THE IMPACT OF AUTOMATED SERVICES QUALITY ON BRAND LOYALTY WITH THE MEDIATING ROLE OF CUSTOMER SATISFACTION AND MODERATING ROLE OF CUSTOMER KNOWLEDGE

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ABSTRACT

The aim of this study was to find out the impact of automated service quality on brand loyalty with the mediating role of customer satisfaction and moderating role of customer knowledge. Data was collected through 150 questionnaires completed by randomly selected customers. Descriptive statistics, exploratory factor analysis, and multiple regressions were used to test the direct impact of automated services quality on brand loyalty, and moderating role of customer knowledge. The findings suggest that the automated service quality and customer knowledge have a significant and positive effect on customer satisfaction. The results show automated service quality and customer satisfaction to be significantly associated with brand loyalty.

INTRODUCTION

Automated service quality has been seen as an important and major way to increase the organizational performance (Caruana, 2002). It also remains a considerable and an important issue in the marketing literature (Jensen & Markland, 1996). So, the automated service quality and brand loyalty is the core heart of any industry (Le Blanc & Nguyen, 1988). It means for any successful industry, that industry must rely on the customer perception and his expectation which a customer have about it (Yavas, Benkenstein, & Stuhldreier, 2004).

During last two decades the technology has become the cause of reforms in any industry. After the revolution in the technology, the technology created a new world for any industry; where the customer can interact easily and can avail automated services without any hesitation anytime and anywhere. Technology has changed the way of doing businesses, and also discovered the new automated service channels for creating any new product (Edey & Gray 1996; Lang & Colgate, 2003).

The purpose of investigation of this phenomenon is to examine why customer loyalty is decreasing even after providing better services. For any industry, the loyalty of the customers can be explained in these three components (Oliver, 1999). First, customer loyalty can be shown through their behavior. Second, loyalty can be indicated by the attitude that a customer has towards that brand. Third, the combination of the customer attitude and their behavior towards that brand, because higher level of customer loyalty can be helpful for boosting income, and can enhance the company's operations and performance.

Increasing the customer loyalty for new customers is five times more expensive as compared to maintaining the existing customers (Godes & Mayzlin, 2004).So based on these facts for getting economical benefit of a company, it is necessary to have loyal customers and it's a great effort which is done by a company. A firm can increase his customer loyalty after providing better service quality.

However, with these services there are some other factors that are required besides service quality. If customers have knowledge about the service, like how to use it, how to properly avail it, then customers always go for information based decision, and hence they will be more satisfied exhibiting higher level of loyalty (Capraro, Broniarezyk, & Srivastava, 2003).

For measuring the customer satisfaction and brand loyalty, the automated service quality is an important feature. Providing the automated service quality can also enhance the brand loyalty, profitability and strength of the relationship with the customer. Any industry that is using traditional delivery channels is facing critical conditions.

After the importance of automated service quality, it is a necessity to understand how a customer can evaluate the services, and how to give the knowledge or awareness about automated delivery channels, because when a customer is having ample knowledge about automated services, then he will be equipped for adopting the specific automated services and will feel comfortable while using that service. This acceptance of the customer

brings a new dramatic change in an industry, and also maintains a relationship that is imperative for customer satisfaction as it lead to the brand loyalty (Mols, 2000).

According to the functional theory of attitude, it is argued that attitude toward a brand is stored in the memory, in the form of brand related association. After the attitude activation, the customer makes decision about that brand. This decision is made under different influences like situational factors as well as the customer knowledge about that brand. On the basis of that information, the customer attitude develops and that attitude leads to their action. In recent years, limited studies have been conducted which investigated automated services quality (Joseph & Stone, 2003), so there is a need for further investigation on automated service quality.

REVIEW OF LITERATURE

Automated services quality and followers' brand loyalty

Technological development has changed the way of doing a business, which influences the financial sector development, by introducing new range of products and services, and improving the other different delivery channels (Edey & Gray, 1996). Now the organizations realize that technology has a potential value for getting competitive advantage and this is the part of marketing literature, for example, the banking sector adapted the new technology very quickly and controlled their costs, attracted the new valuable customer, and nowadays, this technology has become the need of every organization. It has become the need of present customers as well. These technologies innovations facilitate each and every organization not only for their customers, but also for their own organizational perspective.

