

Does Relationship Quality Affect Customer Loyalty of Malaysian National Carmakers: Alternative Attractiveness as Moderator

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Abstract — This paper aims to explore how the intangible element of relationship quality influences the level of customer loyalty towards Malaysian national carmakers in the competitive business of automotive after-sales service. After-sales service is a good platform to retain the customers for a longer term of relationship which creates sustainable business opportunities. The repeated service encounter during the given free warranty period has developed a continuous customer-service provider relationship. Most importantly, the sales of a vehicle have offered existing customers after-sales service business. However, the attractive offers from ordinary workshops have encouraged the existing customers to choose ordinary workshops after the vehicle warranty has expired and the existing relationship with the current service provider is terminated. The loss of existing customers has denied the opportunity for the national carmakers to take advantage of recommendations, referrals, good publicity, and positive word-of-mouth that contribute to a higher level of customer loyalty. Using PLS-SEM as the method of data analysis, this study empirically tested the influence of relationship quality as the independent variable towards customer loyalty while competition variable of alternative attractiveness was tested as a moderator. The data were collected from 312 respondents through the technique of intercept survey and the respondents were chosen based on systematic sampling. The findings revealed that relationship quality was positively related to customer loyalty. However, alternative attractiveness was not significant as a moderator in the relationship between relationship quality

and customer loyalty. Based on the results, this study empirically proved that high quality of relationship gives more impact towards customer loyalty compared to other competitors' offers. This study benefited the Malaysian national carmakers as it provides empirical evidence on the importance of high-quality customer-service provider relationship which might assist them to develop a unique marketing strategy to retain the existing customers and generates more loyal customers.

Keywords—*Relationship Quality, Automotive After-sales Service, Intercept Survey, Customer Loyalty, PLS-SEM.*

1. Introduction

Loyal customer ensures the long-term survival of any business organizations. Without customers, it is less likely that organizations are going to succeed [1]. One of the marketing strategies designed to increase the customer base is strengthening the after-sales service support [2]. The after-sales service provides a platform for repeated and continuous transactions subsequent to the sales of the product and that has created an opportunity for service providers to have a high-quality customer-service provider relationship. The high-quality relationship acts as a bullet to have an advantage over competitors as it ensures customers' return and enjoy the mutual rewards from the special relationship [3]. From the perspective of relationship quality, the satisfied customers return for a longer term of high-quality relationship in which along with the relationship, they develop trust towards the organization and

subsequently being committed to staying loyal to the existing service provider [4]. Customer loyalty in after-sales service is concerned on two-fold; first, the willingness to remain in the existing relationship with the existing service provider after the expiry of vehicle's service warranty tenor, and secondly, the reliance on a brand that expresses through the act of recommendation, referrals, and positive word-of-mouth [5].

The buoyant consumer demand resulting from the rapid economic growth and high purchasing power of Malaysia has made Malaysia as the largest passenger vehicle market in Asia. As such, it is not surprising when several international automotive companies are taking advantage of this demand by setting up operations and sells non-national vehicles in the local market. Apparently, their existence has jeopardized the position of national carmakers as the local vehicle market shares of recent years are controlled by the non-nationals companies [6]. Apart from that, the growth recorded by the non-nationals also indicates that the local consumer choice for owning a vehicle is inclined towards foreign makes [7] which is very alarming for the sustainability of national carmakers. As demonstrated in the Malaysian vehicles market share below (Figure 1), the trend shows that the national carmakers are facing the issue of losing their market shares to the non-nationals which indicates the customers are not loyal to the national brand.

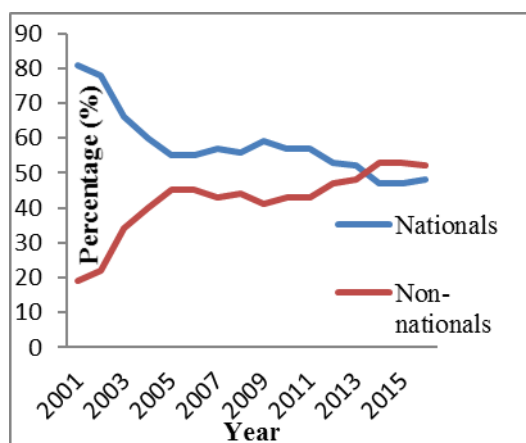


Figure 1. Malaysian vehicles market share from 2001 to 2016, Source: Malaysian Automotive Association (MAA)

Organizations are losing their loyal customers

for several reasons. Among the possible causes are poor quality product, ineffective promotions, insufficient research and development, management failure, and et cetera. However, until recently, the issue of poor quality of after-sales service has been highlighted in some industry reports and still remains unresolved in some sites. A survey report entitled Malaysia Customer Service Index which reports the quality of after-sales service produced by J. D. Power (Figure 2) highlights customers in Malaysia are not satisfied with the quality of service, maintenance, and repair of their vehicle, and the service providers are not meeting their expectations. Most importantly, the national carmakers were ranked below the market average score. That poor after-sales service quality might have given the negative perception towards national carmakers and directly reflected the level of customer loyalty. Accordingly, customer loyalty is the most important aspect in automotive after-sales service as it allows for further customer-service provider relationship development that enhances and provides more business opportunities [8][9]. As such, after-sales service should be the best platform to gain customer loyalty [10].

Furthermore, competing in the red ocean market where the rivals are not only ordinary workshops offering after-sales service but also automotive giant selling the non-national brands. Thus, a competitive advantage must be acquired by the national carmakers in order to differentiate themselves from other competitors. The competition in after-sales service starts right after the expiry of vehicles warranty where the existing customer might terminate the current relationship with the service provider and send their vehicle for service, maintenance, and repair with other ordinary workshops offering similar services. Meanwhile, the competition on the sales side is seen from the higher growth and sales of non-national brands where it may directly reduce the number of vehicles engaging the after-sales service from the national carmakers. The fewer number of vehicles sold may also reduce the opportunity of retaining the existing customers for a long-term business opportunity in the after-sales service stage.

