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Factors Affecting Customer Satisfaction in After-Sales Service of Malaysian Electronic Business Market

FACTEURS QUI INFLUENCENT SUR LA SATISFACTION DES CLIENTS DANS LE SERVICE APRÈS-VENTE DU MARCHÉ DE COMMERCE ÉLECTRONIQUE EN MALAISIE

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Abstract: This study is about the discoveries on the factors affecting customer satisfaction in after-sales service. It helps to extend the understanding on the factors that may exist and its influence towards customers' satisfaction, an important element in retaining a profitable business relationship with the customer. After-sales service which is a part of customer relationship management (CRM) helps to enhance a customer's loyalty. To date, there have been very minimum studies that were conducted by taking into consideration the after-sales service in business organizations particularly the electronic industry in Malaysia. Therefore from the data presented in this study, it can be expected that the findings can benefit both industrial and academician by giving a new source of ideas and information. There are three research objectives of the study; 1. To investigate the effects of delivery on customer satisfaction, 2. To investigate the effects of installation on customer satisfaction and 3. To investigate the effects of warranty on customer satisfaction. Results indicated to confirm on the earlier literature that there was strong relationship between the dependent variables of customer satisfaction and three independent variables;

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delivery, installation, and warranty. It can be concluded that the delivery, installation and warranty aspects are important for business organizations to make their customers satisfied and delighted. The delighted customers in turn will remain loyal and always have a positive impression towards the company and its products. This is true because fast delivery is very crucial to the customers to meet their usage and production requirement. Installing a quality service and a fast response towards the warranty claim will give an indication of good quality and value product. Future research should focus on the similar study of factors affecting customer satisfaction in after-sales service in other prominent industries such as automotive, construction and other manufacturing as well as service sectors so that such constructible findings and conclusions can be generalized from study.
Key words: After-Sales Service; Delivery; Installation; Warranty; Satisfaction

Résumé: Cette étude parle des découvertes sur les facteurs qui influencent sur la satisfaction des clients dans le service après-vente. Il contribue à élargir la compréhension sur les facteurs qui existent et leur influence sur la satisfaction des clients, un élément important pour garder une relation commerçiale profitable avec le client. Le service après-vente fait partie de la gestion des relations clientèles (GRC) qui contribue à renforcer la fidélité de client. Jusqu'à nos jours, en Malaisie, on a fait très peu d'études tout en prenant en considération le service après-vente dans les organisations commerçiales, et en particulier l'industrie du commerce électronique. Par conséquent, à partir des données présentées dans cette étude, on peut s'attendre à ce que les conclusions puissent profiter à la fois aux industriels et aux académiciens en leur donnant une nouvelle source d'idées et d'informations. Cette étude a trois objectifs de recherche: 1. Pour étudier les effets de la livraison sur la satisfaction du client, 2. Pour étudier les effets de l'installation sur la satisfaction du client et 3. Pour étudier les effets de la garantie sur la satisfaction dur client. Les résultats ont confirmé qu'il y avait une relation étroite entre les variables dépendantes de la satisfaction du client et les trois variables indépendantes: la livraison, l'installation et la garantie. On peut en conclure que la livraison, l'installation et la garantie sont importantes pour les organisations commerçiales pour satisfaire leurs clients et les enchanter. En revanche, les clients satisfaits, à son tour, resteront fidèles et auront toujours une impression positive envers l'entrepris et ses produits. C'est vrai parce qu'une livraison rapide est très importante pour les clients, ce qui peut répondre à leur besoin de produit. La prestation d'un service de qualité et d'une réponse rapide peuvent donne aux clients une indication sur la bonne qualité et la valeur des produits. Les recherches ultérieures devraient se concentrer sur l'étude analogue des facteurs qui affectent la satisfaction du client dans le service après-vente dans d'autres secteurs importants tels que l'automobile, la construction et d'autres industries de fabrication ainsi que dans des secteurs de service afin que de telles conclusions et des conclusions constructibles peuvent être généralisées à partir de l'étude.
Mots-clés: service après-vente; livraison; installation; garantie; satisfaction

1. INTRODUCTION

The key to build lasting customer relationships is to create superior value and satisfaction. Customer relationship management (CRM) involves building and maintaining profitable customer relationships by