Nowadays, automated services and their predicted innovation channels have become a standard and are also used for getting an organizational competitive advantage (Rogers, 1995). Now the customers having this type of perception regarding their products and services that organization provides and when the customers analyze their services through these factors such as reliability, easy to use, user friendly, time factor, real time access to information and the automated services including these factors, they develop brand loyalty.

It is observed in marketing literature that the novelty in product quality and automated services quality plays a major and important role for getting customer satisfaction, and further this satisfaction leads to brand loyalty (Lundvall, 1988). In this

competitive economy the success and failure of any organization is dependent on their high quality of automated services that they are providing to their customers (Mouawad & Kleiner, 1996). So, due to this competition, now industries are adapting new technological advancement channels and provide them quality of automated services (Levesque & Mcdougall, 1996). Through these modern delivery channels, organizations can take many advantages like customer satisfaction, brand loyalty, and on the other side they can enhance their productivity, maximize their revenue, improve their performance, and build positive word of mouth regarding their products and services. With all of these advantages, they can attain competitive advantage (Santos, 2003). Lee and Lin (2005) concluded in their study that these modern delivery channels such as internet services quality dimensions (Reliability and responsiveness) have significant impact on customer satisfaction and brand loyalty. The impact of internet service quality on customer satisfaction plays a vital role to create a positive Word of Mouth (Santouridis & Trivallah, 2009).

In an industry, automated services play several roles, like building of brand image and brand loyalty (Alexandris, Douka, Papadopoulos & Kaltsatou, 2008).Automated services may also influence the attitudinal loyalty of the customer, and this experience plays a good role for actual repurchase. So, the relationship between the automated services quality and brand loyalty also matters in every industry and each sector. Hence, it is the need of time for each and every organization to provide advanced technological services for the purpose of developing the brand loyalty (Bennet, Hartel & Kennedy, 2004).

Hypothesis 1. Automated Service Quality has a stronger positive relationship with Brand Loyalty

Mediating role of customer satisfaction between automated services quality and brand loyalty

Since last three decades, customer satisfaction has been seen a fundamental component of marketing theory and practice (Parker and Mathews, 2001). Customer satisfaction refers to a judgment regarding the products and services that a customer has after availing service. But, after availing that service, if a customer perceives the worth of products and services are more than the price he had paid, he would feel satisfied (Huang, 2008).

In literature, the customer satisfaction has been defined in different ways, but according to the

marketing literature the customer satisfaction concept, which is widely accepted, is that satisfaction is the feeling from the outcome of customer evaluation of expectation and perception towards that product and service (Kotler & Armstrong, 1996). Oliver (1999) argued that customer satisfaction is the positive outcome of customer need fulfillment. Another definition is, satisfaction is a positive emotion and feeling after evaluating all aspects of a transaction (Wiele, Boseline & Hesselinks, 2002).

Literature suggests that the automated service quality is one of the basic components for getting customer satisfaction (Cronin & Taylor, 1992). Wong and Shoal (2003) concluded that automated service quality has direct and indirect positive relationship with different behavioral intentions. Marketing literature strongly focuses on the importance of automated service quality and its relationship with the customer satisfaction and brand loyalty (Cronin & Taylor, 1992). For example, in the banking industry, the performance of service provider matters; it is considered a core dimension for measuring customer satisfaction (Levesque & Mcdougall, 1996).

In the service industry, the consistency in product quality and automated service quality plays a vital role, and has a stronger impact on customer satisfaction level. Therefore, service provider firms need to improve their services and introduce new automated delivery channels. Gerrard and Cunningham (1997) stated that often customer switching behavior occurs due to the failure of providing the quality in product and services. Hence, it's not enough to just focus on customers' satisfaction rather it is equally necessary to focus on other problems regarding the delivery channels as well. Customer intentions can be determined through the attitude of customer having positive and negative behavior intentions. The satisfaction of a customer is the perquisite for most of the behavior intentions like customer relationships increase loyalty (Athanassopoulos, Gounares & Sathakopoulos, 2001).

Higher levels of customer satisfaction lead towards repurchase intentions. Anderson and Sullivan (1993) related high level of customer satisfaction as one of the causes of low level of customer switching, and increase in the customer repurchase intentions. Muslim and Zaidi (2008) concluded that the higher level of customer satisfaction is the outcome of higher level of automated service quality, which also leads to the brand loyalty. Caruana (2002) indicated the customer dissatisfaction decreased customer loyalty level, and also concluded that customer satisfaction is the backbone of brand loyalty

This means the customer satisfaction and brand loyalty are two highly related constructs and are negatively related with customer dissatisfaction that promotes customer intentions to switch. Automated service quality has a significant positive relationship with customer satisfaction, and this satisfaction has a significant positive relationship with brand loyalty.

