

Role Of Virtual Queue Management System In Improving Service Efficiency In Banks At Chennai City

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Abstract

Queue management is critical for service sectors. Improper management of waiting line makes customers switch to alternative service providers. With the emergence of new technologies, virtual queue management solutions have been developed to be able to handle queues in an efficient manner. This study focuses on understanding user adoption of queue management systems (QMS) implemented in banks. A structured questionnaire is administered to 50 respondents in a select branch of a bank in Chennai city to understand the effectiveness of virtual QMS. The study revealed that most of the users have begun to adopt QMS service as it is user friendly, saves time, makes services more accessible, is paperless and increases service efficiency.

Keywords: Virtual queue management system, service efficiency, banks, customer service

Introduction

The world is going virtual today. According to Bain & Co, a global consulting firm “A customer is four times more likely to deface to a competitor if the problem is service related than price or product related.” Queue management system has become a necessary element for many of the businesses, especially in the service sector. Businesses can increase the level of customer service satisfaction, enhance brand image and gain a competitive edge among its competitors. Virtual or electronic

queue management or ticketing queue systems are used in environments where queues are formed in unpredictable and varying locations and directions. This is seen in forms of retail, service centers, banks, and most other transaction-based or service related environments at periods of high demand. Virtual Queue Systems are designed to create order in a seemingly unstructured environment by providing customers with numbered tickets that are called audibly and visually, in sequence, by the next available agent available to assist with their specific type of enquiry. Implementing these types of systems create improve both the customer and the staff experience. There are many developers of Queue Management solutions such as Smart Queue, QLess, QMagik, Qmatic, Q-nomy to mention a few.

Virtual Queue Management System is a technology which assigns token number and manages queue with the help of virtual receptionist. With this software it is easy to add and delete the appointments. It gives voice updates as and when the appointments are added and deleted. It helps in broadcasting the messages with respect to the appointments and broadcasts emergency messages as well. This software keeps a track of the customers served with their database. Developers of virtual QMS give ability to the service provider to control when their customers can join the virtual queue enabling service organizations to manage their service activities with a click of button.

The virtual receptionist manages token and queue and provides update on queue movement by updating customers on queue details about what token got completed and reminding them about their turn so that they are on time in bank premises. Once the banks tie up with the queue management solution provider, the virtual QMS has a particular number to which the customer can call and join the queue through a mobile phone or a web application. The customer receives a token number with tentative time of arrival. The customer is then free to do his/her activities since there is no physical waiting. The system updates the customer with voice updates as and when the queue progresses. The customer is specifically alerted when there are three customers waiting ahead for service and this enables the customer to arrive on time.

Review of literature

Davis et al. (1994) in their study propose taxonomy based on the service manager's ability to control the customer's perception of the queuing experience. The study

defines which queuing factors can be controlled by the firm and suggests tactics for managing queues. Ghazal et al. (2016) propose a solution to the problem of client dissatisfaction with long waiting times associated with services. This solution is nothing but a smart queue management system that provides real-time visual and audio updates to service requests via a smart phone app where in users receive digital tickets and are free to leave the waiting area until it is their turn to be served. Pamies et al. (2016) demonstrated solutions for managing waiting in services since waiting in services reduces customer satisfaction and has a considerable and enduring negative effect on the overall evaluation of a service. The authors study the role played by culture in shaping the perceptions of waiting in services through in-depth interviews and consumer diaries. Dahm et al. (2018) explored how retailers can reduce the adverse impact of queues. Their study showed that the customer's experience deteriorates as queue length increases and that perceptions of social pressure mediate this effect. Further this effect is moderated by customers' own waiting time such that customers are more affected by queues forming at their backs when their own waiting time decreases. Mohammad et al. (2019) studied the waiting line arising in the service counters of the Malaysian Road Transport Department. The study proposed an online system that will help manage queue during the service and therefore optimize the waiting time. The authors Singhal et al. (2019) developed a measure of the value of the customer's waiting time that is applicable to all queuing systems. This measure is in addition to the list of the measures of performance of general queues that includes the servers' utilization factor, the expected queue length, the expected waiting time among many others.

Statement of the problem

Customer experience in service sectors has gained significant importance. Quick service is the order of the day and customers dislike waiting lines. Technology has enabled development of virtual queue management solutions to organize customer movement in an efficient manner. This research is conducted to understand role of queue management systems (QMS) implemented in banks to improve service efficiency.

Objectives

The study is carried out to achieve the stated objectives:

- To understand the extent of adoption of virtual queue management system by customers
- To ascertain the key factors affecting the choice of queue management system

Research Methodology

The research design used is descriptive research through a survey technique. The respondents are customers of a particular bank that has implemented QMS in Chennai City. The sampling technique adopted is purposive sampling technique. A structured questionnaire with combination of dichotomous, multiple choice and likert-scale questions have been used and the questionnaire is administered to 50 respondents. Data analysis is carried out using SPSS.

Limitations

The sample units are only from one bank’s branch in Chennai city that has adopted QM Sand generalization has been made based on the collected sample evidence.

Results and discussions

The demographic profile of the respondents including age, gender and occupation are represented in the tables below.

