

A Study on Influence of Product Augmentation on the Sale of Critical Care Equipment in Current Scenario due to COVID-19: A Case Study of Karachi

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ABSTRACT

To find out the effect of product augmentation on sale of critical care equipment the researcher examined in Medical technology industry of Pakistan. Whatever grade does qualities like training and education after the installation of the equipment, warranty period of equipment; availability of spare parts, feedback criticism usage and value of service provide fulfills clients? Organizations attempted to discriminate themselves in this globalized business, so they have a tendency to offer services which provide additional value to its customers; according to their desires and requirements. It was found by the researcher that sale service is fundamental in rating and fulfilling customers. Basically, this study would benefit those organizations that provide post purchase services of critical care equipment in different hospitals. They can check the client's pattern towards after sales service aspects i.e. complaint handling, timely maintenance after the installation of the equipment, warranty period of equipment, availability of spare parts, and through quality service, organizations can increase the sale of brands in critical care equipment.

Keywords: Product Augmentation, Training and education, Warranty period, spare parts availability and Backup services.

1 INTRODUCTION

The organization target to fulfill the customer requirements, as it is very essential, and it is frequently said that customer is always right which implies the customer is correct whenever customer requests for after sales service. It is a great idea in the industry group to give improved post sales service. To keep and fulfill customer satisfaction organization need to give better after sales service. It is very essential for the organization to improve after sale service to struggle in the business sector (Vitasek, 2005). The decision makers of the organization identified with medical equipment's distributors get profited by this study. The distributors are able to ensure client pattern towards deliverance of the equipment, Service quality, warranty and installation of the equipment. These distributors can see the fundamental impact customer fulfillment and what is to be valued legitimately.

The purpose of this research study is to figure out the different or variable aspects that may impact on sales of critical care equipment throughout the services provided after the sale. To determine the impact on sale of critical care equipment, we can use factors such as warranty of equipment, installation, service quality, spare parts availability, training and education, backup services and complaint handling.

1.1 Research Aim

The purpose of this paper is to explore the impact of product augmentation specifically on sale of critical care equipment.

1.2 Research Objectives

- To analyze the significance of the training and education and complaint handling are impact on sale of critical care equipment and their purchase decision

- To analyze the significance of warranty period, back services and spare part availability on sale of critical care equipment.

2 LITERATURE REVIEW

Customer are considered the key players of business and their satisfaction is crucial for every business. Every organization basic priority is to achieve customer satisfaction at maximum level and cannot be functioned separately, and shows seriousness of organization that how far they can go in order to provide quality product and service to customers. Highest level of customer satisfaction and loyalty always demand for after sales services (Yuen, E.F.T., &Chan, S.S.L., 2010). Customer satisfaction level impact on their loyalty and ultimately on profitability (Hallowell, R., 1996). Customer satisfies when theirs' demand or expectation meet fully. After sales service are considered as customer expectation and help in evaluation customer level of satisfaction (Kurata, H., Nam, S.H., 2010).

The after-sales value line incorporates proper installation and timely maintenance of the equipment, timely delivery of the equipment, good warranty provisions and time, availability of spare parts, better service quality feedback from purchaser about the entire service. All these after sales quality line are viewed as essential part of after sales service; brand loyal customers are created and through correct use of value line improve the productivity of the organization and expand customer satisfaction.

Speed and reliability are two dimensions through which the delivery of the product is characterized and to ensure that correct product, through accurate source delivered to proper person at precise cost in exact amount of time. Without knowing the destination person who starts his/her journey is similar to that organization that has no strategic plan for delivery of product or service (Storbacka, K., Strandvik. T., &Grönroos, C., 1994).

Equipment installation is first phase of delivery of the product or after sale and is recognized to create additional gainful sale. The fundamental explanation behind offering installation is to take competitive advantage and after the installation providing timely maintenance to customers is after sale economies and customer demand (Tornow, W.W., &Wiley, J.W., 1991). After-sales services take place after the customer purchase the product and it is dedicated to support customers in the usage” (Cohen, M. &Lee, H.L., 1990).

A warranty is expected a commitment for the purchaser that the product is for long term use. It is a commitment for dealer; it is an obligation regarding vendor and a fulfillment for the purchaser that the equipment is of good quality (Anderson, E.W., Fornell, C., &Lehmann, D.R., 1994). Warranty is also showing the reliability of product. To show that the product functions properly and works for more extended time compared to competing products is the primary reason for offering warranty (Rahman, A., & Chattopadhyay, G., 2015).

While seeing the effect of after sale service characteristic on customer satisfaction, product quality is the first thing which comes in the mind of the customer. Quality of the product or service for the most part relies on upon the customer's purchasing power and predominating examples in the business. Several multinationals offer their same products or give services to distinctive areas with differences in quality at various costs. Organization frequently need to make differences in addition to different organization in the business so that is the reason they have a tendency to utilize such attributes i.e. proper maintenance after the installation, for simply making differences. In this current period customer need to get, some value-added services also, so generally these days' customers choose web that what to purchase and request the apprehensive organization for the manufactured goods. Organizations convey & introduce such manufactured goods at the doorway of the customer with no or with little additional charge. Economic and manufacturing

situation assumed to be a significant part towards after sale services. Generally elevated rivalry in business acquired such benefits the business and organization attempt to seem not the same as the rest. That go simply in the profit of the consumers; on other hand it expenses extra for the association. Organization with solid budgetary foundation and efficient management of assets stand to give such services to fulfill customers for acquiring sustainable competitive advantage.

