SQTQ – Technical Quality; RQ – Relationship Quality; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQT – Relationship Trust; CL – Customer Loyalty; AA – Alternative Attractiveness

5.8 Summary of the Chapter

This chapter reported the findings of the research. The researcher used SPSS 23 when explaining the demographic profile of the respondents. However, in the section of testing reliability and validity of the measures, the PLS-SEM was employed. The bootstrapping technique of PLS-SEM was used as the tool to test the predetermined hypotheses. Generally, the measurement model of this study showed a deemed satisfactory and acceptable result, as indicated by the sufficient evidence of reliability, convergent validity and discriminant validity. Following the measurement model, was a test of structural model for hypothesis testing. The next chapter discusses the findings, the implications of the study to practitioner and future research recommendation. The chapter also includes the limitations of study and some closing remarks of the thesis.

CHAPTER 6

DISCUSSION, CONCLUSION AND RECOMMENDATION

6.1 Introduction

This chapter focuses on the revision and discussion of data analysis results. It also recaps the research objective and research question of the study as discussed in the earlier chapter. The chapter further discusses the findings together with justifications of results. Next, it highlights both the theoretical and managerial contribution of the study. In the later section, it highlights on the limitation of study and outlines the potential direction for future study. Lastly, the conclusion is made that recapitulates the entire chapter of one to six.

6.2 Recapitulation of the Study

Drawing from the social exchange theory (SET) (Blau, 1960; Homans, 1958), this study basically examined the relationship between automotive after-sales service quality, relationship quality, alternative attractiveness, and customer loyalty. Besides, it also investigated the mediating effect of relationship quality on the association between automotive after-sales service quality and customer loyalty, also the moderating effect of alternative attractiveness on the linkage between relationship quality and customer loyalty. To realize all these objectives, data were gathered from the customers of national carmakers who were waiting for car service and maintenance in the Northern branches‘ of national carmakers. Of 384 questionnaires circulated, 322 were collected (97.69%) and 312 used for further analysis by using SPSS and PLS-SEM. The significance levels determined for decision on the hypotheses were based on 0.05 and 0.01 critical level.

All of five hypotheses on the direct relationship, mediating including moderating effect were supported. The findings strongly supported the social exchange theory (SET) when the direct effect of automotive industry after-sales service quality, mediating effects of relationship quality and moderating effect of alternative attractiveness demonstrated significant change in the relationship. Table 6.1 below depicted the summary of research objective including the result and its interpretation.

Table 6.1
Summary of Research Objective, Result and Interpretation

Research Objective		hypothesis	Result	Interpretation
RO1	To examine the relationship between automotive after-sales service quality and customer loyalty in the context of Malaysian national car maker.	There is positive relationship between automotive after-sales service quality and customer loyalty.	Supported	An organization that deliver high quality of service will also secure a higher level of customer loyalty
RO2	To examine the relationship between automotive after-sales service quality dimensions and relationship quality.	There is positive relationship between automotive after-sales service quality and relationship quality.	Supported	An organization that deliver high quality of service will secure a longer term of customer-service provider relationship
RO3	To examine the relationship between relationship quality and customer loyalty in the context of Malaysian national carmakers.	There is positive relationship between relationship quality and customer loyalty.	Supported	An organization that maintained a high quality customer-service provider relationship will secure higher level of customer loyalty.
RO4	To examine the mediation effect of relationship quality on the relationship between automotive after-sales service quality and customer loyalty in the context of Malaysian national carmakers	Relationship quality mediates the relationship between automotive after-sales service quality and customer loyalty	Supported	A high quality customer-service provider relationship will be an intermediary to boost the association between automotive after-sales service quality and customer loyalty

Table 6.1 (Continued)

Research Objective		Hypothesis	Result	Interpretation
RO5	To examine the impact of competition variable i.e alternative attractiveness as moderator between relationship quality and customer loyalty in the context of Malaysian national carmakers.	Alternative attractiveness moderates the relationship between relationship quality and customer loyalty; where the positive relationship between relationship quality and customer loyalty is stronger in organization with higher alternative attractiveness than the one with lower alternative attractiveness.	Supported	The more attractive the alternative, the stronger the association between relationship quality and customer loyalty.

Subsequent to that, there were detail discussions on the research findings. In doing that, the first segment deliberates on the direct relationship between automotive after-sales service quality and relationship quality with customer loyalty. Next, the second segment is dedicated to clarifying the result on mediation and moderation effect.

6.3 Discussions of Results

6.3.1 Relationship between Automotive After-sales Service Quality and Customer Loyalty

Guided by the literature, this study predicted a positive relationship between automotive after-sales service quality and customer loyalty, which in this study received empirical support. As hypothesized, the higher the quality of service, the higher the level of customer loyalty. The focused of evaluation of this study is the service delivered by the Malaysian national carmakers. The evaluation was based on the repeated transactions taking place during the period of free warranty given by the organizations to each car registered. The transactions have created a mutually beneficial relationship between both parties; customer and service provider.

The finding strongly supported the social exchange theory (SET) which outlined on the higher level of loyalty as a result of repeated transaction between the customer and the service provider (Chahal & Kumari, 2011). The quality of service from the previous service transaction will determine the act of loyalty behaviour (Cropanzano & Mitchell, 2005). Indeed, only high quality of service may allow for a future transaction and develop a relationship which indicates loyalty (Crosby et al., 1990; Roberts et al., 2003). In this study, the automotive after-sales service quality was drawn upon four dimensions; customer service, tangibility, technical quality and support service. To capture the after-sales service industry‘s unique characteristics, the dimensions of service quality measurement were regrouped and added according to extant literature. Those dimensions were predicted to enhance the level of customer loyalty towards national carmakers.

Customer service which was developed based on SERVQUAL mainly described the functional process of service delivery. As expected, customer service was the most important predictor for automotive after-sales service quality. This finding is similar with previous researcher who postulated that the intangible factors related to customer service or empathy in specific was the important predictor of customer loyalty to the sales person (Wong & Sohal, 2003). Wong and Sohal (2003) also concluded that the human factor related to customer kindness promotes higher level of customer loyalty in car after-sales service. This result is also parallel to that found previously where the customer service positively related to customer loyalty through customer satisfaction (Jahanshahi et al., 2011). When the customer‘s well-being has been taken care of by the service provider, the act of loyalty behaviour such as recommendation, positive word-of-mouth, willingness to pay premium price will take place and subsequently benefited the service organization. In this situation, the premium quality customer service may act as the source of competitive advantage to differentiate the national carmakers from their competitors.

Technical quality was also found significant in enhancing the level of customer loyalty after customer service. The result indicates that the higher the customer perceived the quality technically; the willingness to stay with the current service organization is higher. As emphasized by Ramayah, Samat, and Lo (2011), the least important of technical quality compared to functional quality can be explained as related to the ability of most organizations to provide similar technical ability, but functional quality served as an important means of service differentiation. The significant relationship empirically indicates the belief that the national carmakers are the right organization to take care of their vehicle and consequently promise higher

loyalty towards national carmakers. This finding is in line with the previous study that tested technical quality in different industry settings involved in healthcare service where the technical aspects significantly influence customer loyalty (Chahal & Kumari, 2011).

