

# DETERMINANTS OF CUSTOMER SATISFACTION TOWARDS CREATION OF CUSTOMER LOYALTY OF THE CONSTRUCTION HARDWARE SUPPLIERS IN MALAYSIA

Aye Aye Khin <sup>1</sup>  
Alexander Tay Guan Meng <sup>2</sup>  
Wong Hong Chau <sup>3</sup>

## Abstract

*Customer loyalty is becoming a critical and key focus point for business organizations as the competition level getting highly stiff and fierce. The main objective of this study is to investigate the determinants of customer satisfaction towards creation of customer loyalty of the construction hardware suppliers in Malaysia. Achieving on customer satisfaction is the key fundamental of business to pursue the strategy of growth and expansion of market share, and to acquiring loyalty behavior. Convenience sampling method was used to collect quantitative data from 120 customers of hardware suppliers in Temerloh, Malaysia and was later analyzed using the correlation, regression analysis and hypothesis testing. The study revealed that the customer satisfaction is positively related to customer loyalty with several of determinant factors. Actually, customer showed that they were satisfied with supplier location, product variety, product quality and service quality of the supplier. All the attributes were positively related to customer satisfaction although product quality and service quality are the most significant aspects that contribute to customer satisfaction. This study's findings would be provided with benefits for the industry in formulating future marketing and customer relationship strategies.*

**Keywords:** *Customer Loyalty, Customer Satisfaction, Construction Hardware Supplier*

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## Introduction

Customer loyalty may be defined and focused on either attitudinal or behavioral (Sweeney & Swait, 2008; Kotler, 2009). In attitudinal measures, favorable on the brand has been used as a predictor of retention behavior (Parasuraman *et al.*, 1988; Caruana, 2002; Kotler, 2009). Customers who satisfied and have had an exceptional experience will create positive worth-of-mouth and repurchase intention as loyalty customers (Zeithaml *et. al.*, 2008). The business will

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<sup>1</sup> Assis. Prof., Faculty of Accountancy and Management, Universiti Tunku Abdul Rahman (UTAR), Malaysia, Email : [ayakhin@utar.edu.my](mailto:ayakhin@utar.edu.my)

<sup>2</sup> Lecturer, Faculty of Accountancy and Management, Universiti Tunku Abdul Rahman (UTAR), Malaysia, Email : [taygm@utar.edu.my](mailto:taygm@utar.edu.my)

<sup>3</sup> Assis. Prof., Faculty of Accountancy and Management, Universiti Tunku Abdul Rahman (UTAR), Malaysia, Email : [wonghc@utar.edu.my](mailto:wonghc@utar.edu.my)

have the foundation for longer-term, more profitable and loyal relationships. Enhancing business performance is a never-ending process (Sureshchandar *et al.*, 2002; Kotler, 2009). As markets shrink, companies are scrambling to boost customer satisfaction and keep their current customers rather than devoting additional resources to chase potential new customers. The claim that it costs five to eight times as much to get new customers than to hold on to old ones is key to understanding the drive toward benchmarking and tracking customer satisfaction.

As Malaysia moves from developing country status towards a developed and industrialized nation, its construction industry had changed in tandem to the changes in construction demand. The country's transformation from an agriculture-based economy to industrialization has created the environment for the development of the construction industry. The construction industry has played an important role in establishing the infrastructure required for socioeconomic development and contributing directly to economic growth. There is a positive correlation between construction output and GDP. The industry's annual growth rates generally follow the growth trend of the economy (Amin & Isa, 2008; Azam & Moha Asri, 2015).

However, over the last five years there have been some dramatic changes in the construction market. Businesses were faced with unprecedented challenges arising from a number of factors. These included rising prices of raw materials, limited availability of funding, government spending cuts and falling consumer spending. Such factors are believed to have affected how the companies in construction industry operate today. The hardware suppliers were faced with fierce competition. Today's business environment and the uncertainty of the economic situation and the unconvincing growth rate in the construction industry had called for a systematic and analytical investigation into real situation confronted between the construction hardware suppliers and their customers (Caruana, 2002; David *et al.*, 2007; Kotler & Armstrong, 2010; Dahari *et al.*, 2011). This will enable them to gain valuable information that are significant in making decision in order to gain and maintain a competitive advantage and sustainability in business.

