Impact of Queue on Customers: An Analysis of Some Retail Shops in Bangladesh

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ABSTRACT

Companies differentiate offerings with competitive advantage like product development but currently customer satisfaction is becoming a vital issue. Service organizations with inefficient waiting line management reduce competency. The objective of this study was to survey different retail shops of Bangladesh to observe waiting line management, factors for waiting & to propose approaches to mitigate waiting lines. The research progressed through conversation with 124 customers and depth interviews of professionals with an effective questionnaire. Analyses of those empirical and numerical data were done in different aspects applying SERVQUAL method and the information is presented as well. To deal with waiting line problems, selection of procedure or priority rule is important according to the type of service and long term perspective should be taken to get rid of queue.

Keywords: Customer's Satisfaction, SERVQUAL, Waiting line management

Introduction

Queues are commonly found wherever customers arrive randomly for services. Some examples of waiting lines we encounter in our daily lives include the lines at supermarket checkouts, fast food shops, airport ticket counters, theaters, post offices and toll booths.

Designers must weigh the cost of providing a given level of service capacity against the potential (implicit) cost of having customers wait for service. In a service facility customers enter a waiting line of a service facility, receive service when their turn comes and then leave the system. The number of customers in the system (awaiting service) will vary randomly over time. Waiting line management can be directly

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applied to a wide range of service operations, including call centers, banks, post offices, restaurants, theme parks, telecommunication systems and traffic management. Managers have a number of very good reasons to be concerned with waiting lines. Major reasons are as follows: the cost to provide waiting space, a possible loss of business if customers leave the line before served or refuse to wait, a possible loss of goodwill, a possible reduction in customer satisfaction, the resulting congestion that may disrupt other business operations or customers.

Background of the Research Problem

Waiting lines abound in all sorts of service systems. And they are non value added occurrences. For customers, having to wait for service can range from being acceptable (usually short waits), to being annoying (longer waits) to being a matter of life and death (e.g., in emergencies). For businesses, the costs of waiting come from lower productivity and competitive disadvantage. For society, the costs are wasted resources (e.g., fuel consumption of cars stuck in traffic) and reduced quality of life. Customers may wait a certain amount of time and then leave. Others may refuse to enter the line at all and go somewhere else or plan to return later; still others may hire people to wait in line for them. Hence, it is important for system designers and managers of existing service systems to fully appreciate the impact of waiting lines. Management of consumer waiting experiences is critical for practitioners in that unpleasant waiting experiences may result in negative service evaluations

Problem Statement/ Objective

The problems of long queues are common in Bangladesh; it appears anywhere where there is a waiting line system. People tend to be dissatisfied when they have to wait too long in lines. The objective of this research is to provide a comparative assessment of the quality of services received by the customers in Bangladesh in the lens of waiting line management. This research included quality service provided from staff, infrastructure and technologies used to manage waiting lines. The assessment may be used as a basis or benchmark for the future studies to track changes in the quality of services. Customer satisfaction and service quality were often treated together as functions of customers' perceptions and expectations. Research has shown that high service quality contributes significantly to customer satisfaction and customer delight. It should also sensitize service providers' planners to improve those areas of service that might be significantly improved. The expectation and perception level of customers have been studied by SERVQUAL method.