In order to be a market leader or at least at par with the local players in the Malaysian automotive market, the national carmakers need a unique bullet beyond the price, product quality, technology, or stylish design. This bullet can be in

less tangible and less easy-to-imitate forms by the competitors such as the intangible element of relationship that often result in a sustainable competitive advantage [11]. Several strategies have been attempted to retain customers and as emphasized, the intangible element of relationship when preceded by a high quality of after-sales service, may result in higher level of customer loyalty [12]. The high quality of customer-service provider relationship opens a wide opportunity for customer retention which benefited the national carmakers in two-fold; five times profit of maintaining the relationship with the existing customer after the expiry of service warranty [13][14] and secondly, generate more sales of national brands as a result of good publicity and positive word-of-mouth by the loyal customers [14][15].

Drawing on the issue of declining trend of loyalty and the problem of poor after-sales service performance of national carmakers as the service provider in which may jeopardize their sustainability in the Malaysian automotive market, this study attempts to examine how the intangible element of high quality of customer-service provider relationship plays a role in the after-sales service stage as a platform to generate long-term beneficial relationship which resulted in higher loyalty towards the national brands. Besides, the important role of competitors has also motivated this study to investigate how the attractiveness of alternatives may influence the association between relationship quality and customer loyalty.

The next section of this paper discusses the research context and conceptual framework in relation to the existing literature on customer loyalty, relationship quality, and alternative attractiveness. Subsequent sections deal with the explanation of the research methodology used and an assessment of validity construct and reliability. This is followed by an explanation of data analysis and hypothesis testing. The last section provides a discussion of the findings and conclusion with suggestions for future research are also discussed.



Figure 2. 2017 Malaysia customer service index study for automotive after-sales service

2. Research Context, Research Model and Hypotheses

2.1 Customer Loyalty

Customer loyalty is an important subject for researchers and marketers as it secures long-term business success and survival [16][17][18][19]. The complexities of its definition, concept, and dimension have made it an interesting subject to receive further attention by researchers, especially related to after-sales service [20][5][9]. The difference in the context of the study and its objective has made it operationalized in many ways such as uni-dimensional, bi-dimensional, composite, and multidimensional approach [21]. The uni-dimensional only evaluates customer loyalty from one side that is either from behavioral or attitudinal. For bi-dimensional, both attitudinal and behavioral dimensions were considered but in two separate distinct dimensions. Customer loyalty is also evaluated by integrating both attitudinal and behavioral dimensions together and named as composite loyalty. For the multi-dimensional customer loyalty, more than two dimensions were measured separately. Among all the ways of measures, the composite loyalty which combines the behavioral and attitudinal dimension together is the most selected conceptual definition to describe customer loyalty in consumer research [22][23][24].

A further review of the literature shows that measures of customer loyalty were initially focused on repeat purchase behaviour [18]. However, customer loyalty measured from more than one dimensions will provide a greater

understanding for marketers that will allow for higher level of loyalty [22][23][24]. In fact, true loyalty can only be achieved by combining repurchase behavior and positive attitude towards the product [25]. This study is examining customer loyalty towards the national carmakers, specifically in the context of after-sales service. The customer loyalty as measured in after-sales service considers two important elements. The first element is the willingness of the existing customer to continue the relationship with the current service provider after the expiry of service warranty given for each car sold. The second element is the act of loyalty behavior as expressed through the recommendations, positive word-of-mouth, and publicity. In this study, customer loyalty is measured in relation to the positive image and confidence towards national carmakers and subsequently generates more sales to strengthen their position in the local automotive arena.

2.2 *Relationship Quality*

The quality of the relationship between the customer and the service provider may serve as the source of competitive advantage that differentiates an organization from their competitors [26][27][28]. As such, on top of the 4P's traditional marketing, the fierce competition requires the organization to focus on the intangible element of relationship that cannot be easily imitated by their rivals. The high quality of relationship in ensuring the existing customer to return for the subsequent relationship after the expiry of vehicle's service warranty opens opportunities for the national carmakers to enjoy the profit from retaining their existing customers.

The importance of relationship quality in ensuring long-term profitability has attracted major attention by the researchers and studies on this relationship have widely published in high-ranking journals [13]. The initial study was started by Dwyer and Oh in 1987 which involved business-to-business research and was furthered by Crosby et al. who established the study on retail settings. Albeit its importance and plentiful publications, relationship quality is still considered underexplored because of its inconsistent definition and lack of universal models to fully describe the relationship [29][30]. Drawing upon that, the researchers have continuously tried to explore further on its dimensions, antecedents, its outcome, and consequences in different context of studies.

The previous studies measured relationship quality in various dimensions as needed by their contexts and objectives of the studies. For example, a study in the services context

measured relationship quality with the salesperson as a combination of customer satisfaction and trust [12]. Meanwhile, a study on the quality of the relationship between market research firm and its customers measures relationship quality through the researcher's involvement, quality of interaction, and the commitment of both parties towards the relationship [29]. The various dimensions for relationship quality also found in a study for a bank and their corporate customers where relationship quality was examined based on the environment and interaction process only and trust, customer satisfaction, also commitment were not considered [29]. More, in a relationship between the customer and their fitness center, the quality was measured by a large number of dimensions up to six which consists of trust, satisfaction, commitment, bonds, cooperation, and adaptation [29].

The previous studies show that besides a multi-dimensional construct, relationship quality is also a uni-dimensional construct and that difference is due to the difference in the nature of study and objectives. A more recent study in telecommunication industry considered only trust as the measure of relationship quality [31]. There were also several studies in different contexts and objectives which measured relationship quality in one single dimension [32][33][12][14][34][35].

However, in a study on the review of literature of relationship quality [13], the three dimensions of satisfaction, trust, and commitment were established as the common measures of relationship quality. Furthermore, [36] also emphasized that these three dimensions are capable of predicting a successful and high-quality relationship to generate higher customer loyalty and differentiates the national carmakers from ordinary workshops. On the same note, earlier studies have underscored that the objective of having a high-quality customer-service provider relationship is to generate a higher level of customer loyalty [26].

2.3 *Alternative Attractiveness*

Alternative attractiveness is basically an inference made by the customer about potential satisfaction occurring in another relationship [37]. In other words, it refers to the positive characteristics owned by the rival service organizations [38]. The rival's attractiveness is denoted as better quality of service, relatively lower service price, free service vouchers, and lucky draws which are positive characteristics or competition factors that may influence the customers to terminate the existing relationship with the current service provider and choose the

ordinary workshops for the next car service maintenance and repair.