Moreover, the main objective of this study was to investigate the determinants of customer satisfaction towards creation of customer loyalty of the construction hardware suppliers in Malaysia. However, the specific objectives of this study are to find out the factors that influencing the customer satisfaction towards creation of customer loyalty of the construction hardware supplier in Malaysia, to examine the relationship between the supplier location, product variety, product quality, service quality and customer satisfaction and to analyze the effect of customer satisfaction towards creation of customer loyalty the construction hardware suppliers in Malaysia.

## Literature review

Customer loyalty refers to the willingness of the customer to maintain contact with a particular organization or product or services (Ahmed *et al.*, 2010; Kotler & Armstrong, 2010; Moha Asri *et al.*, 2014). In particular loyalty represent as customer's commitment in dealing with positive word-of-mouth, and repurchase intention on buying products and particular organization (Parasuraman *et al.*, 1988; Han *et al.*, 2008; Ahmed *et al.*, 2010; Haque *et al.*, 2014). In fact, customer loyalty is a vital element for the continued existence and operating of firms business. On the other hand, satisfaction is a phenomenon expressing that the performance and benefits of the products exceed the expectations of the customers (Parasuraman *et al.*, 1988; Kattara *et al.*, 2008). There is growing managerial interest in

customer satisfaction as a means of evaluating quality (Parasuraman *et al.*, 1988; Kotler, 2009; Kotler & Armstrong, 2010). High customer satisfaction ratings are widely believed to be the lead indicator of company's future profit. Satisfaction can be broadly characterized as a post-purchase evaluation of product quality given pre-purchase expectation (Kattara *et al.*, 2008; Kotler & Armstrong, 2010). Customer satisfaction is the degree to which a customer perceives that an individual, firm or organization has effectively provided a product or service that meets the customer's needs in the context in which the customer is aware of and/or using the product or service. Therefore, satisfaction has been defined as post-consumption on customer's response as the result of their perception on certain quality attribute elements.

For the purpose of this study, three types of variables were studied and that were independent variables, intervening variable and dependent variable. The dependent variables were the variables of primary interest for this research. In this study the model was constructed using customer loyalty as the dependable variable. On the other side there was an intervening variable that was customer satisfaction and there were the independent variables, which significantly influenced the intervening variables in either positive or negative ways. This also means that the variances in the dependent variables were accounted for by the independent variables. For the purpose of this research, four independent variables will be tested; these were customer supplier location, product variety, product quality and service quality. These four independent variables will be tested whether they have significant influence on the intervening variable and subsequently to the dependent variable. With these definitions and all, this research, however, considers some research variables as discuss follow.

## **Determinants of Customer Satisfaction towards Creation of Customer Loyalty**

### **Supplier location**

Supplier location means the location of the construction hardware warehouse and it is considered to be very important. Location can mean convenience and accessibility. Location can also refer to the number of stores in a particular geographical setting. According to (Zarco & Yusta, 2010), once a location is near to the home then transaction costs associated with purchase such as transport costs and time spent are likely to be reduced. Moreover, people were drawn to larger shopping thus larger cities tend to attract more customers to shop their smaller ones therefore the need for supermarkets to consider location when putting up facilities. Therefore, the following hypothesis is developed:

*H1: There is a relationship between supplier location and customer satisfactions of the construction hardware suppliers.*

### **Product Quality**

According to (Zeithaml *et al.*, 2008), the product quality has been described using eight attributes that are: 1) Performance; which is refers to a product primary operating characteristics. 2) Features; these are additional features which are also known as the bells and whistles of the product. 3) Conformance; which is described as the extent to which a product will operate properly over a specified period of time under stated conditions of use. 4) Reliability; the probability that will operate properly over a specified period of time under stated conditions of use. 5) Durability; it is the amount of use a customer gets out of use of a product before it physically deteriorates or until replacement is preferable. 6) Serviceability;

the speed competency and courtesy of repair. 7) Aesthetics; how a product appeals to all the five senses of a human. 8) Customer perceived quality: Customers perception of a products quality based on reputation of the firm. Therefore, the following hypothesis is developed:

*H2: There is a relationship between product variety and customer satisfactions of the construction hardware suppliers.*

### **Product Variety**

Wieseke and Torsten (2009) found that also product variety does not only help retailers attract more consumers but it can also motivate them to purchase more while at the store. If a retailer gives greater variety in product categories, it can improve the convenience of purchase in this way increasing customer satisfaction. Variety product selection can also help reduce the perceived costs like effort and travel time. Variety helps retailers to serve different tastes and preferences of its clients. Therefore, the following hypothesis is developed:

*H3: There is a relationship between product quality and customer satisfactions of the construction hardware suppliers.*

### **Service Quality**

Service quality refers the quality of service, where (Parasuraman *et al.*, 1988) stated that there are five generic dimensions or factors of the service quality: 1. Reliability; The service provider's ability to provide accurate and dependable services; consistently performing the service right. 2. Assurance; Diverse features that provide confidence to customers. 3. Tangibility; refers to the physical characteristics associated with the service encounter. 4. Empathy; The service firm's readiness to provide each customer with personal service. 5. Responsiveness; A firm's willingness to assist its customers by providing fast and efficient service performances. Therefore, the following hypothesis is developed:

*H4: There is a relationship between service quality and customer satisfactions of the construction hardware suppliers.*

### **Customer satisfaction as potential mediator**

Customer satisfaction as mentioned by (Zarco & Yusta, 2010), is affected by many factors which include friendly employees, courteous employees, knowledgeable employees, and helpful employees, accuracy of billing, competitive pricing, service quality, good value and quick service. As mentioned by (Soderlund & Rosengren, 2008), satisfaction is an overall attitude towards a product provider or an emotional reaction to the difference between what customers expect and what they actually receive regarding the fulfilment of a need. Terblanche (2006) also defined satisfaction as a person's feelings of pleasure, excitement, delight or disappointment which results from comparing a products perceived performance to his or her expectations. Thus, customer satisfaction can be defined as the overall evaluation of the service performances or utilization. Therefore, the following hypothesis is developed:

*H5: The relationship between supplier location, product variety, product quality, service quality and customer loyalty of the construction hardware suppliers is mediated by customer satisfaction.*

## Customer loyalty

Customer loyalty relates to what customers think and do and/or try to do. Most customer loyalty experts would agree that loyalty is best defined as a state of mind, a set of attitudes, beliefs, desires etc. Loyalty is developed by approaches which reinforce and develop a positive state of mind and the associated behaviours. The exchange of information is one of the keys of loyalty, and provides a critical bridge between state of mind and behaviour. Loyal customers are more likely to give information to the service provider (because they trust the service provider and expect from the service provider to use the information with discretion and to their benefits). Managing loyalty is important because it means not only managing behaviour but also managing a state of mind (Parasuraman *et al.*, 1988; Bei & Chiao, 2006). Bei and Chiao (2006) explained the customer loyalty as “the market place currency of the twenty-first century”. Bowen and Chen (2001) pointed out that the cost of serving a loyal customer is five or six times less than a new customer. This statement shows the importance of customer loyalty. Besides, (Bridson *et al.*, 2008) mentioned that it is better to look after the existing customer before acquiring new customers. Adding with this, as (Farris *et al.*, 2010) stated the advantages of customer loyalty are as: the service cost of a loyal customer is less than new customers. They will pay higher costs for a set of products; and for a company, a loyal customer will act as a word-of-mouth marketing agent.

## Conceptual Framework

Figure 1: Conceptual Framework of the Customer Satisfaction towards Creation of Customer Loyalty (Source: Own Findings)