Literature Review

Unlike a manufactured product, where quality can readily be assessed, service quality is an elusive and abstract concept that is difficult to define and measure (Markanday, 2011). Literature on queuing indicates that waiting in line or queue causes inconvenience in economic costs to individuals and organizations (Obamiro, 2010).The development of SERVQUAL was a significant contribution made towards the development of a quantitative yardstick for assessing the quality of a firm's service by measuring customers' perceptions of quality. SERVQUAL provides a means of measurement for researchers to determine how well service level is delivered and how it matches customer expectations on a consistent basis (Markanday, 2011). Schneider and Bowen (1985) and Tornow and Wiley (1991) found a positive correlation between the attitude of employees, the attitude of customers and employee and customer perceptions of service quality. According to Taylor (1994), waiting for service is "the time from which a customer is ready to receive the service until the time the service commences". Waiting time is often regarded as a waste of time (Leclerc, Schmitt, and Dube 1995) and has been described by researchers as boring, frustrating, and irritating (Hui and Tse 1996; Katz et al. 1991). Nonetheless, research has suggested that overall value of service may help alleviate the negative emotions of waiting (Katz et al. 1991; Maister 1985). From a practitioner's perspective, waiting lines can be damaging to businesses and have become an important marketing issue. Even though a growing number of companies have attempted to manage consumer waiting experiences through various strategies (e.g., increase of front-line employees, video displays with news updates as waiting time filler, or providing waiting time guarantees to their customers) (Kumar, Kalwani, and Dada 1997), consumer waits remain an unresolved issue. Consequently, more efforts need to be made to understand the waiting process and to reduce the potential negative impact of waits on consumers' evaluations (Kostecki 1996). From an academician's viewpoint, various theories have been utilized to explain waiting phenomena and how waiting affects consumers' evaluations and satisfaction, including social justice (e.g., Larson 1987), attribution (Chebat, Filiatrault, Gelinas-Chebat, and Vaninsky 1995; Taylor 1994), field theory (Dube-Rioux, Schmitt, and Leclerc 1989; Hui, Thakor, and Gill 1998; Houston, Bettencourt, and Wenger 1998), and social comparison theories (e.g., Zhou and Soman 2003). Among these studies, consumers' affective responses to waiting and service evaluations have been frequently examined (e.g., Dube-Rioux et al. 1989; Houston et al. 1998; Hui and Tse 1996; Taylor 1994; Katz, Larson, and Larson 1991; Pruyn and Smidts 1998).

Sampling and Data

The study was conducted within the Dhaka metropolitan area of Bangladesh. This research was part of a customer satisfaction survey of retail shops. To cover a variety of retail firms, a quota of 60 - 70 shoppers from each of four different retail store types was set. The three different types of stores were: (1) Stores like AGORA, Nandon etc., (2) Stores like Rahimafrooz Distribution centre and (3) Stores like Aarong. The final sample had 45 users of stores like Agora, 40 users of stores like Aarong and 39 users of stores like Rahimafrooz Distribution centre.

All the processes that the interview referred to occurred within 8 weeks before the interview. The average interview length was 7 minutes. 12 groups (6 members/ group) of BRAC University Business School students were engaged for data collection. They were properly briefed about the objective of the study and the questionnaire. They were trained to collect unbiased and meaningful data. Permission letters were forwarded to the respective organizations to provide necessary help and to cooperate with the data collectors. Upon receipt of this list, the data collectors used random sampling procedure to select respondents and administer the questionnaire.

Assumptions of SERVQUAL Conditions

The results of market survey were accurate. Customers' needs can be documented and captured and they remain stable during the whole research process. The stores have not only enlisted customers list with membership card but also customers who visit the stores without any membership card. But for this research randomly selected customers were surveyed. The service categories that were used in the development of SERVQUAL (appliance repair and maintenance, retail banking, long distance telephone, and credit cards) are very different from goods retailing. It may well be that consumers use different criteria to evaluate competing goods retailers than they use to evaluate retailers that are primarily or exclusively service firms.

The Instrumentation

The questionnaire design partially followed the SERVQUAL (Parasuraman, 1991) instrument (Factors are Reliability, Assurance, Tangibles, Empathy and Responsiveness) by using a 7-point Likert scale with "1" being "Strongly Disagree" and "7" being "Strongly Agree". For each dimension, all questions

measured the customer expectations and perceptions of the retail firms. Modifications to the SERVQUAL instrument presented by Parasuraman, et al. were made prior to the implementation of our survey. As suggested by Parasuraman, Zeithaml, & Berry, it can be appropriate to modify the items of the SERVQUAL instrument to make the survey more relevant to the context of a particular service environment. Parasuraman, Berry, and Zeithaml originally started with seven dimensions but these were later combined together to create the above five dimensions. Due to the similarities between factors and customer responses against the five factors, the five factors were downsized to only three factors. This is allowable due to the original combined factors done by Parasuarman, Berry, and Zeithaml. While it is useful to generalize about the characteristics of services and service businesses, it appears to be equally important to recognize that differences exist among various services and among the firms that market them.