However, the competitors' bullet to attract customer such as price was not always regarded as successful because service setting is not purely driven by price mechanism [39]. In fact, there are more important elements than price which are conducive to building a long-term relationship [39]. The high-quality relationship served as a barrier for the customer to switch to other competitors, for example, a wedding planner's service, which in a way is regarded as a competitive advantage, and in the context of this current study, perhaps it refers to the high-quality of customer-service provider relationship.

Alternative attractiveness is conceptually described as the competition variable that influences the customer or the buyer (in business to business studies) to switch to other rivals which provide more attractive offers. Empirically, most of the previous researchers examined alternative attractiveness as an exogenous variable [31][40][41]. The most prominent study was by [42] as they looked into the role of alternative attractiveness as a strengthening or weakening factor in the association between trust and service satisfaction with relationship commitment. Their findings in the context of professional consumer service involved financial planning consultation which revealed that the high number of attractive alternative has given a stronger impact on the link between satisfaction and relationship commitment, and the relationship might be less important when there are low alternatives [42]. In a business-to-business study, the concept of alternative attractiveness was measured in terms of the availability of alternative suppliers. Their study has examined this competition factor as a moderating variable but it moderates the relationship between business relationship function and relationship quality. The findings show a similar concept with the earlier discussed studies where when there are more alternative suppliers, the buyer needs to perform better for a higher quality relationship [41].

The importance of competitor in determining the survival of a business organization has shown several suggestions in the previous studies to examine the impact of alternative attractiveness, especially in the studies of customer loyalty and service industry [13][43][44][45]. Hence, being guided by the above suggestions and the recent issues of poor after-sales service performance and poor loyalty toward Malaysian national carmakers in the local automotive industry, this current study

is motivated to examine alternative attractiveness as a moderator in the association between relationship quality and customer loyalty.

The above literature lends support for the development of research model that evaluates the associations between relationship quality and customer loyalty and also one moderating hypothesis involving alternative attractiveness. The hypotheses are developed as follows:

H1: Relationship quality positively influences customer loyalty towards Malaysian national carmakers.

H2: Alternative attractiveness moderates the relationship between relationship quality and customer loyalty of Malaysian national carmakers (see Figure 3).

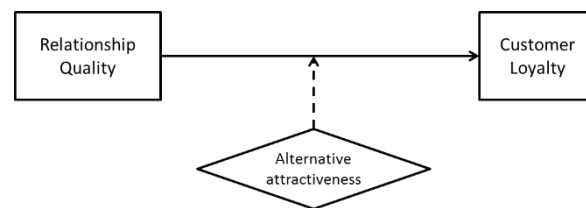


Figure 3. Research model

3. Methodology

All the three constructs in the conceptual model of this study were measured by adapting the instruments and scales from the extant literature with the purpose of improving the content validity. Since the items were adapted from a different context in previous studies, the opinion of industry experts and academicians from the field of marketing were sought to improve the understanding and clarity of the items. Each item was measured by the six-point Likert scale which is indicated by 1 for strongly disagree until 6 for strongly agree. The purpose of using even number scales is because the validity and reliability of even number response scale are higher compared to odd number scale [46]. Besides, the respondents in Asian countries tend to choose middle point answer as compared to Western countries and the answer does not indicate any response to agreeing or disagree [47]. This study measured customer loyalty using composite loyalty which integrates both behavioural and attitudinal loyalty and consists of seven adapted items [26][22][23][15]. In addition, relationship quality was measured by the three dimensions of satisfaction, trust, and commitment. The items of the three dimensions were adapted from [48], [49], [42], [12], and [50]. Meanwhile, alternative attractiveness was measured using six-item scales from [42] and [51].

3.1 Data Collection

The data for this quantitative study were obtained from eleven branches of Malaysian national carmakers after-sales service in the Northern region of Malaysia. The northern region was chosen because the service rendered by all the service provider of Malaysian national carmakers all over Malaysia are the same according to the standard operating procedure (SOP) and that homogeneous service standard may represent the service standard of other regions. Thus, the evaluation of the service in the northern region is sufficient as it contributes to the cost and time efficiency. By using self-administered questionnaire, 312 of selected customers who had visited the service branches of national carmakers for car service, maintenance, and repair were approached. The customers who were approached based on intercept survey method were then selected using systematic sampling wherein every first of the third customer, they were intercepted upon entering the service branches. This method of distributing questionnaires through the vehicle's service center was also used by [9].

Out of the 384 questionnaires distributed, only 312 were eventually used after being scrutinized and those with straight lining were excluded. Among the respondents, 54.2% were male while 45.8% were female. A previous car after-sales service study had the similar pattern of responses where male customers were higher than female [9]. The majorities of the respondents were between 26 and 45 years old. As for the respondents' monthly income, almost 45% of them fell in the income range between RM1001 and RM3000 per month while 10% fell in the range of zero monthly income. For the total cost of service per visit, more than half of the respondents (51.9%) paid RM201 to RM300 and only 8.3% paid more than RM400. The information on the demographic profile of 312 customers is presented in Table 1.

Table 1. Respondent's profile

Variable		Frequency	Percent
Age	17 to 25 years	33	11.6
	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
	Gender	Male	169

Variable		Frequency	Percent
Income	Female	143	45.8
	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
Average Cost of Service	Below RM200	68	21.8
	RM201- RM300	162	51.9
	RM301- RM400	56	17.9
	Above RM400	26	8.3

3.2 Statistical Analysis Results

The analysis of the validity and reliability of data as well as hypothesis testing was done in partial least squares structural equation modeling (PLS-SEM). Besides good for theory testing, this statistical method under the second generation technique emphasized more on exploration in which it predicts and explains the variance of endogenous variable. Since the objective of this study is to explore how the high-quality relationship and the competition variable such as alternative attractiveness predict and explain the variance of customer loyalty, PLS-SEM is employed. In addition, the high efficacy in parameter estimation of PLS-SEM allows it to have superior statistical power than CB-SEM [52].

PLS-SEM is concerned with two elements to examine the model of the study. Firstly, the measurement model which tests the validity and reliability while the second concern is the structural model in which is used to test the hypotheses of the study.

3.3 Measurement Model Evaluation

The measurement model of PLS-SEM allows for the assessment of the construct's reliability and validity as these confirm the quality of the model of the study [52]. The assessment of the quality criteria is concerned with content validity, convergent validity, and discriminant validity.