Table 1: Age

	Frequency	Percent
18 to 27	9	18.0
28 to 37	18	36.0
38 to 47	17	34.0
48 to 57	4	8.0
above 57	2	4.0
Total	50	100.0

Table 2: Gender

	Frequency	Percent
Male	24	48.0
female	26	52.0
Total	50	100.0

Table 3: Occupation

Table 4: Types of services for which QMS is used

	Frequency	Percent
student	5	10.0
home maker	16	32.0
professional	12	24.0
business	8	16.0
others	9	18.0
Total	50	100.0

	Frequency	Percent
Deposit	8	16.0
Withdrawal	15	30.0
Cheque and Draft	15	30.0
Loan and FD	6	12.0
Other Banking services	6	12.0
Total	50	100.0

Table 5: Appointment booking through QMS

	Frequency	Percent	Valid Percent	Cumulative Percent
Walk in without appointment	9	18.0	18.0	18.0
Appointment through phone calls	31	62.0	62.0	80.0
Online appointment/web	9	18.0	18.0	98.0
Others	1	2.0	2.0	100.0
Total	50	100.0	100.0	

Table 6: Preference towards booking an appointment

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	30	60.0	60.0	60.0
no	20	40.0	40.0	100.0
Total	50	100.0	100.0	

Figure 1: Factors influencing use of virtual QMS

Fig.1c

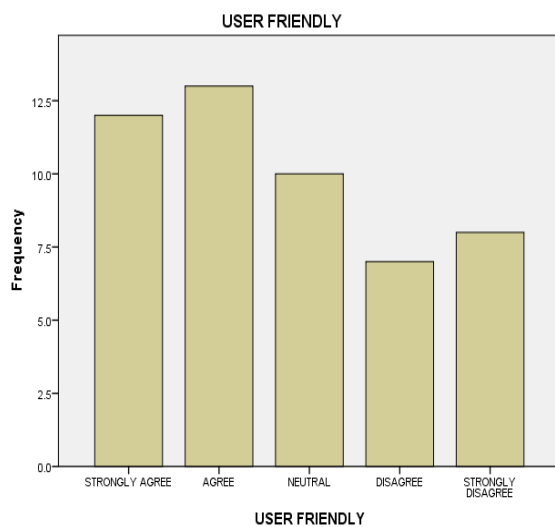


Fig.1a

Fig.1d

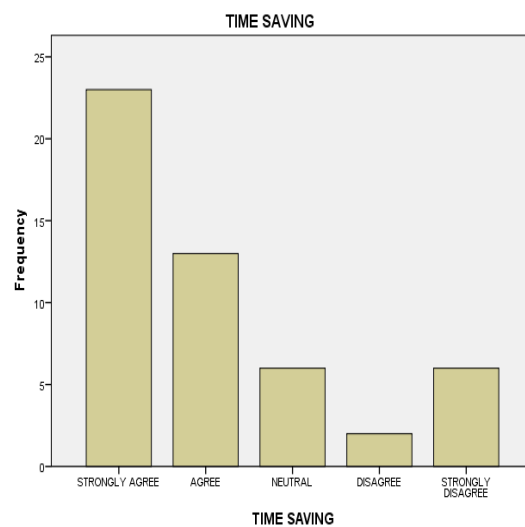


Fig.1b

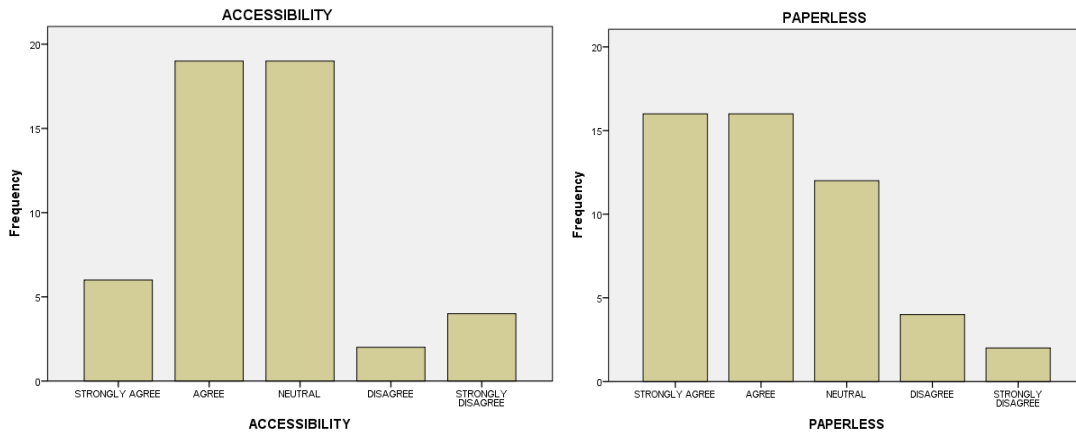


Table7: Increase in Service efficiency through implementation of Virtual queue management system

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	39	78.0	78.0	78.0
No	11	22.0	22.0	100.0
Total	50	100.0	100.0	

FINDINGS AND CONCLUSIONS

- Majority of the visitors to the branch are of the age group of 28-47 years.
- Customers mainly use queue management system for the bank’s services including cheque deposits, cash withdrawals, fixed deposits and loan availment services.
- Majority of the customers prefer to use queue management system.
- About 62% of the customers access QMS through mobile phones and 18% use web-based platform.
- Customers have a mixed response with respect to user friendliness of the QMS tool.
- Customers strongly believe that QMS is reliable and saves time.
- Customers are satisfied with the accessibility to services through QMS.
- About 65% of the customers favour the adoption of QMS as it is paperless and therefore a sustainable approach.
- 78% of the customers favour the adoption of QMS as it improves service efficiency.

Conclusion

Banks that adopt the QMS do not require additional staff to manage tokens and queues as this is a very effective paperless token system. This reduces crowding in the branch and customers will be able to drop in when it is their turn, thereby reducing delays and dissatisfaction. There is still need to promote the use of queue management system among many customers by making the app platform more users friendly. The study brings to light emerging sustainable technological trends such as the virtual queue management system which enable enhancing service efficiency levels vital for businesses.

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