The three factors that were combined to provide better analysis were explained below:

Staff **–** This contains the dimensions of Responsiveness, Assurance, and Empathy. The staff dimension is concerned with customer service, the willingness to help and provide prompt services to customers, the knowledge and courtesy of staff, caring and individual attention provided to the customers and appearance of the employees. Responsiveness, Assurance, and Empathy are closely related and are all mainly concerned with the ability to provide customers with quality service, help, and attention; therefore, they were combined into one category and entitled Staff.

Infrastructure, Tools and Technologies **–** This area is concerned with the dimension of Tangibles. Tangibles refer to the Physical Facilities, Equipment, Software and Technologies.

Queue Time **–** This focuses on only one dimension, Reliability. This dimension is concerned with the ability of the service providers to provide reliable, dependable, and accurate services to its customers within an acceptable time frame.

SERVQUAL Factors along with Dimensions

Factor 1: Staff

Dimension 1: The staff's readiness to listen to customers' needs

Dimension 2: The willingness to help customers

Dimension 3: The staff's ability to instill confidence in customers' psychology

Dimension 4: Staff's knowledge to answer customers' questions

Dimension 5: Staff's dealing with customers in a caring fashion

Dimension 6: Giving prompt respond to customers' problems and/or suggestions

Factor 2: Infrastructure, tools & technologies

Dimension 7: Providing affective infrastructural facility services

Dimension 8: Visibility of the service provided

Dimension 9: Staff members are dressed appropriately for their position

Dimension 10: Proper utilization of technologies (Software)

Dimension 11: Presence of state-of-the-art-Technologies

Dimension 12: Efficient Service capacity facility utilization

Factor 3: Queue Time

Dimension 13: Services provided at times listed

Dimension 14: Convenience to personal schedule

Dimension 15: Actual waiting time was satisfactory compared to the expected time

Analysis Plan

For the analysis, the expectation score was subtracted from the perception (P-E) score for each item in the 15 dimensions. The average SERVQUAL scores for the dimensions pertaining to each of the 3 factors were totaled and then divided by the number of dimensions making up the factor. The scores obtained for the 3 factors represented the outweighed measure of service quality. The weighted score was the average SERVQUAL score multiplied by the importance weight for each dimension (total 100 points). A total of 100 points were allocated to theses

dimensions as well as to rank their importance. The lower the weighted score, the lower is the perception level for the customers. This study aims to minimize and improve the perception gap in the recommendations.

Validity and Reliability of the Study

The SERVQUAL stands alone as one of the truly excellent, empirically validated, comprehensive, and standardized measurement tools for service quality. As a measurement instrument, the SERVQUAL offers a measure of individual survey risks and assets across multiple dimensions, capturing environment, culture, and community contexts. This instrument seemed to be interesting because it offered a useful way to identify and measure customer satisfaction indexes or criterions. Validity and reliability studies on the SERVQUAL have repeatedly shown acceptable psychometric characteristics as both a research measure and as a developing management practice tool, but there has not been an easy way for practitioners to evaluate this information.

The survey method was well organized and provided basic validity and reliability assurance and limitations of the measure. The artificiality of the survey format puts a strain on validity. Since people's real feelings are hard to grasp in terms of such dichotomies as "agree/disagree," "support/oppose," "like/dislike," etc., these are only approximate indicators of what we have in mind when we create the questions. Reliability, on the other hand, is a clearer matter. Survey research presents all subjects with a standardized stimulus, and so goes a long way toward eliminating unreliability in the researcher's observations. Careful wording, format, content, etc. can reduce significantly the subject's own unreliability.

The reliability of the data was tested using Cronbachs' Alpha for each SERVQUAL-dimension, each factors, each dimensions. The alphas for the 15 dimensions varied between 0.63 and 0.95 with an average value of 0.79, which suggests a successful adaptation of the SERVQUAL approach. The validity was tested using the face validity concept. The face-validity was suggested by experts within the retail shops (management team)

Findings of the Study

The results have been compared from different angles and perspectives. The research and analysis in this thesis is based on gaps in the SERVQUAL-model and the service quality is assessed by counting scores that are given by the SERVQUAL-model. The method is used for all 15 dimensions with the purpose of measuring different customer expectations and perceptions.