In the meantime, tangibility was found to be a significant contributor of service quality after customer service. This relationship provides empirical evidence on the importance of tangible factor as part of service quality measure. Service provider must not ignore the tangible factors associated to service industry (Yieh et al., 2007). As such, service providers should maintain a high standard on tangible elements as it affects the overall perception of quality standards and their loyalty behaviour (Yieh et al., 2007). Consistent with the previous study on car service industry, the tangible factor was tested as one of the important drivers that leads to loyalty (Bouman & Wiele, 1992).

In line with the formulated hypothesis, a significant and positive relationship between support service and customer loyalty was found. Even though the weight contributed by support service is relatively lower, the significant result revealed it as one of important criteria that is used to measure service quality. As emphasized by Ulaga and Eggert (2006), other than the human factors considered in functional quality SERVQUAL, support service played an important role in influencing the level of customer loyalty. The special characteristics of service for example, easily accessible information or easily contactable in the case of emergency may support the service delivery process in after-sales service. Along with that, the highly developed information technology and highly demanded customers need to be taken care of to ensure business sustainability. Furthermore, to secure highly loyal customer, service

organization must be highly responsive on service recovery other than the main service delivery (Jones & Sasser, 1995). Indeed, the excellent quality of service needs an integration of support service (Andreassen & Olsen, 2008).

Taken together, the finding provided empirical evidence of a significant positive relationship between automotive after-sales service quality and customer loyalty. Aligned with the social exchange theory (SET) guiding this study, the on-going relationship between customer and the service provider has motivated a mutually long-term benefited relationship with high service quality delivered, and hence resulted in high level of customer loyalty outcome. This shows that the relationship allows the service provider to deliver high quality of service and facilitate them to capture a higher level of customer loyalty. The results are parallel to that of earlier studies that concluded that service quality is the vital precursor to secure higher level of customer loyalty (Bell, 2005; Caceres & Paparoidamis, 2007; Caruana, 2002; Clottey et al., 2008; Curry & Gao, 2012; Etemad-Sajadi & Rizzuto, 2013; Ismail et al., 2006; Lai, 2015; Lee & Lambert, 2008; Qayyum et al., 2013; Radder & Han, 2013; Roberts et al., 2003; Wong & Sohal, 2003, 2006; Yieh et al., 2007).

In conclusion, it is essential to reveal that this present study offers empirical evidences regarding the significant contribution of service quality from mutually benefited relationship perspective to customer loyalty towards Malaysian national carmakers. Given that most of the literatures on service quality reflect the various dimensions suited to the context and objective of study, this study extended the literature by integrating the element of support service in addition to the well-established service quality dimensions. The common measurements were unable to capture the unique

characteristics in different industry settings. Indeed, the dynamics in consumer needs and behaviour need for a new paradigm as service quality measures.

Hence, this study provides empirical evidences that the automotive after-sales service quality dimensions such as customer service, tangibility, technical quality, and support service are the important contributors to secure more loyal customer towards Malaysian national carmakers. In this respect, changes should be made on the measurement of service quality in accordance with specific industry settings. This would give them the signal on the important element to focus in serving customers in automotive after-sales service. In fact, it would also help the national carmakers to strategize their limited resources effectively by concentrating on the new paradigm of service quality and subsequently allows them to be a highly reputable organization with long-term sustainability.

6.3.2 Relationship between Automotive After-sales Service Quality and Relationship Quality

As hypothesized, a significant and positive relationship was found in the hypothesis formulated between automotive after-sales service quality and relationship quality. This finding is in line with social exchange theory (SET) that delineates the relationship developed from repeated transaction as an impact of high quality of service. The parties in the relationship obliged to reward each other and as a result the high quality of service delivered by the service provider leading to a long-term relationship with the customer (Blau, 1960; Cropanzano & Mitchell, 2005). The higher the quality of service delivered by the service provider, the stronger their relationship with the customer. Service quality plays the important role as the

antecedent of high-quality relationship development and only high-quality standards of service bring back the customer (Crosby et al., 1990; Roberts et al., 2003). As emphasized by Crosby et al. (1990), a close customer-service provider relationship needs a combination of both; service quality and relationship quality.

The finding is also consistent with previous findings on the positive role of high quality of service (Caceres & Paparoidamis, 2007; Keating et al., 2003; Pepur et al., 2013; Roberts et al., 2003; Wong & Sohal, 2002). Relate it to the theory of social exchange; relationship quality is an intangible aspect that explained the unique characteristic of relationship as it complements the high quality of service rendered by the service provider. Organizations that delivered the high quality of service and at the same time possess a good quality of relationship with their customer and would be having advantage on those who are not (Caceres & Paparoidamis, 2007; Doaei et al., 2011; Vieira, 2013).

The fulfilled needs and demands from the high quality of service during after-sales service relationship created longer customer-service provider relationship and the satisfaction, trust and commitment has secured brands promotion and competitive advantage on the side of national carmakers. In short, when national carmakers tailored their activities and focus on servicing the customer‘s at the most possible highest quality, it may contribute to the longer tenor of mutually benefited relationship.

6.3.3 Relationship between Relationship Quality and Customer Loyalty

In this study, relationship quality was found to positively enhance customer loyalty. As emphasized by Hennig-Thurau et al. (2002), customer loyalty is the outcome of relationship marketing. Parallel to social exchange theory (SET) from the reciprocal perspective, the high quality of relationship may contribute to the higher level of customer loyalty in a form of reward from the long-term relationship with the existing customer (Williams, 2012). In addition, as highlighted by Athanasopoulou (2009), it offers five times more profit to maintain the relationship with the existing customer compared to acquiring the new one.

As the vehicle manufacturer, the national carmakers offer free warranty which at the same time keeps existing customer to stay until expiry period of the free warranty. The high quality customer-service provider relationship is the source of competitive advantage (Doaei et al., 2011; Vieira, 2013) that obstructs the existing customer to be influenced by the attractiveness of the competitors. The existing customer not only promise handsome profit (Caceres & Paparoidamis, 2007; Doaei et al., 2011; Vieira, 2013) but also plays important role in spreading positive word-of-mouth in promoting national brands (Nordin et al., 2016). The decent publicity might contribute positively to the uprising of customer loyalty (Prasad & Aryasri, 2008).

The finding is consistent with the previous findings that delineate the positive role of relationship quality in enhancing customer loyalty (Doaei et al., 2011; Foster & Cadogan, 2000; Herington & Weaven, 2007; Ndubisi, 2007a; Ndubisi et al., 2007; Prasad & Aryasri, 2008). According to social exchange theory (SET), the close relationship between the service provider and the customer may secure future

repeated transaction. The relationship served as the source of competitive advantage for the national carmakers being the chosen one (Doaei et al., 2011; Vieira, 2013). Also, as emphasized by Chen and Myagmarsuren (2011), the strong relationship may stop customer to switch to a competitor even if influenced by more attractive financial promotion.