Hypothesis 2: Customer satisfaction mediates the relationship between automated service quality and brand loyalty

Moderating role of Customer knowledge between Automated Services and Customer Satisfaction

Customer knowledge is a combination of experience, value and insight information, which is required to create and absorb during the use of products, and while availing the automated services that an enterprise is providing to their customers. Researchers classified the customer knowledge in different ways (Bueren, Schierholz & Brenner, 2005). There are three types of customer knowledge: knowledge about customer, knowledge for customer, and knowledge from customer.

First group is knowledge about customer in which the requirement of a customer is important. Second group is knowledge for customer in which a customer should be aware about the products and services that the organization is providing for the purpose of satisfaction, while the third group is knowledge from customer which includes what a customer feels after using the product of service. However, this paper focuses on one of the customer knowledge category, which is knowledge for customer.

For the purpose of knowledge management, companies are adapting CRM & KMS to enhance new customer knowledge. Nowadays, many leading companies recognize the power of CRM. For the purpose of customer satisfaction, in an industry where the organizations share the information about their products and services which the customer is using, they can easily measure the customer satisfaction, post purchase behavior, predict the repeat purchase behavior, and brand loyalty (Lin, Su & Chien, 2006). There are several advantages of CRM, like organizations expand customer value and market share, and also create loyal customers through this (Lin & Su, 2003). CRM strategies create the customer satisfaction and business excellence (Lin & Su, 2003). However, even in the 21st century, unfortunately, companies ignore the CRM importance and have limited knowledge about it, and due to this ignorance they are losing their customers. Companies must examine how they can better manage customer knowledge. Knowledge Management (KM)

is the key to success for any industry because KM addresses the issue of capturing and delivering the knowledge to their customers (Dacenport & Prusak, 1998). CRM and KM both have positive impact on reducing the cost and increasing the customer value and also maximizing the revenue and get customer satisfaction.

Dyche (2002) concluded that all organizations must adapt and implement their own KM and CRM system. For creating customer value and getting competitive advantage, customer must be aware of having complete knowledge about all of their transactions (Giudici & Passerone, 2002). Many companies use IT as a tool for providing their products and services, and introducing the modern delivery channels, such as through internet customers can easily access the information regarding that product and services; this information influences the customer purchase decision. So, on the basis of these services, companies can also predict customer behavior (Song, Kim & Kim, 2001)

In the high knowledge group, where the customers have much more knowledge about products and services, the customer satisfaction level will be high, but in low knowledge group the relationship of automated services and loyalty is indirect only through satisfaction (Garbarino & Johson, 1999). Oliver proposed an expectation theory stating that when a customer is fully aware about the usage of products and services, then his/her expectation level will be high and he/she would notice whether the provided services will be value for money or overvalued.

Hypothesis 3. Customer Knowledge moderates the relationship between Automated Service Quality and Customer Satisfaction

THEORETICAL FRAMEWORK
FIGURE 1
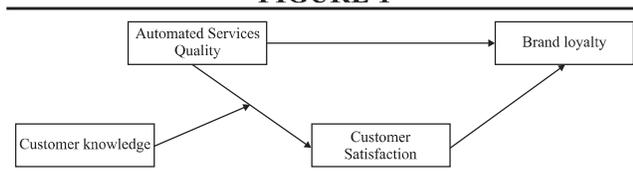
METHODOLOGY

Sample and Procedure

Data was collected through personally administered questionnaires. The measurement of the variables was done through questionnaire items by use of "five-point Likert scale from 1 to 5", rating from "strongly disagree" to "strongly agree" Convenience based

sample from the population of twin cities was selected. The participants included university students from Arid Agriculture University Rawalpindi and Muhammad Ali Jinnah University Islamabad, Pakistan. A total of 180 questionnaires were distributed; however, 150 were useful and complete which made the response rate 83%, and it seemed sufficient sample size according to academic practices for analysis of results. Participation in this study was completely voluntary. Respondents were assured of confidentiality of their provided information, which was used for analysis.