Staff: For the 6 dimensions under the category of staff, the perception level is the best in staff's ability to answer that means competency level (required skills and knowledge of workers) is good enough. But employees show negative attitude to readily answer the queries although they have the competency level.

Infrastructure, tools & technologies: Infrastructural facility has the highest perception level which implies that the retail stores have the infrastructures like building, furniture, space, internet etc. but the stores cannot make the situation and service properly visible to customers. In some situations organizations are not competent in proper utilization of the technologies and have less efficient service capacity facility utilization.

Queue Time: The service schedule is convenient but the retail stores spent long time in queue for the customers for which customer's perception as well as satisfaction level is not good regarding the waiting time.

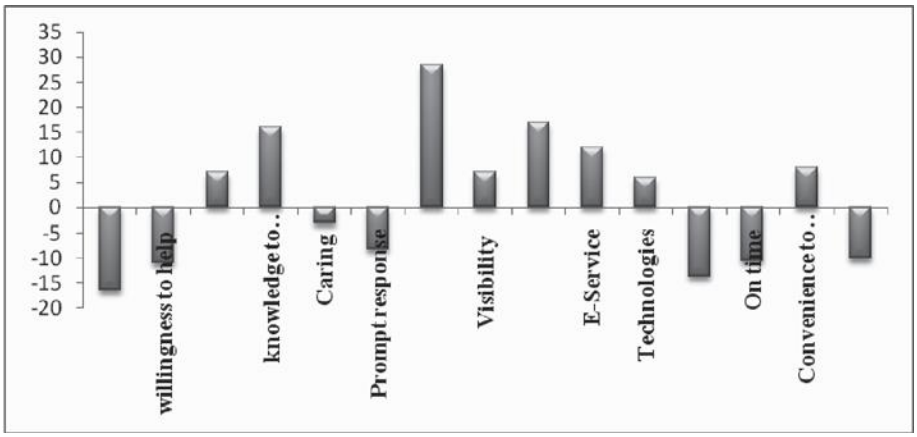
In summary, The mean weighted SERVQUAL score results showed that, the perception level was good at staff's knowledge to answer, infrastructural facility and employee's appearance. Perception gaps needed to be improved on readiness to respond and willingness to help staff attitude as well as customer waiting time needed to be minimized.

Table 3.1: Mean Weighted SERVQUAL Score for Each Dimensions

Dimension	Perception-Expectation	Mean Weighted SERVQUAL Score
Readiness to respond	-3	-30
willingness to help	-2	-20
Ability to instill confidence	1	6
knowledge to answer	2	16
Caring	-0.5	-4.5
Prompt response	-1.5	-8.25
Infrastructural facility	3	15
Visibility	1	7
Dressed employees	2	11
E-Service	2	8
Technologies	1	5
Capacity utilization	-2.5	-10
On time	-1.5	-9
Convenient schedule	1	8
Satisfactory waiting time	-2	-14

The graphical representation in Table 3.1 shows mean weighted SERVQUAL Score which worked as a benchmark in making decisions.

Figure 3.1: Mean Weighted SERVQUAL Score for Each Dimension



Customers' requirements weights have been calculated by taking mean weights against each dimension separately. Customers showed (Table 3.2) a high requirement on response time and helping attitude of service providers. They think that, service providers' caring attitude minimizes their psychological pressure of waiting. Readiness to respond is the willingness or positive attitude of employees to answer the queries of customers. Positive attitude of the employees creates a positive mindset to the customers ultimately which has impact on customer satisfaction. The customers don't want to wait for unproductive time which minimizes their level of satisfaction but other positive behavior and helpful attitude of employees lessens the stress of queue.

