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APPLICATION OF GAP ANALYSIS MODEL TO SERVICE AND DELIVERY SYSTEM OF DUAL PURPOSE KEROSENE IN OSUN STATE, NIGERIA

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Abstract

Service delivery is a component of business that defines the interaction between providers and customers. Today, customers are looking for an alternative as a substitute to replace Dual Purpose Kerosene due to poor delivery and satisfaction derived from the product. Therefore, the study was conducted to apply Gap analysis model to Service and Product Delivery of Petroleum Product using major marketers of petroleum products in Osun State as a case study. The model was employed to reveal the gap between the performance of the organization in term of service and delivery of the product and the actual satisfaction derived by the customers in Osun state. The primary objective of this study is to examine the extent of customers' satisfaction or dissatisfaction for the product in Osun state. The Survey method was used to collect primary data through the administration of questionnaires on 395 respondents. Gap analysis model was used to analyze the formulated hypothesis. The finding revealed overall mean differences of DPK product delivery and satisfaction below average. The willingness to provide prompt service delivery to the customer at the right price, right time and right quantity fell below expectation. The study recommended that management needs to perceive critical gaps between expectations and actual performance and enhance customers' satisfaction through SERVQUAL components.

Keywords: Service delivery, Gap Analysis, SERVQUAL components and customer satisfaction.

1.0 Introduction

The ability of firms to bridge the gap between customers' expectation and actual satisfaction depends solemnly on effective chain distribution system and quality of the product. In the recent years, effective service delivery has taken a very high place in the management of customer relationship management today. Dall, Michael, Bailine & Adam (2004) state that the quality of customer service delivery has decreased in recent years, and this can be attributed to lack of effective chain distribution system. The distribution system is concerned with the positioning of resources at the right time, in the place, at the right cost and at the quantity (Alan, Croucher & Peter, 2010).

In Nigeria today, organisations are facing with many issues like, government policies, individual differences, and organisation capability to meet demand. The deregulation of the Nigerian economy through the Structural Adjustment Programme (SAP) in 1986 during Babangida's administration has affected the downstream oil and gas sector of Nigeria in many ways, one of which resulted in adoption of the price mechanism by the major marketers and independent marketers as a determinant of retail price per litre (Miles & Snow, 1978; Umunnachila, 1996).

The implication of the deregulation was a boost in the profit of the marketers. Many of them tampered with the dispensing pumps and thereby not selling the right quantity of Dual Purpose Kerosene to the consumer (Agusto, 2008).

Moreover, implementation and changes in policy by the government made some of these filling station (independent and major marketers) not to implement appropriate distribution strategy resulting in under stocking, supplying products at a higher price, poor quality and quantity, which often result in customers' dissatisfaction and poor market performance. Despite the forward diversification of NNPC and other major marketers the delivery systems of DPK has not fully satisfied. Also, some observations have been noticed about present day operations and distribution system of Dual Purpose Kerosene which has not in any way impressed the end-users such as poor supplier – key distributors relationship, the poor time to market, a high cost of the DPK, poor quantity as a result of manipulation of dispensing machines. Therefore, it becomes imperative to examine the gap between the delivery system of DPK and Level of actual customers' satisfaction derived by the end users.

2.0 Literature Review

Nigerian Service Delivery Research Team visited the United Kingdom (UK) in 2003 to investigate how the British government has gone about improving service delivery in its own country. Based on their feedback, the FEC supported design and implementation of a Public Service Delivery Programme (PSDP) for Nigeria (Nigerian Service Delivery Research Team, 2003). The President and the British Prime Minister tasked a team to analyse key service delivery issues and develop a roadmap for practical, targeted and achievable service delivery. The reality is that large numbers of Nigerians still have no access to key services, or are very far away from where those services are available.

The positive relationship between quality service and customer satisfaction has been established (Kotler & Armstrong, 2010) using customer satisfaction as a criterion variable. Gupta & Zeithaml (2006) measured customers satisfaction with