dealing with all aspects of acquiring, keeping and growing customers (Kotler and Armstrong, 2010). After-sales service is activities organized by business organizations after the purchasing stage and is a part of customer relationship management (CRM). "After-sales services" has been used the most, to describe services that are provided to the customer after the products have been delivered (Vitasek, 2005). "After-sales services" are often referred to as "product support activities", meaning all activities that support the product-centric transaction (Lele and Karmarkar, 1983). It also being defined as "customer support" elements where all activities that ensure that a product is available to consumers "over its useful lifespan for trouble-free use" (Loomba, 1998). It is noteworthy to point out that after-sales plays a key role in supporting marketing activities to enhance customer loyalty, and thus to increase profitability in the long term (Saccani, et. al, 2006). According to Alexander et al., (2002) and Wise and Baumgarter, (1999) profit margins can be generated higher by delivering the after sale service compared to product sale without it. It may generate at least three times turnover of the original purchase during a given product lifecycle. After sale services represent one of the few constant connections those customers have with a brand (Gallagher et al. 2005), while Lewis et al. (2004) pointed out how it is affected by and affects the brand image of a firm. Gallagher et al. (2005) point to after-sales as a way to recover profits lost due to the fierce competition on sales prices of original equipment, representing at the same time "one of the few constant connections that customers have with a brand". After-sales is thus a potential source of competitive advantage for the firm (Armistead and Clark, 1992; Goffin, 1999). Vitasek (2005) described after-sales service as a service that has been given to the customer after the products have been delivered. The same services are sometimes called "fields services", when they are organized in the main characteristics that are located at a customers' site (Simmons, 2001). After-sales service is often referred to product support services where all activities will support the sold product (Lele and Karmarkar, 1983). However, most of the business organizations are not aware about the after-sales service factors and its impact towards the customer satisfaction. Failing to realize the importance of the factors can lead to a disastrous and threatening business relationship. Dissatisfied customers will turn to competitors who can offer better after-sales services. Profitable business relationship is not something that a company can take easily as it requires enormous effort and cost to build it. According to Irini D. R. (2008) installation and delivery are the keys to the after-sales service that have an influence to the customer. Buyers of product want assurance that the product will perform satisfactorily over its useful life when operated properly. This is achieved through post-sale support such as installation, warranties, extended warranties, maintenance service contracts, provision of spares, training programs, product upgrades and etc (Murthy D.N.P. et. al, 2004). Many value-conscious consumers are demanding that a company's products offer more value than its competitor's products not only in its design and manufacturing, but also in product delivery and support (Sherman, 1992). Increasingly, distribution and service support options available for a product are key determinants in consumers' product purchase decision (Corey et al., 1989; Lele and Sheth, 1987). Levitt (1993) described that manufacturers and retailers cannot consider their active role ends with the sales but continue by supporting their customers with after-sales service such as delivering spare parts and etc. According to Goffin (1999), refer installation as being one among the seven elements of customer support. Installation is the first element of product support after the sales. For a complex product, or safety issues involve, the installation is usually performed by personnel from the manufacturing company or representatives. The rationale of installation packages are based on three main reasons which are after-sales economics, customer requirements, and competitive arguments (Oliva and Kallenberg, 2003). However, according to Murthy D. N. P., et al. (2004) customer dissatisfaction can arise due to poor performance of the purchased item and/or the quality of warranty service provided by the manufacturer. In either case, it results in a negative impact on the overall business performance. This may lead to the dissatisfied customers switching to a competitor or the company losing potential new customers due to negative word-of-mouth effect. The consequence of poor warranty servicing is more difficult and costly to rectify and hence it is very important that manufacturer avoids this occurrence in the first instance. Since non-conforming items have a higher failure rate, they tend to fail early and this affects consumer satisfaction. One way of overcoming this is through a consumer incentive warranty policy (Murthy D. N. P, et al., 1995). Offering better warranty terms convey greater assurance to buyers and can result in greater sales. This implies that product warranty logistic is very important from customer satisfaction as well from the manufacturer's profitability point of view. (Murthy D. N. P., et al.,

2004). The findings have created the interest to study the possibility of the effects on the Malaysian business environment especially to the unexplored electronic industry. Therefore, the objectives of the study are to discover the factors affecting customer satisfaction in after-sales service and towards what extend the delivery, installation and warranty factors are affecting customer satisfaction.

From the review of literature, Chart 1 depicted the proposed theoretical framework of the study:

2. RESEARCH METHODOLOGY

2.1 Hypothesis Development

Given the preceding discussion, the following hypotheses are proposed:

H1. There is no significant difference between deliveries towards customer satisfaction.
H2. There is no significant difference between installations towards customer satisfaction.
H3. There is no significant difference between warranties towards customer satisfaction.

2.2 Research Design

This research is a quantitative research where sources of information are gathered from questionnaire. Instrument utilized was through the self-administered questionnaire containing closed-ended and scales to matrix questions. This study is interested in describing the characteristics of a population or phenomenon, thus the study is a descriptive study. This study also used hypotheses testing to determine the influence of delivery, installation and warranty towards customer satisfaction. The type of sampling is probability sampling. Data collected were based on stratified sampling since the respondents were selected mainly from Engineering, Marketing and Purchasing Department from each of the Permintex Electronic Sdn. Bhd. (PESB) customer. The population has been decided to be 329 from the total of 47 customers around Peninsular Malaysia multiply by 7 respondents for each PESB customer. Out of the total population, 100 respondents are expected to respond to the research survey. Pre-testing of the questionnaire was made during the pilot study. The scale was piloted amongst a sample of twenty (20) private workers and university students.