6.3.4 The Mediation Effect of Relationship Quality on the Association between Automotive After-sales Service Quality and Customer Loyalty

In line with the earlier developed hypothesis, this study has found automotive after-sales service quality as the factor to generate higher customer loyalty through relationship quality. From theoretical standpoint, the mediation role of relationship quality can be elucidated via social exchange theory (SET). According to social exchange theory (SET), the repeated transactions taken place during the period of free service warranty may develop a mutually reciprocal relationship between customer and the service provider of national carmakers and subsequently secure the long-term future transactions (Blau, 1960; Cropanzano & Mitchell, 2005). The mutually beneficial relationship rewards the customer in terms of reduce perceived risk and uncertainty about the transaction, and the national carmakers may enjoy the benefit of increased the act of loyalty behaviour such as good publicity.

The significant findings of relationship quality as mediator which is measured based on three interrelated dimensions proved to be the intervening factor that carries the intangible characteristics in the association of service quality with the rising level of customer loyalty. The stronger customer-service provider relationship in after-sales service may create more sales as a result of increased level of satisfaction, trust and

commitment. These interchangeable dimension of satisfaction, trust and commitment are the three established dimensions of relationship quality that are interrelated and satisfaction as the first level to fulfil may subsequently allow for development of trust and followed by commitment towards the national carmakers (Zineldin, 2000).

In terms of its importance, relationship trust has shown the highest coefficient which indicates its contribution to relationship quality construct. Put it differently, customer in automotive after-sales service perceived that the most important basis for relationship development and continuity would depend upon trust towards the service provider. The coefficient for relationship commitment and relationship satisfaction shows almost similar value but by comparison, relationship satisfaction proves to be the second important dimension that contributed to relationship quality. The phases of high quality relationship development started with the satisfied customers in after-sales service who spread positive word-of-mouth which may benefit the national carmakers in two-fold; promoting brands and products (Nordin et al., 2016), and next, maintain the existing customer to trust the national carmakers and stay committed for a long lasting relationship (Zineldin, 2000).

The relationship quality as a mediator is similar to the previous studies (Al-alak, 2010; Caceres & Paparoidamis, 2007; Huang et al., 2013; Hyun, 2010; Kim et al., 2006; Lin & Ding, 2005; Prasad & Aryasri, 2008; Roberts et al., 2003; Wong & Sohal, 2006) that also found relationship quality as important intermediary to influence customer loyalty. Service quality needs to be integrated with relationship quality as service quality alone cannot explain the intangible part of the relationship (Crosby et al., 1990; Roberts et al., 2003). Furthermore, relationship quality and customer loyalty are the two ingredient for business success (Prasad & Aryasri, 2008)

and as emphasized by Hennig-Thurau et al. (2002), customer loyalty is the outcome of relationship building. The similar study by Roberts et al. (2003) found that the intangible aspect of relationship possessed an additional power to explain customer loyalty on top of service quality.

Overall, the result clearly indicates that relationship quality plays a significant role as intermediary in the link between automotive after-sales service quality and customer loyalty towards national carmakers. As emphasized by social exchange theory (SET), the mutually beneficial relationship rewards the customer in terms of reducing perceived risk and uncertainty about the transaction, and the national carmakers may enjoy the benefit of increased the act of loyalty behaviour such as good publicity. The higher the customer of national carmakers after-sales service perceived the quality of service, the more likely they would perceive a stronger quality of the relationship, and the more likely they express their act of loyalty. It proved that the customer‘s perception of the quality of service is critical in driving the stronger relationship with national carmakers.

Taken together, the high quality of service motivates customer to return to develop further relationship with the service provider, which in turn raising the level of loyalty in terms of promoting the brands and products and also keep on sending their vehicles to the national carmakers after the warranty expiry. This means that the national carmakers need to ensure the services are the top level to motivate the customer to return for relationship development and consequently secure the existing customer for improved level of loyalty. Hence, it can be concluded that service quality is important to generate these two relationship marketing outcome; attitudinal outcome

(relationship quality) and behavioural outcome (customer loyalty)(Wong & Sohal, 2006).

6.3.5 The Moderating Effect of Alternative Attractiveness on the Association between Relationship Quality and Customer Loyalty

Alternative attractiveness moderates the relationship between relationship quality and customer loyalty; where the positive relationship between relationship quality and customer loyalty is stronger in organization with higher alternative attractiveness than the one with lower alternative attractiveness. This study found that alternative attractiveness positively influences the relationship between relationship quality and customer loyalty. The finding suggests that the more attractive the competitor, the stronger the relationship between relationship quality and customer loyalty. Theoretically, the moderation role of alternative attractiveness can be explained by social exchange theory (SET).

According to social exchange theory (SET), each party in the relationship tend to reciprocate each other with the rewards received from the other party. The reciprocity applied when the customers expect to receive the higher quality of service from the service provider for the higher level of loyalty given and as a reward, the service provider tends to increase the quality of service as well as quality of relationship (i.e non-material factor) with the customer (Wieseke et al., 2014). The results of demographic information on the perception towards price charged for the service acquired explained the theory. Only 21.8% of the respondents perceived that the price is low (i.e less than RM200). The rewards expected for the customer to stay loyal may not only in the form of material, but it can be the feeling of being recognized in the

high-quality relationship. In relation to social exchange theory (SET), Blau (1960) emphasized that the customer will remain in the relationship as long as the offer (i.e recognition in a high-quality relationship) from the current service provider is more attractive compared to the other available alternatives.

In conclusion, the finding showed that even though the alternatives as referred to those ordinary workshops that offer the similar service and maintenance are perceived as more attractive, the role of relationship quality is still important in enhancing customer loyalty. The more attractive the alternative, even the small increase in relationship quality will raise loyalty at higher proportion. This means that national carmakers must focus on the quality of relationship to boost the loyalty level as the customers still perceived that no matter how good the offer made by competitor, they will still be committed to maintain the relationship as long as they are satisfied and trust the service provider of national carmakers.

6.4 Contribution of the Study

As evident from the data analysis and findings reported in chapter 5, this study has provided significant theoretical, methodological and managerial standpoint. Based on the foregoing, the contributions are discussed below.

6.4.1 Theoretical Contribution

Previously, researchers have found positive relationship between service quality and customer loyalty (Bell, 2005; Caceres & Paparoidamis, 2007; Caruana, 2002; Clottey et al., 2008; Curry & Gao, 2012; Etemad-Sajadi & Rizzuto, 2013; Ismail et al., 2006; Lai, 2015; Lee & Lambert, 2008; Radder & Han, 2013; Roberts et al., 2003; Wong &

Sohal, 2003; Yieh et al., 2007). However, the recommendation to revisit the service quality measurement has motivated the previous researchers to focus on various dimensions of service quality according to different contexts of studies (Bhat, 2012; Lai, 2015; Taylor & Cronin, 1994). The new dimensions and measurement paradigm could provide a better explanation on service quality or determine the behavioural response of consumer (Bhat, 2012; Kashif et al., 2014).