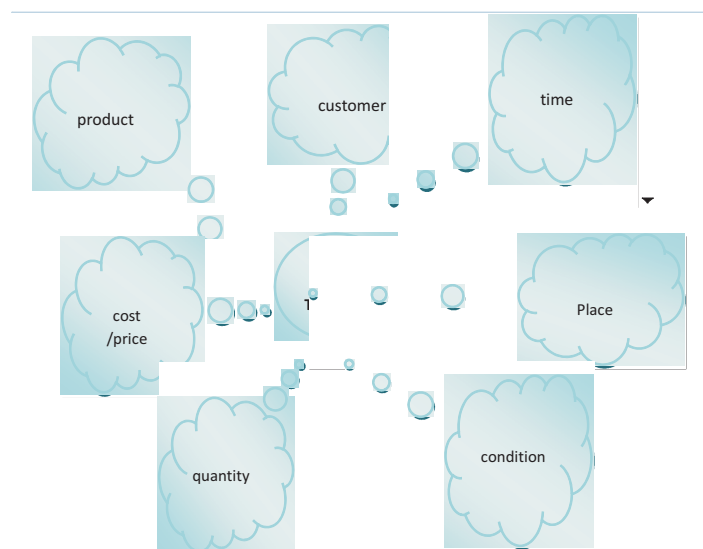
organizational performance, the findings show a positive correlation. Preko, Agbanu, & Feglo (2014) the study concluded that service delivery is significant to customer satisfaction and customer delight.

Previous studies on customer satisfaction and service delivery show positive relationship among the variables (Anderson, Schneider & Bowen, 1999, Preko et al 2014). Kotler & Armstrong, (2010) also explained the positive link between service delivery and customer satisfaction. Jayaraman, Shankar and Hor (2010) concluded that Assurance, Tangibles, Responsiveness, Empathy have positive relationship with customers satisfaction meanwhile, Reliability has a negative relationship but it has no significant effect on customer satisfaction.

The study of Sonja, Amrik and Imam (2007) show that the methodology (questionnaire and sampling size) were not adequately designed to measure the degree of customer's satisfaction or dissatisfaction, also the 64 respondents sampled out of 1000 is a small representation of the population. Therefore, the conclusion of this study may not truly represent or affect the entire population. This study has equally placed a model to bridge the gap in existing literature that revealed customers satisfaction level with well design questionnaire and adequate sample size.

The Components of Customer Service Satisfaction.

The components of customer service can be classified in different ways. They may be seen as transaction-related elements, where the emphasis is on the specific service provided, such as timely delivery, or they may be seen as functional attributes that are related to overall aspects of order fulfillment, such as the ease of order taking. Alan, Croucher and Peter (2010) explain these components diagrammatically with 7's rights as shown below:



The fig. 1 depicts the customers' service satisfaction components.

The model displayed the seven rights that can be used to measure customer's satisfaction. According to the Alan et al. (2010) the seven rights (right price, right quantity, right product, right cost, right place, right time and right condition) explain the various direction by which customers' satisfaction can be measured to indicate whether they are fully satisfied or dissatisfied from the services or products delivery by the organisation. Parasuraman, Zeithaml & Berry (2004) explained service delivery with five specific components:

- *tangibles,*
- *reliability,*
- *responsiveness,*
- *assurance and*
- *empathy*

Effective service delivery depends on these five dimensions; the model has been widely acceptable in the area of service quality delivery and customer satisfaction.

3.0 Methodology

The study used descriptive research design because the researcher used customer satisfaction survey and open-ended questions to obtain information from the respondents. Convenience sampling technique was used to select the customers' sample size from the population of customers of DPK in Osogbo, Osun State. The

city was selected because. It is the state capital with the population of 649, 600 (www.populationcity/nigeria,2015 accessed November, 2015). 400 copies of the questionnaire were distributed to customers of DPK in Osogbo metropolis by the researcher at the filling station at researcher and respondents' convenience. Many customers were not ready to fill the form because of the busy nature of the state capital. Only 350 copies were fully returned and used for the analysis.

The actual response rate = _____

= _____ = 0.897 representing 90 percent that were fully returned and used for the analysis.

The questionnaire was structured and designed for the consumers of DPK product. This questionnaire was divided into two Sections: Section A was designed to capture demographic information of the respondents while Section B was carefully designed to draw required information from the respondents. The questions in section B were structured on a Likert rating scale of 1 - 5 point, (Column A) 1= Not at all important, 2= Little important, 3 = Undecided, 4= Highly important, 5=Extremely important. Also, (Column B) 5= completely satisfied, 4 = Slightly satisfied, 3 = Cannot measure, 2 = Slightly dissatisfied, 1= Completely dissatisfied.