Table 3.2: Weights Given to Customer Requirements

Dimension	Mean Weight given by customers
Readiness to respond	10
Willingness to help	10
Ability to instill confidence	6
knowledge to answer	8
Caring	9
Prompt response	5.5
Infrastructural facility	5
Visibility	7
Dressed employees	5.5
E-Service	4
Technologies	5
Capacity utilization	4
On time	6
Convenience to schedule	8
Satisfactory waiting time	7
Total	**100**

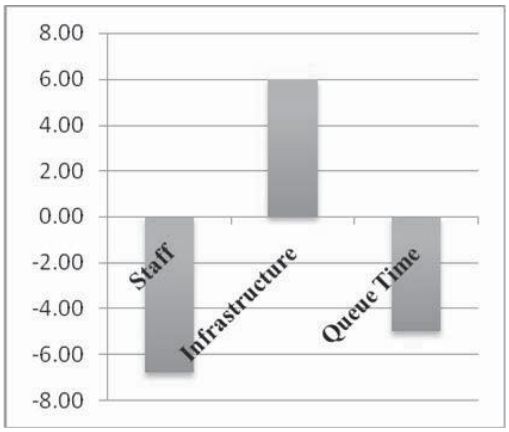
The overall satisfaction level (Table 3.3) showed that, nowadays retail firms improved their infrastructural layout or facility structure better than previous records. New tools and technologies like e shopping, home delivery, more outlets, and decorated stores attracted more customers to the retail stores than before but

necessary and particular improvements are required at competency level of staff and better management concerns were needed to minimize waiting time. Staff training to improve the competency level and queue analysis with management concern can improve the customer satisfaction more.

Table 3.3: Overall SERVQUAL Score

Factor	Overall SERVQUAL Score
Staff	-6.79
Infrastructure	6
Queue Time	-5

Figure 3.3: Overall SERVQUAL Score



According to our analyses of the service gaps or perception gaps aiming to improve service quality, the recommendation section outlines some ways to improve performance level on these dimensions.

Discussion and Recommendations

In order to improve the perceived quality of the staff attitude and queue time minimization within the layout, a number of steps need to be implemented. With regards to the layout, the current setups of the layouts give sufficient number of service facility counters which are not to increase queue time. On the other hand, most of the counters remain closed due to lack of employee monitoring system. In order for business patrons to be assured of the competency of staff, they must

display basic knowledge of the staff they represent. Training should be conducted to a standard so that any employee could give customers guidance for general questions, such as to which floor or section of the shops specific products could be found. They should also keep an open and approachable counter, instead of commonly lingering further in the back of the office. Customers should have a pleasant encounter every time the services of the staff are required, and should leave with a feeling of confidence that they have been attended to sincerely. This will only be achieved when not only staff members have the knowledge required to answer general questions, but also have the consideration to express it with courtesy.

Confidence would be generated only if companies are quick to serve. Undue delay is an important reason for losing confidence. Customers are most appreciated on the premises. Each employee from sub staff to Chairman in the company can play a vital role in this regard. The customers at no cost should go back unattended. The sense of care is a vital element in achieving customer satisfaction. An unattended or frustrated visit could bring discord and a feeling of disgust. There should not be any display of complacency and lack of sensitivity in the employees toward customers. The customers need to be served promptly, efficiently and effectively.

Queues are not linear with regard to changes in arrival rates or service times. Generally, when there is variability in arrivals of customers and/or in service times, the average length of the queue and the average waiting time both grow exponentially when the utilization of the servers approaches full utilization. Therefore such queuing systems should not be planned for full utilization of the servers because queues and waiting times become very long. We can also look at the length of the queue (and the waiting time) from a different perspective. Doubling the service capacity of a system that has long queues will not cut the queues by half, but rather almost eliminate them. For example, if a super shop has a single cash counter for customers and the average waiting time of customers for cash payment is 20 minutes, and the utilization of the receiving point is 90%, adding a second counter operating in parallel will almost eliminate the waiting times (and not cut them in half), but the utilization of the counters will drop to 45%. In a period of major change in the business environment, enhancing satisfaction is becoming increasingly important because satisfaction is recognized as a measure of quality. Knowledge of the use of queuing model to determine system parameters is of value to service providers who seek to attract, keep and provide quality service and products to customers in the ever-competitive “marketplace”.

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