The respondents in the age group of below 18 were none, 89.7% lied in the age bracket of 18-25, 10.3% lied in the age bracket of 26-33. 79.5% of respondents were male and 20.5% were females. 4.1% of the students were in intermediate. 64.4% of the students were bachelor. 31.5% of the students were masters. After collecting the answered questionnaires, these questionnaires were indexed and entered into SPSS sheet for further correlation, regression analysis and also to determine the reliability of data. The scales used to measure the hypothesis in this study were derived from the instruments designed for previous studies and it calculate the reliability and validity of data.

MEASURES

Automated Service Quality (ASQ)

Independent variable Automated Service Quality was measured by using five point Likert scale. Measurements related to the ASQ fields, Automated Service Quality were adopted from the study of Al-Hawari (2006). The value of the Cronbach's alpha was .789. Sample question included for Automated Service Quality is "Brand x has a sufficient numbers of Automated services".

Customer satisfaction

To measure overall customer satisfaction with the brand, one of the most frequently employed measurement proposed by Oliver (1980) have been used. The value of the Cronbach's alpha was .864. Sample item includes "My choice to use Brand x is a wise one".

Brand loyalty

To measure brand loyalty, five items on repurchase and recommendation intentions have been used. These were taken from the first dimension of the 'behavioral intentions' scale proposed by Zeithmal et al. (1996). Items included in the scale were like. The value of the Cronbach's alpha is .863. Sample item is "I bought this brand because I really like it".

Customer Knowledge

To measure the Customer Knowledge, the scale of Wang and Feng (2012) was adopted. The construct was measured by three questions. The value of the Cronbach's alpha was .768. Sample question of this scale includes "I have full knowledge of this Service and I feel comfortable to use it".

RESULTS

Table 1 presents correlation among the model variables. Automated Service Quality was positively and significantly associated with brand loyalty (r = .718).

TABLE 1
Means, Standard Deviations and Correlations

Variable	Mean	SD	1	2	3	4
1. ASQ	3.45	0.81	1			
2. CS	3.60	.95	.757**	1		
3. CK	3.57	1.0	.762**	.591**	1	
4. BL	3.54	1.0	.718**	.712**	.645**	1

*** Correlation is significant at the 0.01 level (2-tailed).*
** Correlation is significant at the 0.05 level (2-tailed).*

Automated Service Quality was positively and significantly associated with customer knowledge (r = .762). Automated service quality was positively and significantly associated with customer satisfaction (r = .757). Customer satisfaction was positively and significantly associated with brand Loyalty (r =.712). Customer satisfaction was positively, and significantly associated with Customer knowledge (r =.591). Customer knowledge positively and highly significantly associated with brand loyalty (r =.645).

Regression Analysis

Table 2 shows the beta values and significance values of the independent variable Automated Service Quality shows a significant relationship with customer loyalty (p < .01; β = 0.821**) which means that Automated Service quality has a significant impact on customer loyalty. Likewise, customer satisfaction has a significant impact on brand loyalty (p < .01; β = .747**) which shows a strong impact between these two variables. Similarly, automated service quality has a strong and significant impact on customer satisfaction (p < .01; β = .783**), this shows that customer satisfaction is mediated between the path of automated service quality and brand loyalty.

TABLE 2
Regression for Outcomes

Predictors	Customer Satisfaction			Customer Loyalty		
	β	R²	ΔR²	β	R²	ΔR²
Step 1						
Demographic Variables		0.278			0.162	
Step 2						
Automated Service Quality	0.783**	0.657	.379**	0.821**	0.540	0.378**
Customer Satisfaction				0.747**	.528	.365**

* p< .05, ** p < .01, ***p<..001

TABLE 3
Moderation Analysis

Predictors	Customer Satisfaction			Customer Loyalty		
	β	R²	ΔR²	β	R²	ΔR²
Step 1						
Demographic Variables		0.278			0.162	
Step 2						
Customer Knowledge						
(Controlling ASQ, CK)		0.658	0.380	0.821**	0.540	0.378**
Customer Satisfaction				0.747**	.528	.365**
Step 2 (Interaction Term)						
ASQxCK	0.016	0.719*	0.1*			

* p< .05, ** p < .01, ***p<..001

Table 3 shows the moderated regression analysis. According to this table, researcher first controlled the effect of both variables (Automated service quality and Customer Knowledge) and further developed the interaction term of these variables. After finding the regression of interaction terms (Automated service quality and customer knowledge), the regression was run that also shows a significant impact of combined effect of moderator and independent variable with the mediator ($p < .05$; $\beta = .016$).