As every industry carries the unique characteristics that might give different finding to contribute to knowledge content on service quality and customer loyalty, this study has regrouped and incorporated service quality into four dimensions; customer service, support service, technical quality and tangibility. The incorporation of different dimensions of service quality and also investigating their causal relationship with customer loyalty and relationship quality in addition to alternative attractiveness simultaneously in a framework is expected to have extended the knowledge boundaries. Eventually, researches outcome confirm that there were causal positive relationships between service quality and customer loyalty (Curry & Gao, 2012; Etemad-Sajadi & Rizzuto, 2013; Lai, 2015; Qayyum et al., 2013; Radder & Han, 2013) and also between relationship quality and customer loyalty (Doaei et al., 2011; Ndubisi et al., 2007; Ndubisi, 2007a; Prasad & Aryasri, 2008). Based on this, it could be said that this current study empirically validates the suggestion by Lai (2015), Kashif et al. (2014) and Bhat (2012) that the automotive after-sales service quality and relationship quality might have a significant influence on customer loyalty.

The studies that mainly focused on service quality regularly applied dichotomous approach in evaluating service quality for example Maiyaki and Mokhtar (2011), Lenka et al. (2010), Clottey et al. (2008) and Caceres and Paparoidamis (2007). This

study that tested service quality in different group has also evaluated service quality separately between the functional and technical quality; and thus contributed to the theory. The indication on the importance of separating service quality into functional and technical was seen in the findings when service quality as second-order construct showed technical quality as the second importance dimension of service quality in explaining customer loyalty. This means that customers in automotive after-sales service are more concerned about the functional quality compared to technical quality while others are more towards technical quality (Kang & James, 2004; Maiyaki, 2012). However, technical quality still shows significant result and therefore confirms the claim by Kang and James (2004) and Maiyaki (2012) on the importance of technical quality especially in automotive after-sales service quality of national carmakers. Hence, it should be integrated in the model of service quality.

Previous studies have suggested examining alternative attractiveness as moderator to reveal its role as competition variable (Athanasopoulou, 2009). Aydin and Özer (2005) also proposed to examine alternative attractiveness in relation to situational factor and how it impacts the behavioural and attitudinal loyalty. Previous studies on customer loyalty also suggested examining alternative attractiveness because its role as competition variable might contribute to a more holistic view of customer loyalty (Jones & Taylor, 2007; Santouridis & Trivellas, 2010). Besides the suggestions from the literature, the social exchange theory (SET) guided this study has emphasized on the mutually benefited customer-service provider relationship and how it generates a higher level of loyalty. As such, considering the suggestions and the social exchange theory (SET), this current study has examined alternative attractiveness as a moderator between relationship quality and customer loyalty and consequently found

that alternative attractiveness positively and significantly moderates the link between relationship quality and customer loyalty.

The established outcome confirms that the presumption due to competition by the ordinary workshops there, the alternative attractiveness moderates the association between relationship quality and customer loyalty. That means the alternative attractiveness tends to strengthen the association between the high-quality customer-service provider relationships and resulted in the outcome of the higher level of customer loyalty. In addition to that, the review of literature also showed that previous studies have examined alternative attractiveness as moderator in between other variables such as between attitude, subjective norm and behavioural control with behavioural intention (Chiu et al., 2013), relationship quality and buyer‘s performance (Song et al., 2012), also trust and satisfaction towards commitment (Sharma & Patterson, 2000); and all of that is different with this current studies. Come to this end, this finding is expected to have significantly contributed to the marketing theory in general and social exchange theory (SET) in specific.

On the similar note, it is evident in the literature that the high quality of customer-service provider relationship might contribute to the outcome of improve level of customer loyalty (Hennig-Thurau et al., 2002). Besides, the high quality of service is the criterion for existing customer to return and consequently promise long-term customer-service provider relationship (Crosby et al., 1990; Roberts et al., 2003). The high quality of relationship is important to explain the intangible part of service quality as the service quality alone is insufficient to explain relationship quality (Crosby et al., 1990). Given the comprehensive reviewed of past studies, which examined the mediation effect of relationship quality, were conducted on other link;

differ from the focus of this study. For example Doaei et al. (2011), investigated the mediation role of relationship quality in the link between relationship marketing tactic and customer loyalty and found that relationship quality did not mediate the relationship between the two variables.

On another note, past studies have also reported positive relationship between service quality and relationship quality (Keating et al., 2003; Pepur et al., 2013; Wong & Sohal, 2002). Besides, there were also previous studies that claim the role of high quality relationship as the factor that influences the loyalty (Chen & Myagmarsuren, 2011; Doaei et al., 2011; Vieira, 2013). Based on the foregoing, this study is confirming the suggestion by Roberts et al. (2003) that very limited studies have integrated service quality, relationship quality and customer loyalty in a framework. Besides, this study also examines the variable of alternative attractiveness as competition factor and subsequently validates its role in affecting customer loyalty. Indeed, the difference in measuring service quality by adding the element of support service and regrouping the SERVQUAL is hoped to contribute significantly to the social exchange theory (SET) and marketing theory in general.

6.4.2 Methodological Contribution

In addition to the theoretical contribution discussed above, this study has attempted to contribute toward significant methodological standpoint. Firstly related to the measurement scales used in this study which were adapted from the various sources especially the dimension of support service. In this regards, it was necessary to cross-validate the measurement scale for its validity and reliability. Many previous studies validated the scales using traditional method such as factor analysis and Cronbach‘s

alpha for reliability confirmation. But, PLS-SEM offered a more systematic and up to date assessment for reliability and validity. Hence, the additional dimensions of support service which were adapted from the similar studies and integrated with other adapted dimension of service quality was validated for measurement and subsequently hypothesized for linkages among variables using PLS-SEM path modelling.

To this end, all the reliability and validity of measurement scales examined indicated by composite reliability, convergent validity and discriminant validity showed that the result obtained in this study is above the minimum recommended threshold. Furthermore, confirmatory factor analysis (CFA) in the measurement model was also tested to confirm on the uni-dimensionality of the constructs examined. As such, it confirmed that all the measures used in this current study were reliable and valid specifically in the context of Malaysian automotive after-sales service and therefore contribute methodologically by establishing the reliability and validity empirically in the context of automotive after-sales service.

Secondly, the testing of the second-order multi-dimensional scale of service quality and relationship quality with four and three dimensions respectively found that both second-order constructs empirically supported and fitted the surveyed data. The two second-order constructs of service quality and relationship quality were verified and found to be distinct but related as evidence from the convergent and discriminant analysis conducted. Consequently, analysis of the multidimensional scale second-order model was comprehensively integrated into the structural model and found adequately fit the empirical data. Again, this study has contributed to the methodological standpoint by offering a parsimonious framework.

6.4.3 Managerial Implication

In this section, managers are provided with an insight on how their customers perceived service quality, how customer-service provider relationship can be enhanced, and understand the role of competitors and the impact of all these factors on customer‘s loyalty behaviour. The managers are given the statistical evidence on the significant causal relationship among the variables studied.