3 RESEARCH METHODOLOGY

Research methodology describes the research problem is explored and analysed. This research paper studies used mix method for data collection. Primary data has been collected through questionnaire paper and interview whereas, secondary data has been collected through literature review, articles and journals. The sample size of 15 Doctors, 30 biomedical engineers, 5 Sales person and 20 Technician was selected. For analysis of data has analysis percentage method is used.

3.1 Research Hypothesis

Dependent variable sale of critical care equipment in COVID-19 Scenario and independent variables are warranty, complaint handling, training and education and backup services.

H1: Warranty of the critical care equipment has an important positive effect on Sale of critical care equipment.

H2: Training and education has enhanced the user interaction with equipment and ultimately a significant effect on sale of critical care equipment.

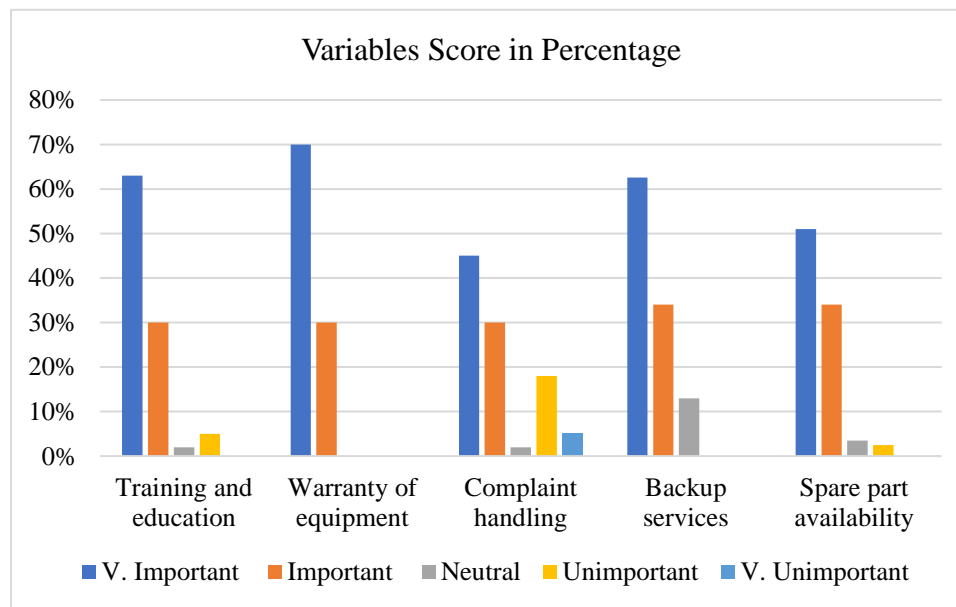
H3: complaint handling of the critical care equipment has an important effect on the sale of critical care equipment.

H4: Backup service of the critical care equipment has a positive impact on sale of critical care equipment.

4 RESULTS

Table 1

Variables	V. Important	Important	Neutral	Unimportant	V. Unimportant
Training and education	63%	30%	2%	5%	0%
Warranty of equipment	70%	30%	0%	0%	0%
Complaint handling	45%	30%	2%	18%	5%
Backup services	62.6%	34.0%	13.0%	0.0%	0.0%
Spare part availability	51%	34.0%	3.5%	2.5%	0.0%



As per survey result, shown in Table 1 as well as graph, Training and education rated as 63%, Warranty of equipment 70%, Complaint handling 45%, Backup services 62.6% and Spare part availability 51% rated very important highest, which clearly prove that all independent variables are significantly important and effecting depended variable that is sale of critical care equipment in COVID-19 Scenario. Thus, all hypotheses are accepted.

4.1 INTERVIEW SUMMARY

Interview conducted with Engr. Tariq. He is a Biomedical Director of Dow University of Health sciences. He discussed in such dynamic and tough competition, for grapping customer is not easy

task especially in-service related business. For Backup service and company must have proper workshop for service and repair the critical equipment. As per internal company policies new critical care equipment must be purchased within 3 to 5 years' warranty depend on the pricing because it is a tool for evaluation of reliability and durability of products, again benefit any company in long run. Further compliant of any new critical care equipment must be handled within 24 hours on fast pace by qualified engineer and professional even on weekend and after working hours to achieve high level of customer satisfaction.

5 CONCLUSION

Technology has helped critical care equipment in diagnosis and treatment of patients and its role is increasing in providing quality healthcare to patients. In this research, I would like to explore the importance of the above-mentioned topic specifically of the critical care equipment. Most of the companies have ignored the importance of after sales service in this field.

Medical industry is sensitive in nature and handling product augmentation with care is crucial. Technology is growing rapidly and with the advancement new critical care equipment in mega city like Karachi is very essential. Health care sectors are focusing in availability of specialized medical equipment for delivering best healthcare services. Thus, for new medical device augmentation, after sales service role become more crucial for manufacturer or service provider to achieve customer satisfaction level, consequently help medical industry in accessing affordable and quality health care services. Hence high unavailability of after sales service of critical medical equipment may leads failure. Factors like training and education of new equipment to customers, backup service and complaint handling on urgent basis are significantly affecting the sale of these equipment and on new-service success. Warranty of equipment and spare part availability ensure the reliability and durability of products and help in gaining customer trust and satisfaction level.

Thus, studies found that all independent variables are significantly important and effecting on dependent variables.

6 SIGNIFICANCE AND RECOMMANDATION

Basically, this study helps the decision maker of the association associated with radiological equipment provider; they can check customer pattern towards, service quality, warranty, and availability of spare parts. From this, they can see what basically impact customer fulfillment and what ought to be logically valued. After sales service is fetching the most important criteria for many companies. In order to retain the existing customers proper after sales service is required. Customers buy more frequently from a company they believe who support them and provide highest after sales satisfaction.

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