Descriptive and Gap analysis were used in this study. This model was used because it provides details on the current situation and practices in order to identify gaps that need improvement with regards to compliance with the relevant standards. It involves the comparison of actual performance with potential or set standard (Edwin, 2014). Since the study intends to identify the gap between customers' expectation and actual satisfaction derived from Dual Purpose Kerosene product /Service Delivery by the Total filling station in Osun State in order to proffer solutions.

i.e. $Y=f(x)$ where: Y=Dependent variable (Customers satisfaction) and X = Independent variable. The Service/ product delivery variables = Components of customers' satisfaction and SERVQUAL five- dimensional factors were used to measure the service/ product delivery by the organisation. Customers' satisfactions were determined by the Overall satisfaction and customers' satisfaction index.

$$CSI = \frac{\sum_{i=1}^{20} vr (Me - Ma)}{AP} = \frac{AP}{EMS}$$

Where;

i = Numbers of Variable used in the model, Vr = Variable, Me = Mean Value of Customers' Expectation, Ma = Mean Value of Actual Customers' Satisfaction and CSI= Customers Satisfaction Index.

Therefore, the study raised this question: is there any significant gap between customers' expectation and actual satisfaction derived from Dual Purpose Kerosene product /Service Delivery by the selected company?

Table 1 Cronbach's Alpha

Cronbach's Alpha	.824
Number of Items	20
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. KMO	0.747

Author's computation 2015.

Cronbach's Alpha coefficient provides an assessment of overall scale reliability. Table 1 shows that 0.824 for all scale used in the study were reliable.Kaiser-Meyer-Olkin (KMO) value of0.74 indicates sampling adequacy.

The result of KMO test confirms that the sample is a true representation of the population.

Table 2 shows that all the variables in the model reveal gap values > 0. 5. This means that consumers are completely and highly dissatisfied with the service and product delivery of DPK. Complete and accurate delivery of the product, quick accessibility, availability of the product across all the local government of the selected states, level of customer relationship management, obtaining the product under the right condition and reliability of the product were found with critical gap value of 2.52, 2.21, 2.16, 2.12, 1.99 and 1.86 respectively and so on. Obtaining the product at the right place and quick accessibility of the DPK Complete and accurate delivery of DPK product and other variable captured in the study shows that customers are dissatisfied with all the variables greater than 0.5. The result indicates that consumers' expectations from DPK service delivery by the organisation were not met. From the above results, hence, it implies that there is a significant gap between the expectation and actual satisfaction derived by the customers on service and product delivery of the organisation. The computed result from the formula shows

that

$$\emptyset = \frac{AP}{EMS} = \frac{62.54}{97.1} = 0.64$$

Moreover, the result indicates that the consumers of DPK product are highly dissatisfied with the product delivery of DPK up to 36% of the maximum level.

Also, 5 dimension SERVQUAL model (Tangibles, Empathy, Reliability, Assurance, and Responsiveness) and 7's C customers' satisfaction component were not met and satisfied. This study, therefore, postulated that there is a gap between customers expectation and actual satisfaction derived from DPK delivery system.

Table 2. Gap Analysis of Customers' Expectation and Actual Satisfaction Derived from DPK Delivery System

Variables	Mean Expectation /Importance	Mean Actual satisfaction	Gap
Complete and accurate delivery of the product	4.90	2.38	2.52
Obtaining the product at the right place / quick accessibility	4.90	2.69	2.21
Availability of the product across all the local government in the state	4.93	2.77	2.16
Level of customer relationship management	4.77	2.65	2.12
obtaining the product under the right condition	4.78	2.79	1.99
Reliability and quality of product delivery	4.75	2.89	1.86
Product delivery at the right price	4.88	3.06	1.82
Buffer/safety stock to minimize bullwhip effect	4.56	2.75	1.81
Availability of physical facilities, equipment and personnel (Tangibles)	4.48	2.67	1.81
Attitudes of staff (attendants) to the customer	4.72	2.94	1.78
Response to customers' service complaint	4.71	3.05	1.66
Obtaining the product from the retail outlets at the right time	4.66	3.02	1.64
Effective decision on supply chain	4.68	3.10	1.58
Availability and delivery of product at the right quantity	4.50	3.05	1.45
Ability to deliver customer's need and pay attention when the need arise (Empathy)	4.60	3.25	1.35
Ability of staff to convey trust and confidence (Assurance)	4.44	3.16	1.28
Product re-cycle time	4.52	3.26	1.26
The willingness to help customers and to provide prompt service delivery (Responsiveness)	4.46	3.21	1.25
Ability to perform the promised service dependably and accurately (Reliability)	4.55	3.33	1.22
Effective customer service delivery by Total filling Station	4.06	3.59	1.17
Total	97.19	62.54	34.65

Source: Author's computation using SPSS Package (2015).