2.3 Data Analysis Method

For the purpose of this study, the researcher used the Statistical Software Package for Social Sciences (SPSS) Version 17 to compute all the data gathered from the questionnaire. The techniques of analysis used in this study were descriptive (mean, standard deviation) and inferential analysis (regression) to sum up the data collected. The questionnaires used are adopted from the questionnaires developed by past researchers and PESB itself. In order to help to describe the sample characteristics in the data analysis report, demographic data (Section A) such as age, gender, ethnicity, working experience and job tenure are included in the questionnaire. These data are structured in a range of response option, rather than seeking exact figures. In the subsequent section, all the study variable scales are measured using Likert scale rated varying from 1 to 7 (highly disagree to highly agree). Delivery was constructed in five measurement items, installation was constructed in five measurement items, warranty and customer satisfaction in four measurement items respectively. Pre-Testing of the questionnaire was made during the pilot study.

3. RESULTS AND DISCUSSION

This section presents the findings of this study. The data is interpreted using the mean, factor analysis

and regression methods of SPSS.

3.1. Pilot Study

Improvement has been made based from the feedback by reducing the questionnaire Likert scale rating from 1-7 to 1-5 in order to ease respondents' understanding and interpretation of each question.

3.2 Factor Analysis

Based on KMO measure of sampling adequacy test in table 1, it was found that the factor analysis data was appropriate with the value of 0.808, which falls between the ranges of being great and appropriate of factor analysis data. Bartlett's Test was utilized with the result indicates a highly significant result with $p=0.000$ ($p<0.001$) and therefore factor analysis is appropriate. From the results obtained in rotated matrix table 2, all four factors can be accepted with attributes required for re-shufflement and reduction. This reduction is possible because the attributes are related. The rating given to any one attribute is partially the result of the influence of other attributes.

3.3 Regression Analysis

Table 3 shows the R-Square and Durbin-Watson test. R-Square test result of 0.698 can be accepted for the regression analysis. The Durbin-Watson test result of 1.676, an indicator that the autocorrelation is almost reaching to zero or there is a significant different exist between the dependent and independent variables (no autocorrelation). From the ANOVA in table 4, it appears that the three predictor variables are not all equal to each other and could be used to predict the dependent variable, brand loyalty as is indicated by F value of 73.874 and strong significance level of 0.000 ($p<0.05$). Further as shows in table 5, the results show that all of the variables are significant ($p<0.001$) with high Beta (0.355, 0.275 and 0.392) and t value (5.669, 5.047 and 4.158).The VIF value of less than 10 for all variables show that the problem of multi-collinearly have not existed and all data are mutually exclusive. As for the interpretation, the test indicates that delivery, installation and warranty have significant influence towards customer satisfaction. By examining the t statistic for all the independent variables it is apparently confirmed that delivery, installation and warranty have significant relationship due to strong significant level ($p<0.05$) with customer satisfaction, indicating that the null hypotheses are wrong and can be rejected.

3.4 Discussion

From the statistical result, it was found that delivery, installation and warranty to be significantly related to the customer satisfaction. All of these factors are important in delivering an acceptable after sales service performance that will be able to make the customer satisfied and delighted. A good delivery system always derived from pull strategy where demand 'pulls' rather than 'pushing' the product through marketing channels to final customers. Customers require products to be delivered at the right place, time and at the right price. However, companies often pay too little attention to their distribution channels, sometimes with damaging results (Kotler and Armstrong, 2010). Apparently such circumstances can threaten to the existing seller-consumer relationship. Furthermore, factor such as the flawlessness of the installation process has an influence on customer satisfaction because it can reduce damages to the product as well as assurance for the product quality and reliability. Moreover, the installation task was carried out by an experience and expert employee of the company provider, thus creating delight and satisfaction post purchase environment. Manufacturers and retailers of capital and consumer goods cannot consider their active roles have ended with the sale (Levitt, 1983), but rather must provide their customers with a set of supporting after-sales services, such as installation packages, technical advice for use, maintenance/repair, spare parts delivery, product upgrading, etc. Lastly, offering better warranty terms convey greater assurance to buyers and can result in greater sales. Failure

to deliver proper warranty service can have a negative impact on sales and hence negate the reasons for offering the warranty in the first place. This implies that product warranty logistic is very important from customer satisfaction as well from the manufacturer's profitability point of view (D. N. P. Murthy et al. 2004). Therefore, after-sales service is clearly important in satisfying consumer needs, an important factor in creating long term profitable relationship with the customer. After-sales may generate more than three times the turnover of the original purchase during a given product's life-cycle, and often provides profitability higher than product sales (Alexander et al., 2002).