3.3.1 Content Validity

As a rule of thumb, the content validity in multivariate analysis requires the loadings for the items of the respective construct to be higher than

the loadings of the other constructs in the model. If any item is loaded higher on the other constructs than their loading, the item will then be removed. To assess the content validity of this study, the factor loadings suggested by [53] is used. As shown in Table 2, the factor loadings for all the items of their respective construct are more than the other constructs. In addition, the level of significance of the factor loading as shown in Table 2 also confirms the validity of the research measurement model.

Table 2. Factor loading and cross-loading

	AA	CL	RQC	RQS	RQT
AA1	0.844	0.147	0.204	0.210	0.199
AA2	0.879	0.140	0.226	0.200	0.185
AA3	0.790	0.191	0.258	0.193	0.200
AA4	0.879	0.120	0.193	0.152	0.127
AA5	0.773	0.141	0.188	0.160	0.127
AA6	0.766	0.041	0.132	0.033	0.070
CL2	0.177	0.910	0.796	0.768	0.826
CL3	0.163	0.914	0.779	0.762	0.811
CL4	0.156	0.924	0.772	0.768	0.804
CL5	0.150	0.894	0.806	0.723	0.784
CL6	0.157	0.910	0.816	0.711	0.788
RQC1	0.184	0.763	0.833	0.713	0.760
RQC2	0.256	0.741	0.881	0.672	0.745
RQC3	0.240	0.789	0.907	0.736	0.790
RQC4	0.218	0.754	0.894	0.666	0.726
RQC5	0.201	0.817	0.915	0.708	0.789
RQC6	0.259	0.712	0.819	0.591	0.695
RQS1	0.182	0.775	0.745	0.947	0.854
RQS2	0.198	0.757	0.721	0.943	0.825
RQS3	0.199	0.787	0.748	0.965	0.871
RQS4	0.234	0.795	0.747	0.945	0.862
RQTB1	0.145	0.811	0.786	0.793	0.876
RQTB2	0.166	0.825	0.794	0.810	0.906
RQTB3	0.179	0.824	0.826	0.796	0.918
RQTB4	0.173	0.793	0.781	0.765	0.898
RQTG1	0.188	0.772	0.722	0.856	0.900
RQTG2	0.211	0.790	0.757	0.856	0.921
RQTG3	0.211	0.793	0.786	0.836	0.915
RQTG4	0.176	0.746	0.733	0.760	0.872

3.3.2 Convergent Validity

The main reason for assessing the convergent validity in measurement model of PLS-SEM is

to ensure that the measured items efficiently reflect their corresponding factor. Convergent validity is achieved when the degree to which a factor positively correlates with another factor of the same construct [52]. The convergent validity is examined by the items loading, composite reliability, and average variance extracted (AVE) of each construct in the model. Most importantly, to confirm that all constructs possess adequate convergent validity, all the items loaded to the respective constructs are able to explain more than 50% of the variance of the related constructs [52]. In other words, the loadings of the items must be at least 0.5.

Along with that, for the composite reliability value, it must not be below 0.70 in order to be considered as satisfactory and confirms that the constructs possess an adequate level of internal consistency, therefore, considered a valid measure of the constructs. For this study, the composite reliability values for all constructs are from 0.926 to 0.974 (Table 3). On an additional note, even though the values are above 0.90, it is not related to the possibility of constructs measuring the same phenomenon [52] because further checking on collinearity shows that the VIF values are all below five which is not a major problem (Table 5) according to [52].

On top of that, the average variance extracted (AVE) for each construct is all above the cut-off value of 0.50. To achieve desired loadings, composite reliability, and AVE, any item or indicator that is loaded below the recommended threshold of 0.5, 0.7, and 0.5 respectively, the items will be deleted. Table 3 depicts the loadings, composite reliability, and AVE that exceeded the threshold. Therefore, this signifies that the convergent validity of the model has been established.

Table 3. Internal consistency and convergent validity of constructs

Alternative attractiveness			
Items	Loading	First-order Construct	CR
AA1	0.844	Scale Type Reflective	0.926
AA2	0.879		
AA3	0.790		
AA4	0.879		
AA5	0.773		
AA6	0.766		
AVE		Convergent	Items Deleted

0.677	Validity (AVE>0.50) Yes	Nil
Customer loyalty		
Items Loading	First-order Construct Scale Type Reflective	CR 0.960
CL2 0.910		
CL3 0.914		
CL4 0.924		
CL5 0.894		
CL6 0.910		
AVE 0.829	Convergent Validity (AVE>0.50) Yes	Items Deleted CL1 CL7
Relationship Commitment (RQC)		
Items Loading	First-order Construct Scale Type Reflective	CR 0.952
RQC1 0.833		
RQC2 0.881		
RQC3 0.907		
RQC4 0.894		
RQC5 0.915		
RQC6 0.819		
AVE 0.767	Convergent Validity (AVE>0.50) Yes	Items Deleted Nil
Relationship Satisfaction (RQS)		
Items Loading	First-order Construct Scale Type Reflective	CR 0.974
RQS1 0.947		
RQS2 0.943		
RQS3 0.965		
RQS4 0.945		
AVE 0.902	Convergent Validity (AVE>0.50) Yes	Items Deleted Nil
Relationship Trust (RQT)		
Items Loading	First-order Construct Scale Type Reflective	CR 0.972
RQTB1 0.876		
RQTB2 0.906		
RQTB3 0.918		
RQTB4 0.898		
RQTG1 0.900		
RQTG2 0.921		
RQTG3 0.915		
RQTG4 0.872		
AVE 0.812	Convergent Validity (AVE>0.50) Yes	Items Deleted Nil

Table 3. Internal consistency and convergent validity of constructs (continued)

Relationship Quality (RQ)		
Items Loading	Second-order	CR

RQC 0.928	Construct Scale Type Reflective	0.963
RQS 0.931		
RQT 0.979		
AVE 0.895	Convergent Validity (AVE>0.50) Yes	Items Deleted Nil

3.3.3 Discriminant Validity

The next quality checking in the measurement model of PLS-SEM involved the assessment of construct's discriminant validity. Establishing discriminant validity means that each construct under investigation is statistically unique and truly distinct from other constructs [52]. To ascertain this validity, this study followed the suggestion of Fornell and Larcker [54]. Using this criterion, the comparison is made between the values in the diagonal (square roots of AVE) with the off-diagonal values that indicate correlation. As shown in Table 4, the Fornell Larcker discriminant validity standard is adhered to when all the diagonal values are greater than the off-diagonal values located in the same rows and columns. This condition confirms that the discriminant validity of the model has been attained.