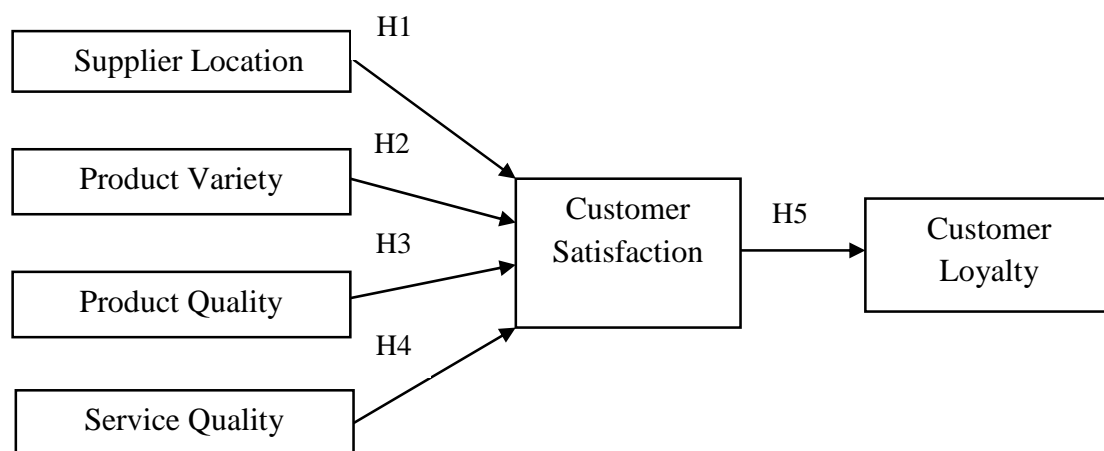


Figure 1 illustrates the conceptual framework of customer satisfaction towards creation of customer loyalty. This study presents by the dependent variable as customer loyalty (CL), and independent variables such as supplier location (SL), product variety (PV), product quality (PQ), service quality (SQ) and mediating variable of customer satisfaction (CS) towards creation of customer loyalty of the construction hardware suppliers in Malaysia.

## Methodology

From the study of the literatures, customer loyalty will be the function of customer satisfaction. Subsequently, customer satisfaction itself will be also the attributes of many other factors, among the important attributes are the supplier location (SL), product variety

(PV), product quality (PQ) and service quality (SQ). Therefore, customer loyalty (CL) as an equation of customer satisfaction (CS) is assumed to be determined as follows:

$$CL = \beta_0 + \beta_1 CS + e_1$$

In subsequently; customer satisfaction (CS) as an equation with related factors is assumed to be determined as follows:

$$CS = \beta_0 + \beta_1 SL + \beta_2 PV + \beta_3 PQ + \beta_4 SQ + e_2$$

where CL = Customer Loyalty; CS = Customer Satisfaction; SL = Supplier Location; PV = Product Variety; PQ = Product Quality; SQ = Service Quality;  $\beta_0$  and  $\beta_0$  = intercept;  $\beta_1$  and  $\beta_s$  = coefficients of independent variables;  $e_s$  = residuals.

The conceptual framework was the foundation on which the entire research project was based. It was logically developed, described and elaborated network of associations among the variables deemed relevant to the research (Sekaran & Bougie, 2010). The independents, moderating and the dependent variables are illustrated in the diagram in Figure 1. The relationships among the variables were constructed in the hypotheses so that they can be visualised easily and the dynamics of the situation was clearly understood.

Based on the literature reviews and preliminary interviews with suppliers and customers, a model indicating the customer loyalty was developed. The model consists of five important factors that were posited to have an effect on the customer loyalty towards suppliers. They are the independent variables of supplier location, product variety, product quality and the moderating variable of customer satisfaction. Here, this section discusses the research design process, sampling methods, measurements and instruments, data collection and source of data, which are explained accordingly. A field study on the customer satisfaction behaviour were carried out in the district of Temerloh, Pahang to find out their level of satisfaction and loyalty towards the supplier of construction materials in a non-contrived settings where work proceed normally. The quantitative methods were used in collecting data using a simple non-probability sampling method to investigate the relationship. The correlation study and regression analysis were then being carried out to the important variables associated with the problem using SPSS.

The sample for this study was selected from the supplier's customers in Temerloh district. Sekaran and Bougie (2010) suggested that the sample size of 100-200 is adequate. Due to constraint in time, cost and resources, a total of 120 customers were selected as the samples in order to test the research hypothesis. The convenience sampling from the non-probability sampling method was used where the members of the population were those from the conveniently available. Even though this method is not generalizable at all but it is quick, convenient and less expensive for the purpose of this study and is adequate for a general understanding of the problem.