Firstly, the empirical evidence on the significant relationship between automotive after-sales service quality and customer loyalty implies that the national carmakers specifically, the service managers, marketing manager and top management should be more focused on the importance of high service quality standards. The finding showed that the most important dimension of service quality perceived by the customer in automotive after-sales service is functional quality. Comparatively, the effort and resources should be focused on ―how" the service is being delivered by the service provider. The service providers are the one that represent the national carmakers and the loyalty towards the service provider could influence the customer to be loyal to the organizations. The national carmakers should ensure that the service providers are fully equipped with adequate knowledge, and possess a proper technical certificate to gain the customer‘s confidence and high level of trust.

Similarly, technical quality was also found to significantly influence customer loyalty. Besides functional element of service, the ―what" aspect was also found to contribute significantly in explaining the quality of service delivered. Based on this therefore, the national carmakers are supposed to make sure that the service jobs are done successfully without any interruption, vehicle‘s problem solved and the spare parts are

totally genuine as promised. In addition to that, tangibility was also found to be the significant contributor as measure of service quality and showed causal relationship with customer loyalty. This implies that besides the evaluation on the transaction, the customers are also concerned on the physical appearance and the quality of environment offered to them.

Support service as the additional aspect evaluated by the customer in relation to service quality was perceived as the least important dimension of service quality. However, it still possesses significant influence on customer loyalty and thus should be taken seriously by the national carmakers in their strategy development. That means the aspect of technology and communication was able to facilitate the customer in the process of vehicle service. The back office support must also be available at all time in all conditions. The above findings that provide the comparative importance of service quality measure could serve as a guide to assist the national carmakers to identify which service quality dimensions to prioritise in improving their quality of service and subsequently ensure the customer to return for next service after the warranty expires.

Secondly, relationship quality was found to have significant positive relationship with customer loyalty as well as the outcome for automotive after-sales service quality. Relationship quality was also found as the mediator that intermediates the positive role of automotive after-sales service quality and customer loyalty. This finding implies the important role of customer-service provider high quality relationship as the social and emotional relationship benefit other than economic benefit. In ensuring the return of existing customer, the national carmakers should deliver the service in a high degree of appropriateness to make the customer perceived that the benefit they

received was higher than the sacrifice they made. This mainly related to the repeated transactions between the customer and the service provider that develop a long-term mutually beneficial relationship. Likewise, the national carmakers should also balance between the cost for the service and maintenance and the quality of relationship in such a way that customer would perceive more value for the sacrifice made.

Finally, based on the significant result, the finding also offers some important managerial implications regarding the role of alternative attractiveness when it was evident that there was a causal positive effect of alternative attractiveness in the link between relationship quality and customer loyalty. This implies that the more the customer perceived the competitor to be more attractive, the greater would be the impact on customer loyalty. That means a small change in the quality of relationship tends to increase the loyalty at greater level. Again, the quality of relationship which developed stage by stage on the basis of satisfaction, trust and commitment could be the source of competitive advantage to retain the existing customer after the expiry of vehicle service warranty. The national carmakers should invest more on enhancing the service provider‘s capability to manage the elements that affect the customer‘s internal feelings including social and emotional relationship in their transactions.

6.5 Limitations of the Study

Even though the findings of this study offer several contributions with regards to the relationship marketing outcome as influenced by the service quality and competition variable, there are also some limitations that need to be highlighted.

Firstly, instead of using longitudinal approach of data collection, this study used cross-sectional research design where the data collection for this research was completed within a relatively short period of two months. The concern for choosing the cross-sectional approach was that the variables investigated such as service quality, relationship quality, alternative attractiveness, and customer loyalty were subject to evolve over time. Thus, to avoid bias due to time, economic or political changes, the study used cross-sectional data collection. Furthermore, this kind of study is expected to complete within three years‘ time, hence, the study was facing the issue of time and cost constraints and a longer time frame for data collection in longitudinal study is not feasible. However, the causality does not happen by chance as explained in chapter four of methodology and proven by the statistical result in chapter five.

Next, the findings of this study mainly focused on customer loyalty in the context of after-sales service in national carmakers where its evaluation were limited to two perspectives; the recommendation and positive word-of-mouth that resulted in higher level of customer loyalty, and also the willingness of the customer to return for the next service maintenance and repair which resulted in longer term of existing customer-service provider relationship. A different context of study might see customer loyalty from a more suitable perspective related to the context under investigation for example the study on customer loyalty in e-commerce website that defined customer loyalty based customer‘s repeat buying behaviour (Chang & Chen, 2009).

6.6 Recommendation for Future Research

Based on the above-mentioned limitation, the recommendation for future research is presented in this section accordingly. First, the future researcher should opt for the longitudinal approach as the longer period of data collection allowed for better understanding of the changes that happen within a stipulated period of time. In addition, it could add more value when the variables under investigation revealed some changes in trend that influence the customer‘s perception.

In relation to the differences on geographical area, it is suggested that the future researcher conduct a nationwide survey that covers East and West of Malaysia for the purpose of making a comparison on the consumer behaviour among different part of Malaysia. The more heterogeneity among groups may reveal some findings to provide a better insight on current consumer needs and demands which may be valuable for the researchers as a new contribution to the knowledge content and also assist the practitioners in business strategy development. Besides, the future studies should also compare the difference in customer‘s perception between national and non-national carmakers. From the comparison, a more rigorous conclusion can be made to further understand the current pattern of consumer behaviour. In fact, the findings could be generalised to the customers of non-national carmakers.

Finally, other than alternative attractiveness as a moderating variable, the future researchers are recommended to investigate the moderating influence of price and relationship tenure in relation to the variables examined in this current study. The other variables are expected to moderate the relationship between the variables studied.

6.7 Conclusion

Based on the previous research findings, the conclusions for this study are made accordingly:

This study examined the relationship between automotive after-sales service quality and customer loyalty in the context of Malaysian national carmakers. Consistent with the theory, the automotive after-sales service quality has a significant positive relationship with customer loyalty. The more customers perceived that the service of national carmakers is of higher quality, the higher their act of loyalty behaviour as expressed by recommendation and positive word-of-mouth. The efforts in improving the after-sales service process may successfully reflect the good image towards the national carmakers then improve their position in the local automotive market. The study further explored that customer service as the functional factor is the most influential element in determining the high quality of service in the context of automotive after-sales service or specifically national carmakers. However, even though the element of support service is perceived as the least important dimension that measured service quality, the significant finding shows that it is also essential as the measure for service quality that is perceived by the customer of national carmakers after-sales service.

It also investigated the mediation effect of relationship quality and the significant mediation effect of relationship quality between automotive after-sales service quality and customer loyalty and which suggest the need for the national carmakers to focus on developing high-quality customer-service provider relationship besides keeping on delivering the high quality of service to their existing customers. These could promote

the higher level of customer loyalty as the loyalty is given to the organization; not the department doing the related transaction.