Table 4. Fornell and Larcker criterion

	AA	CL	RQC	RQS	RQT
AA	0.823				
CL	0.177	0.910			
RQC	0.258	0.872	0.876		
RQS	0.214	0.820	0.779	0.950	
RQT	0.201	0.882	0.859	0.898	0.901

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. CL – Customer Loyalty; AA – Alternative Attractiveness; RQC – Relationship Commitment; RQS – Relationship Satisfaction; RQT – Relationship Trust

3.4 Establishing Higher Order Construct

One of the reasons to establish higher-order construct is to minimize the number of paths connecting the variables in the structural model so that the model is less complex and more parsimonious [52]. Accordingly, relationship quality was conceptualized as a second-order construct with reflective scale. By using repeated indicator approach, the second-order construct was measured directly by the first-order constructs. Repeating the same indicators in the second-order

construct similar to the first-order construct may give a better operationalization of the model [55].

This study conceptualized relationship quality as a reflective second-order construct with three interrelated dimensions which comprised of satisfaction, trust, and commitment. Previous relationship quality studies have also measured relationship quality in the similar three dimensions of satisfaction, trust, and commitment [56][57][28][35]. In this study, the high correlations between the three first-order construct of relationship quality implied the existence of second-order construct [58]. Besides, all the three first-order constructs of relationship satisfaction (RQS), relationship trust (RQT), and relationship commitment (RQC) are well explained by the second-order of relationship quality as demonstrated by the R2 of 0.867, 0.959, 0.861 respectively (Figure 4).

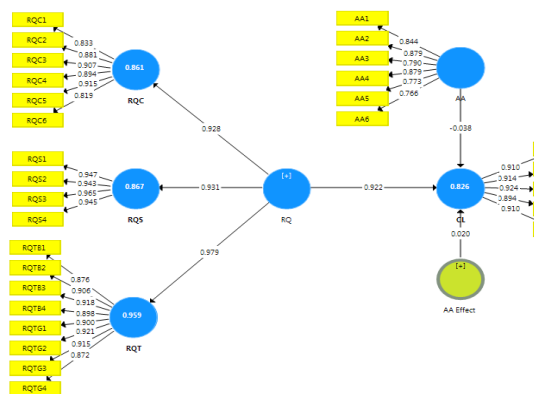


Figure 4. PLS-SEM algorithm

3.5 Structural Model Evaluation

3.5.1 Collinearity Assessment

Having established the validity and reliability of the construct, the hypotheses testing by running bootstrapping procedure in the structural model (inner model) is required. However, prior to evaluating the structural model, it is important to make sure that the inner model of the study is free from collinearity issues. The issue of collinearity refers to a situation when the variables which look different from one another but actually measuring the same thing. Accordingly, when a study measures two or more variables (multicollinearity), each variable must be distinctive from one another. In the case where multicollinearity exists, the redundant variables can be dropped. The variance inflation factor (VIF) is one of the calculations to detect the collinearity issue [52]. In relation to that, Table

5 demonstrates the result of collinearity test of this study and the VIF values smaller than 5 suggests that collinearity is not a major problem [52].

Table 5. Collinearity assessment

	A A	CL	R Q	RQC	RQ S	RQT
AA		1.057				
CL						
RQ			1.057		1	1
RQC				1		
RQS					1	
RQT						1

3.5.2 Assessment of Path-coefficient

Table 6 illustrates the results of path-coefficient for the hypothesized relationship. Table 6 shows the direct hypothesis while Table 7 shows the moderating hypothesis. A close look shows that relationship quality was positively related to customer loyalty and found to be significant (RQ → CL, β = 0.922, p < 0.01). Hence, H1 is supported. This indicates that the better the quality of the relationship between the customer and the service provider, the higher the loyalty towards the national carmakers.

Table 6. Path co-efficient assessment for direct relationship

Hypothesis H1	Relationship RQ -> CL
Coefficient(β)	Standard Error
0.922	0.018
T Value	P Values
50.670	0.000
Supported Yes	

Note: *p < 0.05 (t = 1.645)

RQ – Relationship Quality; CL – Customer Loyalty

Table 7. Path co-efficient assessment for moderating effect

Hypothesis H2	Relationship RQ*AA -> CL
Coefficient(β)	Standard Error
0.020	0.024
T Value	P Values
0.829	0.204
Supported No	

Note: *p < 0.05 (t = 1.645)

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

3.5.3 Predictive Relevance (R^2 and Q^2) and Effect Size (f^2)

One of the assessments in PLS-SEM structural model involved the evaluation of the predictive relevance of the model and effect size of the construct. The predictive relevance is examined by the R^2 and cross-validated redundancy Q^2 . The R^2 is the coefficient of determination that indicates the predictive accuracy of the model or the combined effects of the exogenous variable on the endogenous variable. In essence, the R^2 indicates the extent of variance in the endogenous variable as explained by the exogenous variables linked to it. The measure for R^2 ranges from 0 to 1 and the value close to 1 indicates a higher level of predictive accuracy of the model. According to the rule of thumb suggested by [59], the values of 0.26, 0.13, and 0.02 are indicated as substantial, moderate, and weak respectively. As shown in Table 8, the result reveals that 82.6 percent of the variance in customer loyalty is explained by the relationship quality. Therefore, this R^2 value implies that this model possesses a substantial level of predictive accuracy.

The quality of the model was also examined using cross-validated redundancy (Q^2) which involved the blinding technique in PLS-SEM. This process requires deletion of some data values which would be estimated as missing values. By using omission distance of seven for blindfolding, certain values were generated to allow for comparison being made on how close is the real result from the estimated result. The rule in PLS-SEM predictive relevance is that the value must be greater than zero. In Table 8, the cross-validated redundancy value of 0.640 for customer loyalty is more than zero. Therefore, this suggests that relationship quality possesses predictive capacity over customer loyalty.