Data were gathered from the construction hardware supplier customers in Temerloh district. A set of structured questionnaire was distributed to the customers of the suppliers and at the same time the interviews were administered. The questionnaire were initially being pre-tested among 30 individuals to find out any problems with the understanding and completing the questionnaire. The pre tested questionnaire had provided some useful information and correction were made for the final questionnaire. The questionnaires were simple, short and could easily be understood. Since this was the first customer satisfaction survey made on this

topic in the district, so there was no previous example on the level of customer loyalty in this area before. The research was conducted in January 2014 and the survey questionnaires were handed out to customers for two weeks, the time-period considered was long enough to collect a reliable results.

For the purpose of this study, all data were obtained from primary sources. Primary data refer to information obtained first-hand by the researcher on the variables of interest for the specific purpose of the study. In this study, it means that the data were obtained from the customers of the specific suppliers from Temerloh district, who provided information through interviews, administered questionnaires and observations to complete this study.

## Results and Discussions

This study represents the entire data analysis and result interpretation consisting the demographic profiles, test on the reliability of the scales, the correlation analysis, regression analysis, hypothesis testing etc. Demographic variables for the purpose of this study showed in Table 1. It only provides a general view on the demographic information of the population under the study. Only three questions on the demographic factors were collected that were gender, age and education background.

Table 1: Demographic Profile of the Respondents

		Frequency	Percent
Gender	Female	6	5.0
	Male	114	95.0
	<b>Total</b>	<b>120</b>	<b>100.0</b>
Age	Between 26 - 35 years	19	15.8
	Between 36 - 49 years	99	82.5
	Above 50 years	2	1.7
	<b>Total</b>	<b>120</b>	<b>100.0</b>
Education	Secondary	105	87.5
	Certificate	11	9.2
	Diploma	3	2.5
	Degree	1	.8
	<b>Total</b>	<b>120</b>	<b>100.0</b>

(Source: Own data analysis)

Table 1 explains that the sample descriptive statistics of the respondents responding to the questionnaire according to the gender was not evenly distributed where 114 samples were male and 6 samples were female. Male respondents represented more than female respondents that was 95% of the total candidates. This might be due to the lack of female customers in the construction hardware industry. Besides, the sample descriptive statistics of the respondents responding to the questionnaire had a frequency mode of age group between 36 to 50 years old who represents 82.5% of the total respondents. This could be due to the purchase decision and involvement in this sector were normally done by the middle aged group who had better knowledge and experiences towards the materials purchased. In addition to it, the highest percentage of respondents was from the secondary level of education which consists of 105 out of 120 samples and represents 87.5% of the total respondents. While certificate represents 9.2%, diploma 2.5% and degree level represent less than 1%. This could be due to the geographic factor in which normally not many of higher educated persons lived in small towns like the one under the study.

Cronbach’s Alpha test of reliability shows in Table 2. It is the most popular estimate to measure internal consistency of a scale. Ideally, the Cronbach alpha coefficient of a scale should be .7 and above (Sekaran & Bougie, 2010).

Table 2: Reliability Test

	<b>Cronbach’s Alpha</b>	<b>N of items</b>
Supplier Location	.736	3
Product Variety	.799	4
Product Quality	.853	6
Service Quality	.866	8
Customer Satisfaction	.843	5
Customer Loyalty	.799	4
Overall	.953	30

(Source: Own data analysis)

The widely accepted social science cut-off point for alpha coefficient was 0.70 for the reliability of the measures to be considered acceptable. Since the alpha coefficient for all the above constructs was above 0.70, the internal reliability of the measures used in this research can be considered to be acceptable.

Correlation analysis presents in Table 3 & 4. The Pearson correlations are related in the sense that both deal with correlation among variables. The correlation coefficient is a measure of linear association between two variables. Hence, Table 3 exhibits the association between customer loyalty and customer satisfaction. The Pearson Correlation shows the *r* value of 0.762 between customer loyalty and customer satisfaction. Thus the customer loyalty is associated with customer satisfaction.