Similarly, alternative attractiveness as a moderator has a significant moderating influence on the association between relationship quality and customer loyalty. High alternative attractiveness has a stronger moderating effect on the relationship compared to low alternative attractiveness. That means the more attractive alternative encouraged a higher quality of customer-service provider relationship, and at the same time increased the loyalty towards the national carmakers. In other words, the more attractive the competitor, the more the customers tend to strengthen their loyalty towards the national carmakers with the higher perception on the quality of a relationship.

Finally, as all of the hypotheses were supported, the research model that was developed from the related existing literature, with respect to all the key variables of service quality, relationship quality, alternative attractiveness and customer loyalty, also received total empirical support. Social exchange theory (SET) was used as a basis to explain the theoretical ground. The theory on reciprocal relationship between the customer and the service provider which is explained by the high quality of service delivered has developed long-term high quality of relationship then subsequently resulted in higher level of loyalty as a reward for the national carmakers. Moreover, the findings of the study which is in line with the theory and conceptual model, fits the empirical data well and therefore it could be concluded that the outcome of the research validates the underpinning theory employed.

Further to that, the national carmakers are one of the assets of the country and were established as a national project. In fact, Malaysia is the only country in Asean that produces cars. The existence of national carmakers is special to Malaysian and Malaysians are proud of them. At one time ago, their existence allowed for Malaysian to own at least a brand new car. Besides, their existence also offers substantial numbers of job opportunities and thousands of Malaysians have been trained in the industry. To ensure their long-term sustainability, excellent quality of service is vital to gain the good perception of Malaysian towards the national carmakers and consequently strengthen their position in the local automotive industry. Their capability to compete globally is vital and as empirically found in this study, one of the established sources of competitive advantage is through customer relationship development. As long as the customer perceived that the relationship is beneficial, they will stay in the relationship for life and the faith in the brand (i.e national brand) will promise higher loyalty through the recommendations and positive word-of-mouth.

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APPENDICES

Appendix A

Questionnaire

BORANG SOALSELIDIK

KAJIAN MENGENAI KUALITI SERVIS, KUALITI HUBUNGAN DAN KESETIAAN PELANGGAN

Kajian Terhadap Organisasi Automotif Nasional di Malaysia yang Memberi Servis Selepas Jualan

Kajian Menjurus kepada Doktor Falsafah dalam bidang Pemasaran dijalankan oleh

ZAINIL HANIM BINTI SAIDIN

Di bawah Penyeliaan

PROFESOR MADYA DR. SANY SANURI BIN MOHD MOKHTAR
DR. ROHAIZAH BINTI SAAD
PROFESOR DR. RUSHAMI ZIEN BIN YUSOFF

KOLEJ PERNIAGAAN
UNIVERSITI UTARA MALAYSIA

KERAHSIAAN

Semua maklumat dan jawapan yang diberikan dalam kajiselidik ini akan dianggap rahsia dan hanya untuk tujuan akademik. Sebarang maklumat yang menunjukkan identiti responden tidak akan didedahkan dalam apa jua keadaan.

SEKSYEN A – INFOMASI RESPONDEN / *SECTION A – RESPONDENT'S INFORMATION*

Sila baca soalan di bawah dan pilih (/) jawapan sesuai berkenaan dengan diri anda.
Read the questions below and select (/) the most appropriate answer that describes you.

1. Syarikat Kereta National / National Automotive Company: ( ) Proton ( ) Perodua

2. Umur/ *Age*
   ( ) Daripada 17 hingga 25 tahun/ *Between 17 to 25 years*
   ( ) Daripada 26 hingga 35 tahun/ *Between 26 to 35 years*
   ( ) Daripada 36 hingga 45 tahun/ *Between 36 to 45 years*
   ( ) Daripada 46 hingga 55 tahun/ *Between 46 to 55 years*
   ( ) Melebihi 56 tahun/ *Above 56 years*

3. Jantina/ *Gender:* ( ) Lelaki/ *Male* ( ) Wanita/ *Female*

4. Tahap Pendidikan Tertinggi/ *Highest Level of Qualifications*
   ( ) Sijil Persekolahan (SPM/STPM)/ *School certificates (SPM/STPM)*
   ( ) Diploma/ *Diploma*
   ( ) Ijazah/ *Degree*
   ( ) Pasca Ijazah/ *Postgraduate Degree*

5. Berapakah purata pendapatan anda setiap bulan? / *What is your average monthly income?*
   ( ) Kurang dari RM1,000 / *Less than RM1,000*
   ( ) RM1,001 hingga RM3,000 / *RM1,001 to RM3,000*
   ( ) RM3,001 hingga RM5,000 / *RM3,001 to RM5,000*
   ( ) Melebihi RM5,000 / *More than RM5,000*
   ( ) Tiada pendapatan / *No income*

6. Berapakah **purata bil** yang dikenakan setiap kali anda menghantar kenderaan anda untuk servis biasa atau dibaiki akibat kerosakan? / *What is the **average** total bill charged for the service maintenance or repair?*
   ( ) Kurang RM200/ *Less than RM200*
   ( ) RM201 hingga RM300/ *RM201 to RM300*
   ( ) RM301 hingga RM400/ *RM301 to RM400*
   ( ) Melebihi RM400/ *More than RM400*

SEKSYEN B: DIMENSI KUALITI PERKHIDMATAN (PERKHIDMATAN PELANGGAN, PERKHIDMATAN SOKONGAN, KUALITI TEKNIKAL DAN RUPABENTUK)

SECTION B: SERVICE QUALITY DIMENSIONS (CUSTOMER SERVICE, SUPPORT SERVICE, TECHNICAL QUALITY AND TANGIBILITY)

Tandakan sejauhmanakah anda bersetuju atau tidak bersetuju dengan kenyataan yang diberikan. *Please indicate the extent to which you agree or disagree with the following statements.*

Menggunakan skala dari 1 – 6, **bulatkan jawapan anda**.
Using the scale from 1 – 6, kindly circle your response.

Sangat Tidak Bersetuju 1-------2------ 3------ 4 ------ 5------ 6 **Sangat Setuju**

Strongly Disagree *1-------2------ 3------ 4 ------ 5------ 6* ***Strongly Agree***

Khidmat Pelanggan / C*ustomer Service*								
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
	Maklumbalas/ Responsiveness						
1SMR1	Penyedia perkhidmatan memberi servis dengan cepat. *The service provider provides prompt services.*	1	2	3	4	5	6
2SMR2	Penyedia perkhidmatan sentiasa menunjukkan kesungguhan untuk membantu. *The service provider shows willingness to help the customer.*	1	2	3	4	5	6
3SMR3	Penyedia perkhidmatan sangat bersopan-santun dan menghormati pelanggan. *The service provider is respectful and polite.*	1	2	3	4	5	6
4SMR4	Penyedia perkhidmatan tidak nampak sibuk dengan urusan lain untuk memenuhi permintaan saya. *The service provider never looked too busy to respond to my requests.*	1	2	3	4	5	6
	Jaminan/ Assurance						
5SMA1	Penyedia perkhidmatan di sini sentiasa menunjukkan budi bahasa yang baik. *The service provider is consistently courteous with me.*	1	2	3	4	5	6
6SMA2	Saya mempunyai keyakinan yang tinggi terhadap penyedia perkhidmatan. *I have confidence in dealing with the service provider.*	1	2	3	4	5	6