PLS-SEM evaluates the R^2 to demonstrate the strength of the model with the combination of the exogenous and endogenous variable. The change in the R^2 value when a certain exogenous construct is omitted may also determine the contribution of the omitted construct towards the endogenous constructs [52]. Accordingly, the importance of an exogenous variable in explaining the endogenous variable is measured through evaluation of the effect size (f^2). Following [52], f^2 values of 0.35, 0.15, and 0.02 indicate large, medium, and small effects of the exogenous latent variable, respectively. The result in Table 8 shows that relationship quality ($f^2 = 4.542$) has a large effect on customer loyalty. This study also measured alternative attractiveness as a moderator. The effect size of

relationship quality after moderating effect is also demonstrated in Table 8 with the f^2 of 4.46 (large) but with relatively smaller effect compared to f^2 before moderating (4.542). This indicates that the relationship quality explained and predicted customer loyalty slightly better without the moderator. Additionally, Table 8 also signifies that alternative attractiveness has no significant effect as a moderator towards customer loyalty. This also implies that in this model, only relationship quality explained and predicted customer loyalty.

Table 8. Determination of co-efficient (R^2), predictive relevance (Q^2) and effect size (f^2)

Co-Efficient	Predictive Relevance	Effect Size f^2 (Before)	Effect Size f^2 (After)
R^2	Q^2	CL Effect Size	CL Effect Size
CLRQ 0.826	0.640	4.542 Large	4.460 (Large)
AA*RQ			0.005 (None)

4.0 Discussions and Conclusions

The primary objective of this study is to empirically evaluate how the quality of customer-service provider relationship influences the level of customer loyalty towards Malaysian national carmakers. On top of that, this study also critically examines the role of competitor's attractiveness in the association between the relationship quality and customer loyalty.

The finding from this study reveals that the direct relationship between relationship quality and customer loyalty was supported. Hence, H1, which estimated a positive and significant relationship between relationship quality and customer loyalty confirms the findings of other studies [27][15]. This finding conceptualized that the high quality of customer-service provider relationship is an important intangible tool that can be utilized to capture a higher level of customer loyalty towards the Malaysian national carmakers. Furthermore, the finding reemphasizes the fact that customer loyalty is the outcome of relationship marketing [49]. This finding is also aligned with the social exchange theory (SET) from the perspective of reciprocal reward enjoyed by both parties involved in a mutual long-term beneficial relationship. According to the theory, the long-term relationship with the existing customer may benefit the organization as it gives five times more profit compared to acquiring the new customer

[60]. On another end, customers may also be rewarded with a special treatment in terms of recognition or prestige.

The next hypothesis, H2 detailed alternative attractiveness as the moderator between relationship quality and customer loyalty. It was found in this study that H2 was not supported. The H2 indicates that the attractive competitor's offer is not a significant factor to influence the association between the relationship quality and customer loyalty towards Malaysian national carmakers. The price, free service vouchers, or the attractive lucky draws are not significant determinants to change the relationship between the relationship quality and customer loyalty. As emphasized by [36], the relational factor or the relational rewards is still dominant beyond the cost-benefit comparison.

4.1 Theoretical Contribution

Theoretically, this study has made an important contribution by empirically examined the effect of high-quality customer-service provider relationship on customer loyalty in automotive after-sales which was ignored by previous studies. By integrating the intangible element of relationship and the outcome of relationship marketing such as customer loyalty together with the competition variable, namely, alternative attractiveness in a single model, this study has been able to answer the call for more studies to be conducted. Additionally, the moderating role of alternative attractiveness as a competition variable that can be used to explain the association between relationship quality and customer loyalty is regarded as a theoretical contribution in the field of after-sales service. This study is among the pioneer studies that examined the effect of alternative attractiveness on the link between relationship quality and customer loyalty.

4.2 Practical Contribution

Practically, the findings of this study may provide several useful insights to the related parties such as the managers and the marketers. The findings reveal that the high-quality customer-service provider relationship plays the most significant role in influencing the level of customer loyalty. Also, the high effect size of the construct towards customer loyalty compared to alternative attractiveness suggests that the managers and the marketers should not prioritize their concern on the competitors' attractiveness- but rather give preference on strengthening the relationship with the existing customer as this will guarantee long-term

highly loyal customers. This holds the arguments of previous studies that long-term relationship with the existing customers may generate more loyal customer and saves more as compared to acquiring new customers.

Therefore, the findings place greater responsibility on the Malaysian national carmakers to strategize a progressive business plan that is capable to win the customer's heart as this will guarantee a long-term high-quality relationship with the existing customers who spread positive word-of-mouth as publicity to generate more sales. Besides, the findings of this research are also beneficial to the non-national carmakers as they are offering similar product and services. Recently, several automotive organizations have started yielding to these calls by providing extraordinary services such as free food and beverages for those customers waiting for their vehicle to complete the service, 24-hours emergency assistance, massage equipment in the customer's waiting area, and many other offers which exceed customer's expectations. The positive association between relationship quality and customer loyalty as revealed in this study requires the automotive organizations to obtain customer's involvement in a program that may strengthen and lengthen the relationship such as customer loyalty program. Given the high level of involvement through activities, special treatment, rewards, lucky draw, competition and et cetera, the high-quality long-term interaction between the organization and the existing customers may dominate the relationship and eventually increase the level of loyalty.

This study also revealed that the high quality of the relationship is an important tool that surpassed competitors offers as it cannot be imitated by the competitors. In essence, the high-quality of customer-service provider relationship may differentiate the national carmakers from competitors and ensures the existing customer to return for further relationship development after the expiry of vehicle's warranty. In fact, the intangible relationship creates good publicity through the act of recommendation and positive word-of-mouth which indicates higher loyalty [5].

4.3 Limitation and Future Direction

Just like any other studies, this study has several limitations. First, it only examined customer loyalty in the context of after-sales service where the evaluation was conducted only on the recommendation and positive word-of-mouth as a result of faith towards national carmakers and the willingness to continue the service after the warranty expiry. This comes as a limitation because a different context of study might see customer loyalty from a broader perspective according to the context under investigation. The

second limitation is that this study is limited to only Malaysian national carmakers and it is recommended for future studies to carry out a comparative study between national and non-national carmakers. A bigger sample may extend the richness of the data and portray a higher generalizability which will broaden and deepen the understanding of relationship quality and customer loyalty concept in the automotive after-sales service literature.