Table 3: Correlation between Customer Loyalty and Customer Satisfaction

		<b>Customer Loyalty</b>	<b>Customer Satisfaction</b>
<b>Customer Loyalty</b>	Pearson Correlation	1	.762**
	Sig. (2-tailed)		.000
	N	120	120
<b>Customer Satisfaction</b>	Pearson Correlation	.762**	1
	Sig. (2-tailed)	.000	
	N	120	120

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

Table 4: Correlation between Customer Satisfaction and Predictors

		<b>CS</b>	<b>SL</b>	<b>PV</b>	<b>PQ</b>	<b>SQ</b>
<b>CS</b>	Pearson Correlation	1	.439**	.639**	.701**	.796**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	120	120	120	120	120
<b>SL</b>	Pearson Correlation	.439**	1	.466**	.523**	.436**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	120	120	120	120	120
<b>PV</b>	Pearson Correlation	.639**	.466**	1	.654**	.616**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	120	120	120	120	120
<b>PQ</b>	Pearson Correlation	.701**	.523**	.654**	1	.689**
	Sig. (2-tailed)	.000	.000	.000		.000



	N	120	120	120	120	120
SQ	Pearson Correlation	.796**	.436**	.616**	.689**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	120	120	120	120	120

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

The Pearson correlation  $r$  value between the mediating variable of customer satisfaction and the independent variables of location, product variety, product quality and service quality are 0.439, 0.639, 0.701 and 0.796 respectively. All the values are above 0.3. Thus the customer satisfaction is associated with all the independent variables. The  $r$  value between the independent variables is all under 0.85 which indicate that there is no problem of multicollinearity between the independent variables.

Regression analysis involves identifying the relationship between dependent and independent variables. A model of the relationship is hypothesized, and estimates of the parameter values are used to develop an estimated regression equation. However, Table 5 represents the model summary of customer loyalty. The determinant coefficient, R-Square value is 0.580 which means that 58% of the variation in the customer loyalty can be explained by customer satisfaction. The Durbin-Watson statistic is 1.750.

Table 5: Model Summary of Customer Loyalty

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.762 <sup>a</sup>	.580	.577	.31081	1.750

a. Predictors: (Constant), CS; b. Dependent Variable: CL

Table 6: The ANOVA for Customer Loyalty

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.749	1	15.749	163.028	.000 <sup>a</sup>
	Residual	11.399	118	.097		
	Total	27.148	119			

a. Predictors: (Constant), CS; b. Dependent Variable: CL

The Table 6 shows the ANOVA and means that the significant value is less than 0.01 level. Therefore, group means are significant difference. This phenomenon, however, supports the hypothesis. In addition to this, Table 7 represents the determinant coefficients of customer loyalty and customer satisfaction. The customer satisfaction has a positive effect on customer loyalty towards the construction hardware supplier and the hypothesis is accepted. In general, customer satisfaction can be used to model customer loyalty towards the hardware supplier.

Table 7: Determinant Coefficient of Customer Loyalty

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.268	.309		4.105	.000	.656	1.880		
	CS	.758	.059	.762	12.768	.000	.641	.876	1.000	1.000

a. Dependent Variable: CL

The equation Customer Loyalty = 1.268 + 0.758(Customer Satisfaction) + 0.309e<sub>1</sub>. Thus for every unit increase in customer satisfaction, customer loyalty is expected to increase by 0.758 units. The p-value of customer satisfaction is less than 0.01 level which means that the customer satisfaction is a significant predictor of customer loyalty. Therefore, building customer loyalty is very important because it is all about retaining the right customer and getting them to buy often in higher quantities (Bei & Chiao, 2006; Ahmed *et al.*, 2010; Sarwar *et al.*, 2013). Treating the customers well and showing that they were cared and remembered will reward the company by them choosing the company over the competitors. Thus, loyalty is useful as they predict phenomena such as recommendation, repetition and retention.

On the other hand, as regression analysis is a statistical process for estimating the relationships among variables, so it includes many techniques for modelling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. To do so, however, Table 8 represents model summary of customer satisfaction.

Table 8: Model Summary of Customer Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.831 <sup>a</sup>	.691	.680	.27142	1.788

a. Predictors: (Constant), SL, PV, PQ, SQ; b. Dependent Variable: CS

Table 8 shows the determinant coefficient, R-Square value is 0.691 which means that 69.1% of the variation in the customer satisfaction can be explained by supplier location, product variety, product quality and service quality. The Durbin-Watson statistic is 1.788.