7SMA3	Penyedia perkhidmatan mempunyai pengetahuan yang cukup untuk menjawab segala persoalan berkenaan kenderaan. *The service provider has optimal knowledge to answer enquiries about vehicle.*	1	2	3	4	5	6
8SMA4	Penyedia perkhidmatan mempunyai kemahiran teknikal yang baik. *The service provider is technically competent to perform the service.*	1	2	3	4	5	6
	Empati / Empathy						
9SME1	Penyedia perkhidmatan bersimpati serta memahami kesulitan dan masalah saya. *The service provider is sympathetic and supportive towards my problems.*	1	2	3	4	5	6
10SME2	Penyedia perkhidmatan memberi perhatian secara individu dan istimewa terhadap saya. *The service provider does provide me with individual and personalized attention.*	1	2	3	4	5	6
11SME3	Penyedia perkhidmatan memahami dengan jelas kemahuan dan kehendak saya. *The service provider knows and understands my specific needs.*	1	2	3	4	5	6
12SME4	Penyedia perkhidmatan sentiasa meletakkan kehendak saya sebagai keutamaan. *The service provider always put my best interest at heart.*	1	2	3	4	5	6
	Kebolehpercayaan / Reliability						
13SML1	Servis yang dibuat selesai dalam jangkamasa yang telah dijanjikan. *The service delivered and completed within certain time frame as promised.*	1	2	3	4	5	6
14SML2	Servis yang diperlukan telah dijalankan seperti yang dijanjikan (mengikut deskripsi yang tertera dalam borang arahan servis). *The service required performed as promised (as per job order given to customer).*	1	2	3	4	5	6
15SML3	Penyedia perkhidmatan melakukan kerja atau servis yang betul pada kali pertama dan seterusnya. *The service provider performs the job or service right the first time.*	1	2	3	4	5	6
16SML4	Penyedia perkhidmatan memaklumkan kepada saya mengenai masa kerja-kerja servis akan dijalankan. *The service provider keeps me informed on when the service will be performed.*	1	2	3	4	5	6
17SML5	Penyedia perkhidmatan sentiasa memberi maklumat yang tepat dan betul (contohnya invois yang terperinci). *The service provider provides accurate information (e.g itemised invoice).*	1	2	3	4	5	6

khidmat sokongan /*support service*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
18SP1	Kakitangan sokongan sentiasa memberi respon segera walaupun pada waktu sibuk atau lewat malam (contohnya kes kerosakan di waktu lewat malam). *Support service staff quickly response to me even during the busy hours of the day or during late night time (e.g emergency breakdown during late night time).*	1	2	3	4	5	6
19SP2	Kakitangan sokongan sentiasa mudah dihubungi semasa kecemasan dan kerosakan. *It is easy to contact the support service staff during emergency breakdown.*	1	2	3	4	5	6
20SP3	Pusat khidmat pelanggan mudah dihubungi untuk mendapat sebarang maklumat dan bantuan (contohnya pusat khidmat pelanggan, laman sesawang). *It is easy to get through to customer support service for any information or assistance (e.g customer call center, website).*	1	2	3	4	5	6
21SP4	Laman sesawang untuk urusan penempahan atau temujanji servis mestilah sentiasa tersedia kerana ianya penting untuk keselesaan dan menjimatkan masa saya. *The site for online booking must be consistently available as it is important for my convenient and saves my time.*	1	2	3	4	5	6

kualiti teknikal /*technical quality*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
22STQ1	Penyedia perkhidmatan telah membantu menyelesaikan masalah kenderaan saya. *The service provider has assisted me to solve problems associated with my vehicle.*	1	2	3	4	5	6
23STQ2	Penyedia perkhidmatan telah melaksanakan kerja dengan baik sehingga menghindar segala masalah kepada kenderaan. *The service provider has performed well in doing their job resulting in free problems to my vehicle.*	1	2	3	4	5	6
24STQ3	Kerja-kerja servis biasanya dapat dijalankan dengan lancar dan diselesaikan tanpa sebarang gangguan atau tertangguh. *The service jobs normally completed successfully without interruption.*	1	2	3	4	5	6
25STQ4	Hasil kerja servis yang baik telah membantu kepada imej baik syarikat. *The service jobs performed by the service provider portray good image of the company.*	1	2	3	4	5	6

26STQ5	Alat-alat ganti dari pusat servis ini adalah asli dan mempunyai kualiti yang baik. *The spare parts offered by this service centre are genuine and of best quality.*	1	2	3	4	5	6

rupabentuk /*tangibility*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
27STB1	Penyedia perkhidmatan menyediakan ruang yang bersih dan selesa kepada pelanggan. *The service provider provides clean and comfortable lounge for customers.*	1	2	3	4	5	6
28STB2	Penyedia perkhidmatan menyediakan kemudahan fisikal dan kelengkapan yang terkini (contohnya ruang parkir, komputer, wifi, televisyen, minuman dan sebagainya). *The service provider provides up-to-date physical facilities and equipment (e.g customer's parking, computer, wifi, television, refreshment and etc.)*	1	2	3	4	5	6
29STB3	Penyedia perkhidmatan menyediakan persekitaran yang selamat dari bahaya dan bebas dari segala risiko. *The service provider provides environment free from danger, risk, or doubt.*	1	2	3	4	5	6
30STB4	Penyedia perkhidmatan berpakaian kemas dan nampak professional. *The service provider is well dressed and appears neat to show professionalism.*	1	2	3	4	5	6
31STB5	Penyedia perkhidmatan menggunakan alat-alatan dan dokumen yang sesuai semasa memberi perkhidmatan kepada pelanggan. *The service provider used proper material and documentation during performing the service.*	1	2	3	4	5	6

SEKSYEN C: KUALITI HUBUNGAN (KEPUASAN, PERCAYA DAN KOMITMEN)

SECTION C: RELATIONSHIP QUALITY (SATISFACTION, TRUST AND COMMITMENT)