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References

- [1] Abdullateef, A. O., Mohd Mokhtar, S. S., & Yusoff, R. Z., "The strategic impact of technology based CRM on call centers' performance", *Journal of Internet Banking and Commerce*, Vol 16, No. 1, pp. 1–17, 2011.
- [2] Naseema, CM., "Customers attitude towards after sales services of white goods", *Asia Pacific Journal of Research*, Vol 1, No. XL111, pp. 69–72, 2016.
- [3] Wieseke, J., Alavi, S., & Habel, J., "Willing to pay more, eager to pay less: the role of customer loyalty in price negotiations", *Journal of Marketing*, Vol 78, No. November, pp. 17–37, 2014.
- [4] Zineldin, M., "Beyond relationship marketing: technologicalship marketing", *Marketing Intelligence & Planning*, Vol 18, No. 1, pp. 9–23, 2000.
- [5] Nordin, N., Yaacob, A. A., Razak, R. C., Radzi, W. N. W., & Saraih, U. N., "Service evaluation on automotive after-sale service", *Journal of Advanced Research in Business and Management Studies*, Vol 4, No. 1, pp. 43–50, 2016.
- [6] Malaysian Automotive Association [MAA], "Market review for 2016", Retrieved on 14th June 2017, from http://www.maa.org.my/pdf/Market_Review_2016.pdf, 2016.
- [7] Raja Sabaradin, R. Z., "Industry brief: Malaysia 's automotive industry (The national carmaker)", *Global Advisory & Research*, 2013.
- [8] Egonsson, E., Bayarsaikhan, K., & Ting, T. L., "After-sales services and customer relationship marketing: A multiple case study within the Swedish heavy equipment machinery industry", Retrieved on 12th April 2017 from <http://www.diva-portal.org/smash/get/diva2:635620/FULLTEXT01.pdf>, 2013.
- [9] Yieh, K., Chiao, Y. C., & Chiu, Y. K., "Understanding the antecedents to customer loyalty by applying structural equation modelling", *Total Quality Management*, Vol 18, No. 3, pp. 267–284, 2007.
- [10] Saccani, N., Songini, L., & Gaiardelli, P., "The role and performance measurement of after-sales in the durable consumer goods industries: an empirical study", *International Journal of Productivity and Performance Management*, Vol 55, No. 3/4, pp. 259–283, 2006.
- [11] Bloemer, J., Ruyter, K. De, & Peeters, P., "Investigating drivers of bank loyalty: the complex relationship between image, service quality and satisfaction", *International Journal of Bank Marketing*, Vol 16, No. 7, pp. 276–286, 1998.
- [12] Crosby, L., Evans, K., & Cowles, D., "Relationship quality in services selling: An interpersonal influence perspective", *Journal of Marketing*, Vol 54, No. July, pp. 68–81, 1990.
- [13] Athanasopoulou, P., "Relationship quality: A critical literature review and research agenda", *European Journal of Marketing*, Vol 43, No. 5/6, pp. 583–610, 2009.
- [14] Ndubisi, N. O., Wah, C. K., & Ndubisi, G. C., "Supplier-customer relationship management and customer loyalty: The banking industry perspective", *Journal of Enterprise Information Management*, Vol 20, No. 2, pp. 222–236, 2007.
- [15] Prasad, C. J. S., & Aryasri, A. R., "Study of customer relationship marketing practices in organised retailing in food and grocery sector in India: an empirical analysis", *Vision: The Journal of Business Perspective*, Vol 12, No. 4, pp. 33–43, 2008.
- [16] Kaur, H., & Soch, H., "Mediating roles of commitment and corporate image in the formation of customer loyalty", *Journal of Indian Business Research*, Vol 5, No. 1, pp. 33–51, 2013.
- [17] Purgailis, M., & Zaksa, K., "The impact of perceived service quality on student loyalty in higher education institutions", *Journal of Business Management*, Vol 6, pp. 138–153, 2012.
- [18] Srinivasan, S. S., Anderson, R., & Ponnayalu, K., "Customer loyalty in e-commerce: an exploration of its antecedents and consequences", *Journal of Retailing*, Vol 78, No. 1, pp. 41–50, 2002.
- [19] Ulaga, W., & Eggert, A., "Relationship value and relationship quality: broadening the nomological network of business-to-business relationships", *European Journal of Marketing*, Vol 40, No. 3/4, pp. 311–327.