Decision Rule: Gap value > 0.5 dissatisfied, Gap value < 0.5 satisfied.

4.0 Discussion of findings

The gaps were computed by subtracting mean actual performance from the mean expected for each of the variables (Ace, 2009). Leisdecker and Bruno (1984) explained that results of gap analysis satisfy if performance improves continuously on expectations with a significant gap (less than 0.5) between expectation and performance (actual) evaluation. The higher the mean value, the more important the factor measured in the distribution system. Arranging the gaps in descending order with respect to the mean value of the gap, it is possible to identify the critical gaps or opportunities for improvement.

The result of gap analysis for DPK product reflected that customers are not fully satisfied. Level of customer relationship management is poor but significant and important to organisational performance, the DPK is not obtained under the right condition, Total filling stations are not reliable in term of quality and availability of the product, Products are not supplied at the right price but customers are very sensitive to change in price, there is no effective plan for buffer/safety stock to minimize bullwhip effect on their operations. The mean customers' expectation on the effective plan of stock management to reduce bullwhip effect shows 4.56 but the actual performance shows 2.75. Wide gap exists, the meaning of this is that there is no perfect structure put in place to improve on safety stock in the Total filling station to cope with future demand.

Availability of physical facilities are not encouraging, equipment and personnel (Tangibles), Attitudes of staff (attendants) to the customer is very important but poor in this organisation, response to customers' service complaint as discovered to be very slow, the result show that product was not sold at right time, right quantity, Empathy, Assurance are very important to effective service delivery to customers satisfaction. (See Parasuraman, Zeithaml & Berry, 2004). The overall mean differences of DPK product was 34.65. This means that customers are highly dissatisfied with the service delivery of DPK in Total filling station up to 36% level of dissatisfaction.

5.0 Conclusion

The mean variables identified in the expectation and actual satisfaction from the selected product should be noted for necessary action. The outcomes of this study pointed out that, for organisations to successfully achieve high market share and customer satisfaction, it must pay strong attention to customers' service satisfaction components. The model displayed the importance of these seven rights (right price, right quantity, right product, right cost, right place, right time and right condition)

and SERVQUAL Model, organisation should plan in line with these variables to improve on customers' satisfaction. The results showing the significance of these variables to customers' satisfaction supported the conclusion of Alan et al. (2010) and Parasuraman, et al. (2004).

This finding suggested that organisation should particularly emphasize more on relationship management attributes such as quick access to their products, reliability of their products, effective communication with customers, response to customers' problems and complaints, providing customers' requirements adequately and actively responding to customers' enquiries on their services in order to bridge the existing gap between customers' expectation and actual satisfaction derived from the product/service delivery of the selected product.

Finally, the levels of customers' expectations on services and delivery of the selected product were different from their actual satisfaction derived from the products especially on the quick accessibility of the products and availability of the product across all the local governments in each of the state needs improvement. Customers expressed their view that all the variables measured are highly important and significant to the success of an organisation but customers are not satisfied holistically with their performance. The conclusion supported the view of Ace (2009) and Leisdecker and Bruno (1984). The study revealed that wide gap exists between customers' expectation and actual performances of the Total filling station. There is need to improve on gap variables greater than 0.5 to enhance customers' satisfaction.

Recommendations

- (i) The management needs to examine their perceived critical gaps between expectation and actual performance of its operations. Those variables with the wide gap such as the availability of the product across the Local Government Areas of the state, on time delivery, quick accessibility of the product, especially the Dual Purpose Kerosene needs quick attention by the management to improve customers' satisfaction. This can be achieved through implementation of effective customers' satisfaction components and SERVQUAL factors.
- (ii) The organisation needs to re - strategize especially on the issue of order fulfillment and quick accessibility of the product in all the Local Governments of the state, this is to avoid customers' loyalty to other competitors and for the organisation to achieve their vision and stated objectives.
- (iii) The organisation should improve their stock management and ensure adequate inventory such that there would be no stock out that negatively affect their market performance.
- (iv) From the customers' view of gap analysis, the mean score differences indicate that organisation should work perfectly on buffer stock to manage any form of

stock - out and even bullwhip effects on the product which may likely affect them in the future.

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