Table 9: The ANOVA for Customer Satisfaction.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.920	4	4.730	64.205	.000 <sup>a</sup>
	Residual	8.472	115	.074		
	Total	27.392	119			

a. Predictors: (Constant), SL, PV, PQ, SQ; b. Dependent Variable: CS

Table 9 explains also the probability p-value from the ANOVA table. It is less than 0.01 level which means that group means of the four variables, such as, supplier location, product variety, product quality and service quality are significant difference with customer satisfaction.

Table 10: Determinant Coefficient of Customer Satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF

1	(Constant)	.165	.354		.467	.641	-.535	.866		
	<b>SL</b>	.017	.066	.016	.263	.793	-.113	.148	.696	1.437
	<b>PV</b>	.169	.080	.154	2.113	<b>.037</b>	.011	.327	.506	1.977
	<b>PQ</b>	.221	.083	.216	2.670	<b>.009</b>	.057	.386	.411	2.435
	<b>SQ</b>	.564	.078	.545	7.246	<b>.000</b>	.410	.719	.476	2.103

a. Dependent Variable: CS

The customer satisfaction equation is:

$$\text{Customer Satisfaction} = 0.165 + 0.017(\text{Supplier Location}) + 0.169(\text{Product Variety}) + 0.221(\text{Product Quality}) + 0.564(\text{Service Quality}) + 0.354 e_2$$

This means that for every unit increase in location, customer satisfaction is expected to increase by 0.017 units, provided the other variables remain unchanged. Similarly, for every unit increase in product variety, customer satisfaction is expected to increase by 0.169 units, provided the other variables remain unchanged. For every unit increase in product quality, customer satisfaction is expected to increase by 0.221 units, provided the other variables remain unchanged; and for every unit increase in service quality, customer satisfaction is expected to increase by 0.564 units, provided the other variables remain unchanged. The p-value of location is 0.793 which is more than 0.05 shows that location is not a significant predictor for the customer satisfaction. The p-values the other variables that were product variety, product quality and service quality are less than 0.05 which shows that they are the significant predictors for the customer satisfaction. The VIF values for the independent variables are less than 5, indicating that there is no problem of multicollinearity.

Based on the regression analysis, hypotheses testing showed in Table 11. H2, H3, H4 & H5 are supported of the theory and except H1 is not only supported. According to (Soderlund & Rosengren, 2008) store offer comprised of four dimensions which were store merchandise, trading format, customer service and customer communication. They further stated that merchandise refers to the product quality and price carried by the store. Similarly, the trading format consists of elements like location, layout and atmosphere. Lastly, customer service includes the level of assistance provided by the retailer, the speed of service quality and friendliness of staff.

Table 11: Hypotheses Testing of Customer Satisfaction and Customer Loyalty

H <sub>(x)</sub>	Hypothesized Statement	Finding(s)
<b>H1</b>	Supplier location has a relationship between customer satisfactions of the construction hardware supplier industry.	Not Supported
<b>H2</b>	Product variety has a relationship between customer satisfactions of the construction hardware supplier industry.	Supported
<b>H3</b>	Product quality has a relationship between customer satisfactions of the construction hardware supplier industry.	Supported
<b>H4</b>	Service quality has a relationship between customer satisfactions of the construction hardware supplier industry.	Supported
<b>H5</b>	Customer satisfaction has a significant relationship between customer loyalty of the construction hardware supplier industry.	Supported

Moreover, it can be concluded that all the empirical results from this study confirmed that the customer satisfaction is positively related to all the independent variables. Therefore, the final estimated model for customer satisfaction towards creation of customer loyalty of the

construction hardware suppliers had provided the clear and positive answers to the questions on customer loyalty towards construction hardware supplier. The data analysis had provided the results show the independent variables of supplier location, product variety, product quality and service quality are positively related to the mediating variable of customer satisfaction, which in turn had a positive relation towards the dependent variable of customer loyalty. In the analysis, all the correlation coefficients ( $r$  values) between the independent variables did not exceed 0.85 and the Variance Inflation Factor (VIF value) were less than 5 which indicates that there was no problem of multicollinearity between the variables. The  $p$ -value for the model was less than 0.01 level and the residuals were normally distributed. Therefore the model of the customer satisfaction towards creation of customer loyalty of the construction hardware suppliers in this study can be concluded as valid and can be accepted.