4. CONCLUSION

Based on the study, it can be concluded that the three significant factors involved in after-sales service are delivery, installation and warranty. It can be seen that customers really rely on the prompt delivery of the products, the installation response to be according to specification and requirement, and with the assurance of good quality products that are guaranteed for a certain period of time. When all these all three factors are being looked at professionally and efficiently, the reputation of the company will be enhanced and this will make the company much talked about among the consumers and competitors. To the manufacturers, the three factors in after-sales service are of utmost importance to build a long lasting profitable relationship with the existing customer. Such relationship will create a strong loyal customer base that will give the company a competitive edge for future survival.

As for recommendation, it is important that the company to adopt a good after–sales service management to enhance the effectiveness and efficiency to serve the customer. For example, by implementing extensive customer relationship management (CRM) with sophisticated software and analytical tools, this can help to integrate customer information and build stronger capabilities in delivery, installation and warranty. Secondly, companies need to improve on the inventory management by keeping acceptable safety stock to avoid the delay in product delivery to the customer. Furthermore, it must always keep the lead time at the minimum possible as to meet the needs and wants of the customer. A good distribution system is required to ensure that the product can reach the customer at the right time and place. Thirdly, pertaining to installation, the company must always train their staff to give cohesive and reliable services to the customers. Here, a good attitude towards working together throughout the installation process with the customer is needed so that the customer will be happy and delighted with the service. Fourthly, there is a need to respond within a reasonable and acceptable period of time to the customer regarding the warranty claim. The company should not delay the claim made by a customer and try to fulfill it promises either by repairing or replacing with a new product. Finally, continuous improvement is required through integrated functional activities in order to produce high quality products which in turn can lead to customers' high satisfaction and confidence. All departments be it Marketing, Finance, Operations and Human Resource must work together to achieve the mission, vision and objectives of the company.

Future research should focus on the similar study of factors affecting customer satisfaction in after-sales service in other prominent industries such as automotive, construction and other manufacturing as well as service sectors. By doing this, hopefully we can get a clearer picture on the extended scope of after-sales service of several industries environment, which can be further examined. Eventually, a comparison can be made between the findings of the different industries so that such constructible findings and conclusions can be made to the study.

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CHART AND TABLES

Chart 1: Proposed Theoretical Framework

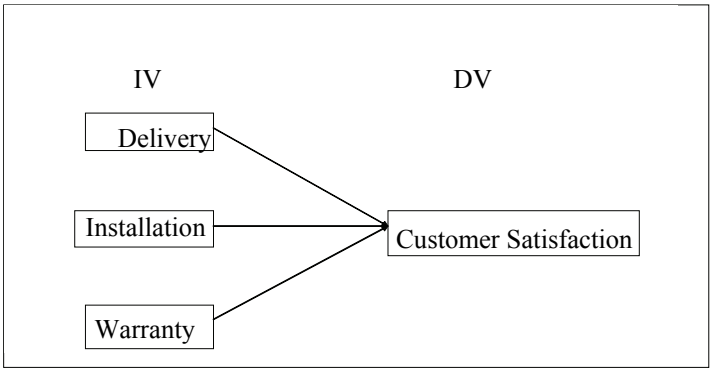

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.808
Bartlett's Test of Sphericity	Approx. Chi-Square	533.149
	df	91
	Sig.	.000

Table 2: Rotated Component Matrix

	Component			
	1	2	3	4
Reception of the proper invoice/delivery papers	.795	.042	.152	.031
Transfer of product to your place	.718	.039	.319	-.204
Quality of the product itself when delivered	.693	.229	.059	.294
Reliability in delivery times	.663	.252	.167	.271
Quality of the product packaging when delivered	.607	.070	-.083	.560
response time to attend to a warranty claim	.099	.858	.007	.163
the time for rectify a failed item	.113	.799	.111	.119
Flawless of the installation	.323	.526	.477	.089
Attentiveness of installation personnel in order to avoid damages	.101	.018	.812	.200
Advice and instructions given by the technicians	.179	-.001	.614	.534
Time elapsed between delivery and installation	.448	.368	.555	-.004
Accurate information about time of installation	.149	.444	.511	.147
A proper contract between the manufacturer and service agents	.043	.187	.122	.804
Explanation about contract	.094	.165	.301	.741

Table 3: Result of R Square and Durbin-Watson Test

Model	R Square	Dutbin-Watson
1	0.698	1.676

Table 4: Result of Annova Test

Model	F	Sig.
1	73.874	0.000

Table 5: Result of Coefficients

Variable	Standardized Coefficients			Collinearity Statistics	
	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.392	.508	.612	.452	2.213
Delivery	.355	5.669	.000	.689	1.452
Installation	.275	5.047	.000	.610	1.640
Warranty	.392	4.158	.000	.750	1.333