Kepuasan / S*atisfaction*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
32RS1	Saya sangat gembira dengan prestasi baik penyedia perkhidmatan. *I am delighted with performance of the service provider.*	1	2	3	4	5	6
33RS2	Saya sangat berpuas hati terhadap hubungan baik dengan penyedia perkhidmatan. *I am very satisfied towards my relationship with the service provider.*	1	2	3	4	5	6
34RS3	Saya merasa senang hati apabila berurusan dengan penyedia perkhidmatan ini. *I feel good when dealing with the service provider.*	1	2	3	4	5	6
35RS4	Secara keseluruhannya, saya berpuas hati dengan penyedia perkhidmatan ini. *Overall, I am satisfied with the service provider.*	1	2	3	4	5	6
Percaya terhadap integrity penyedia perkhidmatan/ *Trust in service provider's integrity*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
36RTG1	Penyedia perkhidmatan memberi perkhidmatan dengan jujur dan ikhlas. *My service provider performed with full of honesty.*	1	2	3	4	5	6
37RTG2	Penyedia perkhidmatan bekerja dengan penuh integriti. *My service provider performed with high integrity.*	1	2	3	4	5	6
38RTG3	Penyedia perkhidmatan di pusat servis ini boleh dipercayai dan amanah. *My service provider is trustworthy.*	1	2	3	4	5	6
39RTG4	Penyedia perkhidmatan tidak pernah berbohong dan mengambil kesempatan ke atas pelanggan dengan niat mengambil keuntungan di pihak mereka. *My service provider never hides any information with the intention to cheat me for their own benefit.*	1	2	3	4	5	6
Percaya kepada sifat baik hati penyedia perkhidmatan / T*rust in service provider's benevolence*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
40RTB1	Penyedia perkhidmatan sangat mengambil berat akan kegembiraan saya. *My service provider is concern about my happiness.*	1	2	3	4	5	6
41RTB2	Saya percaya yang penyedia perkhidmatan akan sentiasa memahami kesukaran yang saya alami. *I believe my service provider will respond with understanding towards my difficulty.*	1	2	3	4	5	6

42RTB3	Saya boleh bergantung harap kepada penyedia perkhidmatan. *I can depend on my service provider based on their action that might affect me personally.*	1	2	3	4	5	6
43RTB4	Penyedia perkhidmatan menunjukkan kesungguhan untuk membantu walaupun ianya tidak memberi apa-apa kelebihan kepadanya. *The service provider has expressed their willingness to help me even it did not benefit them.*	1	2	3	4	5	6

Komitmen / C*ommitment*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
44RC1	Hubungan saya dengan penyedia perkhidmatan sangat rapat dan mesra. *I feel emotionally attached to the service provider.*	1	2	3	4	5	6
45RC2	Saya sangat komited dalam menjaga perhubungan baik dengan penyedia perkhidmatan *I am very committed to my relationship with the service provider.*	1	2	3	4	5	6
46RC3	Saya berhasrat untuk kekalkan dan meneruskan hubungan baik ini selama-lamanya. *I intend to maintain and continue this relationship indefinitely.*	1	2	3	4	5	6
47RC4	Penyedia perkhidmatan telah menyatakan hasrat untuk meneruskan hubungan dalam jangkamasa yang panjang. *The service provider has expressed his/her desire to establish long-term relationship with me.*	1	2	3	4	5	6
48RC5	Saya mempunyai tahap kesetiaan yang kuat terhadap penyedia perkhidmatan *I have a strong sense of loyalty towards the service provider.*	1	2	3	4	5	6
49RC6	Hubungan baik dengan penyedia perkhidmatan adalah penting untuk saya. *My relationship with the service provider is very important to me.*	1	2	3	4	5	6

SEKSYEN D: KESETIAAN PELANGGAN

SECTION D: CUSTOMER LOYALTY

KESETIAAN PELANGGAN / *CUSTOMER LOYALTY*							
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
50CL1	Saya memberitahu perkara-perkara baik berkenaan penyedia perkhidmatan ini kepada orang lain. *I say positive things about the service provider to other people.*	1	2	3	4	5	6
51CL2	Saya mencadangkan penyedia perkhidmatan ini kepada sesiapa yang merujuk kepada saya. *I recommend the service provider to someone who seeks my advice.*	1	2	3	4	5	6
52CL3	Saya menggalakkan rakan-rakan dan saudara untuk menghantar kenderaan kepada penyedia perkhidmatan ini untuk khidmat servis biasa atau pembaikan. *I encourage friends and relatives to service and repair their car to this service provider.*	1	2	3	4	5	6
53CL4	Saya sentiasa mengutamakan penyedia perkhidmatan ini untuk kunjungan servis yang akan datang. *I consider this service provider as my first choice in the next visit.*	1	2	3	4	5	6
54CL5	Saya mempunyai hubungan yang sangat baik dengan penyedia perkhidmatan di sini. *I have a very strong relationship with this service provider.*	1	2	3	4	5	6
55CL6	Kemungkinan untuk saya meneruskan hubungan baik ini adalah sangat besar. *The chances for me to stay in this relationship are very good.*	1	2	3	4	5	6
56CL7	Saya **tidak kisah** untuk membayar harga servis yang lebih tinggi asalkan dapat meneruskan hubungan baik dengan penyedia perkhidmatan ini. *I **do not mind** to pay more in exchange of the good relationship with the service provider.*	1	2	3	4	5	6

SEKSYEN E: DAYA TARIKAN ALTERNATIF

Nota: Pusat servis persendirian – utama dan paling kerap dikunjungi.

SECTION E: ALTERNATIVE ATTRACTIVENESS

Note: Personally own workshop –main and most frequently visited.

DAYA TARIKAN ALTERNATIF / *ALTERNATIVE ATTRACTIVENESS*								
Bil./ *No*	Kenyataan/ *Statement*	Skala/ *Scale*					
57AA1	Pusat servis persendirian *(contoh: ABC Auto Workshop & Repair)* mengenakan cas servis yang lebih murah. *Personally own workshop (e.g: ABC Auto Workshop & Repair) would be cheaper.*	1	2	3	4	5	6
58AA2	Pusat servis persendirian *(contoh: ABC Auto Workshop & Repair)* memberi diskaun yang lebih menarik. *Personally own workshop (e.g: ABC Auto Workshop & Repair) offers better discounts.*	1	2	3	4	5	6
59AA3	Pusat servis persendirian *(contoh: ABC Auto Workshop & Repair)* menawarkan cara pembayaran yang lebih mudah dan pelbagai (contohnya: kad kredit, kad debit, cash dan sebagainya) *Personally own workshop (e.g: ABC Auto Workshop & Repair) offers a more flexible and convenient mode of payment (e.g: credit card, debit card, cash and etc.)*	1	2	3	4	5	6
60AA4	Pusat servis persendirian *(contoh: ABC Auto Workshop & Repair)* lebih menguntungkan saya. *Personally own workshop (e.g: ABC Auto Workshop & Repair) benefited me more.*	1	2	3	4	5	6
61AA5	Pusat servis persendirian *(contoh: ABC Auto Workshop & Repair)* terletak lebih dekat dengan tempat saya. *Personally own workshop (e.g: ABC Auto Workshop & Repair) is located closer to me.*	1	2	3	4	5	6
62AA6	Saya merasa lebih berpuas hati dengan pusat servis persendirian *(contoh: ABC Auto Workshop & Repair)*. *I would feel more satisfied with the service of personally own workshop (e.g: ABC Auto Workshop & Repair)*	1	2	3	4	5	6

Soalan Berakhir / *End of the questionnaire*

Appendix B

Guidelines on number of sample size for a specified population

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Source: Krejcie and Morgan‘s (1970)

Appendix C

*G*Power Analysis*