Customer loyalty is a vital element for the continued existence and operating of firms business (Siddiqi, 2011). Customer respect oriented business organization will attract and develop loyal customers. In emerging business competitions the loyalty of customers had shown as a main feature in getting continue competitive advantage. It is crucial to understand the customer psyche for building competitive policies to succeed in differentiation and winning of customer loyalty in the competitive market. Customer loyalty can be measure by (Batista *et al.*, 2014) the intention of repurchase, recommending the product or services to other and patience towards price. Significantly the call quality, an intention to recommend the current carriers to others, handsets type and brand value having an explanatory power to measure the determinants of customer loyalty (Saeed *et al.*, 2014).

Forward-looking nature ability produce by customer loyalty has emerged as one of the most reliable metrics. Using a customer loyalty metric helps organization make better decision based on customer insights such as operational metrics, profitability and sales. Walker's Loyalty Matrix is designed by (Walker, 2004) to address the elements of both behavioural loyalty as well as attitudinal loyalty while many assert that loyalty is simply repeat purchase. Inserting of attitudinal dimension, the researcher are able to segment further for the customer base, for instant, customer has low commitment but willing to continue of purchasing will trapped them eventually. In contrast to truly loyal customers in which both have high in attitudinal loyalty and behavioural. From a business perspective, this enables companies not only to understand some of the motivation behind the customer behaviour, but also provide a better barometer of risk, profit, revenue and an organizational call to action (Eden, 2015; Tarasi *et al.*, 2013). This is very important and meaningful benefit (Mahmud & Jusoff, 2013; Sirakaya-Turk *et al.*, 2015), however, truly loyal customers tend to more likely to recommend the company to future customers, will be prone to buying a broader range of products, are more secure sources of revenue and repeated purchase and purchase more in the future.

## Conclusion and Implications

The country's transformation from an agriculture-based economy to industrialization has created the environment for the development of the construction industry. The findings from this research which was specifically conducted in the construction hardware supplier sector had clearly revealed that the loyalty of customers had arisen through satisfaction of customers towards the products and service provided by the suppliers. The higher the level of satisfaction towards the product and service quality offered by the suppliers, the higher is the level of loyalty towards them. That shows how significant is the product and service quality contributes towards the customer loyalty. It is therefore suggested that everyone in the organization was to hold responsibility to ensure that the customers remain satisfied by

continuously improving their product and service quality. It is very important for the business to change the organization culture and to improve process management so as to meet the expectation of their customers especially with regards to their product and service quality. The challenge from current situation of fierce competition in the market for the construction materials had forced the suppliers to be more alert of the changing business environment.

Findings of this research show that the quality of customer service and the quality of products promotes customer satisfaction and it also revealed that there is a positive and meaningful relationship between the customer's satisfaction and the increased in the customer's loyalty. This study showed that a better quality of products and services tends to increase the customer's loyalty. The company may pursue the common points of this study to inspect the level of their customer's satisfaction and loyalty. Although it may be easy to propose that customer satisfaction increases loyalty, but there are also many satisfied customers who are not loyal to that particular product or brand due to some other reasons. Thus, paying attention to satisfaction and loyalty at the same time is not only critical but also a challenging task for a company. Therefore, customer satisfaction and loyalty issues play a vital role for businesses in maintaining a competitive advantage. It could be established through the businesses formulated components of marketing mix by acknowledging the customers' expectations and understanding the meaning of customer loyalty. Through measuring and studying the customer satisfaction and loyalty, organizations do not only gain knowledge on their customer but also gain competitive edge in the market. For future study, it is needed to capture a more comprehensive study on the customer loyalty especially on the customer satisfaction in the construction hardware retail sector. This study's findings would be provided with benefits for the industry in formulating future marketing and customer relationship strategies.

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