- 2006.
- [20] Jahanshahi, A. A., Gashti, M. A. H., Mirdamadi, S. A., Nawaser, K., & Sadeq Khaksar, S. M., "Study the effects of customer service and product quality on customer satisfaction and loyalty", *International Journal of Humanities and Social Science*, Vol 1, No. 7, pp. 253–260, 2011.
- [21] Chiu, C. M., Cheng, H. L., Huang, H. Y., & Chen, C. F., "Exploring individuals' subjective well-being and loyalty towards social network sites from the perspective of network externalities: the facebook case", *International Journal of Information Management*, Vol 33, No. 3, pp. 539–552, 2013.
- [22] Hallowell, R., "The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study", *International Journal of Service Industry Management*, Vol 7, No. 4, pp. 27–42, 1996.
- [23] Jacoby, J., Chestnut, R. W., & Fisher, W. A., "A behavioral process approach to information acquisition in nondurable purchasing", *Journal of Marketing Research*, Vol 15, No. 11, pp. 532–545, 1978.
- [24] Rundle-Thiele, S., "Exploring loyal qualities: assessing survey-based loyalty measures", *Journal of Services Marketing*, Vol 19, No. 7, pp. 492–500, 2005.
- [25] Day, G. S., "A two-dimensional concept of brand loyalty", *Journal of Advertising Research*, Vol 9, No. 3, pp. 29–35, 1969.
- [26] Caceres, R. C., & Paparoidamis, N. G., "Service quality, relationship satisfaction, trust, commitment and business-to-business loyalty", *European Journal of Marketing*, Vol 41, No. 7/8, pp. 836–867, 2007.
- [27] Doaei, H., Rezaei, A., & Khajei, R., "The impact of relationship marketing tactics on customer loyalty: the mediation role of relationship quality", *International Journal of Business Administration*, Vol 2, No. 3, pp. 83–93, 2011.
- [28] Vieira, A. L., "Assessing relationship quality and its key constructs from a rival models approach", *Management Research: The Journal of the Iberoamerican Academy of Management*, Vol 11, No. 2, pp. 113–132, 2013.
- [29] Athanasopoulou, P., "Relationship quality in sports: a study in football teams and fitness centres", *Sport, Business and Management: An International Journal*, Vol 3, No. 2, pp. 100–117, 2013.
- [30] Ndubisi, N. O., "Relationship marketing and customer loyalty", *Marketing Intelligence & Planning*, Vol 25, No. 1, pp. 98–106, 2007.
- [31] Abdullah, M. F., Putit, L., & Teo, C. B. C., "Impact of relationship marketing tactics (RMT's) & relationship quality on customer loyalty: a study within the Malaysian mobile telecommunication industry", *Procedia - Social and Behavioral Sciences*, Vol 130, pp. 371–378, 2014.
- [32] Ali, S. H. S., & Ndubisi, N. O., "The effects of respect and rapport on relationship quality perception of customers of small healthcare firms", *Asia Pacific Journal of Marketing and Logistics*, Vol 23, No. 2, pp. 135–151, 2011.
- [33] Cannière, M. H. De, Pelsmacker, P. De, & Geuens, M., "Relationship quality and purchase intention and behavior: The moderating impact of relationship strength", *Journal of Business and Psychology*, Vol 25, pp. 87–98, 2010.
- [34] Wong, A., & Sohal, A., "Customers' perspectives on service quality and relationship quality in retail encounters", *Managing Service Quality*, Vol 12, No. 6, pp. 424–433, 2002.
- [35] Wong, A., & Sohal, A. S., "Understanding the quality of relationships in consumer services: A study in a retail environment", *International Journal of Quality & Reliability Management*, Vol 23, No.3, pp. 244–264, 2006.
- [36] Barry, J. M., & Doney, P. M., "Cross-cultural examination of relationship quality", *Journal of Global Marketing*, Vol 24, pp. 305–323, 2011.
- [37] Ping, R. A., "The effects of satisfaction and structural constraints on retailer exciting, voice, loyalty, opportunism, and neglect", *Journal of Retailing*, Vol 69, No. 3, pp. 320–352, 1993.
- [38] Jones, M. A., Mothersbaugh, D. L., & Beatty, S. E., "Switching barriers and repurchase intentions in services", *Journal of Retailing*, Vol 76, No. 2, pp. 259–274, 2000.
- [39] Wulf, K., & Odekerken-Schröder, G., "A critical review of theories underlying relationship marketing in the context of explaining consumer relationships", *Journal for the Theory of Social Behaviour*, Vol 31, No. 1, pp. 73–101, 2001.
- [40] Chiu, P. H., Yen, T. F., Chu, K. K., & Tseng, C. L., "Does the alternative attractiveness switch tourists' intention in agritourism?", *International Journal of Organizational Innovation*, Vol 6, No. 2, pp. 219–233, 2013.
- [41] Song, Y., Su, Q., Liu, Q., & Wang, T., "Impact of business relationship functions on relationship quality and buyer's performance", *Journal of Business & Industrial Marketing*, Vol 27, No. 4, pp. 286–

- 298, 2012.
- [42] Sharma, N., & Patterson, P. G., "Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional, consumer services", *International Journal of Service Industry Management*, Vol. 11, No. 5, pp. 470–490, 2000.
- [43] Aydin, S., & Özer, G., "The analysis of antecedents of customer loyalty in the Turkish mobile telecommunication market", *European Journal of Marketing*, Vol 39, No. 7/8, pp. 910–925, 2005.
- [44] Jones, T., & Taylor, S. F., "The conceptual domain of service loyalty: how many dimensions?", *Journal of Services Marketing*, Vol 21, No. 1, pp. 36–51, 2007.
- [45] Santouridis, I., & Trivellas, P., "Investigating the impact of service quality and customer satisfaction on customer loyalty in mobile telephony in Greece", *The TQM Journal*, Vol 22, No. 3, pp. 330–343, 2010.
- [46] Birkett, N. J., "Selecting the number of response categories for a Likert-type scale", 1986.
- [47] Si, S. X., & Cullen, J. B., "Response categories and potential cultural bias: effects of an explicit middle point in cross-cultural surveys", *The International Journal of Organizational Analysis*, Vol 6, No. 3, pp. 218–230, 1998.
- [48] Roberts, K., Varki, S., & Brodie, R., "Measuring the quality of relationships in consumer services: an empirical study", *European Journal of Marketing*, Vol 37, No. 1/2, pp. 169–196, 2003.
- [49] Hennig-Thurau, T., Gwinner, K. P., & Gremler, D. D., "Understanding relationship marketing outcomes: an integration of relational benefits and relationship quality", *Journal of Service Research*, Vol 4, No. 3, pp. 230–247, 2002.
- [50] Morgan, R. M., & Hunt, S. D., "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol 58, No. July, pp. 20–38, 1994.
- [51] Callarisa Fiol, L. J., Alcañiz, E. B., Moliner Tena, M. A., & García, J. S., "Customer loyalty in clusters: Perceived value and satisfaction as antecedents", *Journal of Business-to-Business Marketing*, Vol 16, No. 3, pp. 276–316, 2009.
- [52] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M., "A primer on partial least squares structural equation modeling (PLS-SEM)", SAGE Publications, 2014.
- [53] Chin, W. W., "The partial least squares approach to structural equation modeling", *Modern Methods for Business Research*, Vol January, pp. 237–246, 1998.
- [54] Fornell, C., & Larcker, D. F., "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol 18, No. 1, pp. 39–50, 1981.
- [55] Chin, W. W., Marcolin, B. L., & Newsted, P. R., "A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an Electronic-Mail Emotion/ Adoption Study", *Information Systems Research*, Vol 14, No. 2, pp. 189–217, 2003.
- [56] Dant, R. P., Weaven, S. K., & Baker, B. L., "Influence of personality traits on perceived relationship quality within a franchisee-franchisor context", *European Journal of Marketing*, Vol 47, No. 1, pp. 279–302, 2013.
- [57] Raskovic, Matevz; Brencic, M. et al., "Relationship learning as a dimension of relationship quality: tentative evidence from transnational buyer-supplier relationships", Vol 25, pp. 37–50, 2013.
- [58] Byrne, B. M., "Structural equation modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument", *International Journal of Testing*, Vol 1, No. 1, pp. 55–86, 2001.
- [59] Cohen, J., "A power primer", *Psychological Bulletin*, Vol 112, No. 1, pp. 155–159, 1992.
- [60] Williams, K., "Core qualities of successful marketing relationships", *Journal of Management and Marketing Research*, Vol 13, pp. 1–30, 2012.