Table 4 is about mediated regression analysis between two variables; automated service quality and customer loyalty. For this, the mediator was controlled to find the impact of independent variable on the dependent variable. The result was significant ($p < .05$; $\beta = .497$). This exercise illustrates that the mediator: customer satisfaction is playing partially mediated role between the variables.

TABLE 4
Mediated Regression Analysis

Predictors	Customer Loyalty		
	β	R²	ΔR²
Step 1			
Demographic Variables		.162	
Step 2			
Customer Satisfaction	.413**	.528	.365**
Step 3			
Automated Service Quality	.497*	.593	.066*

*$p < .05$, ** $p < .01$, ***$p < ..001$

DISCUSSION

On the basis of above analysis in the regression table, the significant impact was observed between two variables; automated service quality and brand loyalty, which indicated the acceptance of Hypothesis 1. Hence, study proves the impact of automated service quality on customer loyalty. The use of automated services has become widespread in majority of the services. It has put numerous opportunities for business professionals to enhance current marketing and customer loyalty among the products (Joseph & Stone, 2003). It has been revealed further that there exists a strong impact of automated service quality on customer satisfaction. Majority of the respondents in the questionnaire agreed to this, and these observations further added up in the past theories.

The study sought to investigate the relationship between automated service quality and brand loyalty. The result showed that automated service quality plays a vital role for enhancing customer satisfaction, as well as brand loyalty. Previous studies examined automated service quality with no consideration to determine importance of customer knowledge for getting brand loyalty. Literature suggested that the automated service quality has provided and innovative way to enhance the customer satisfaction and brand loyalty (Zineldin, 2000)

Caruana (2002) argued this in a way that automated services put a great influence in the mind of the customers about the use of innovated ideas to get the services they want. They further get high impression and feel proud of the services they use. This exercise further helps them to get satisfied and they start loving it which accomplishes the task of the companies. Third, regression was run between customer satisfaction and customer loyalty after controlling the demographics. This result was also significant and helpful to find the impact of satisfaction on loyalty among the customers. There are several studies which show this relation. This study also played another role in validating the relationship. Customer loyalty encompasses loyalty attitudes which are opinions and feelings about products, services, brands, or businesses that are associated with repeat purchases. This happens when customer gets satisfied first. Customer satisfaction therefore helps the customers to get loyal (Huang, 2008). Analysis is clearly showing a mediating impact of customer satisfaction between automated service quality and customer loyalty. Research further illustrates that there is a partial mediation between these two variables after controlling the impact of mediator customer satisfaction. This significant impact helped to put a hallmark on the mediating impact of customer satisfaction between automated service quality and customer loyalty. So, hypothesis 2 is accepted. To get the moderating impact it was necessary to find the interaction term which was further regressed after controlling the individual impact of customer knowledge and automated service quality. This interaction term was also playing a significant role on the customer satisfaction. So, there exists the moderator which is strengthening the relationship. Hypothesis 3 therefore is accepted. Often failure occurs when customers don't know how to use the services. This can be put down to complacency when customers are given the knowledge of how to use the automated service and then get satisfied (Gabardine & Johson, 1999).

The industries should pay their attention to improve the automated service quality that leads to the brand loyalty, attraction of new customers, retention rates, may benefit by information about the effect of automated service quality on brand loyalty. From this evidence the industries should focus on improving automated service quality and also focus to deliver the proper knowledge about those automated channels to their customer. The findings of this study also predicted that customer knowledge has a strong positive relationship between automated service quality and customer satisfaction. So, it means if the companies properly deliver the information

and knowledge about their Automated Services to their customers in an effective and efficient manner, then their customer will be more satisfied.

THEORETICAL AND PRACTICAL IMPLICATIONS

This study shows that automated service quality has indeed a role for getting customer satisfaction and brand loyalty. The study demonstrated that there is a role of customer knowledge towards the products and services. Youth (18-25 years) pay much role for using automated service quality. So, organizations can target them and give incredible knowledge about that automated service because they will be the consumers of tomorrow. Decision makers of organizations should put positive strategies in their products and automated services in order to attract customers towards them. Therefore, organizations should work on different strategies to deliver the knowledge about those automated services towards them. This study can suggest marketing managers in particular to formulate the appropriate marketing strategies to let customers to buy more products. In this way, they can earn more profits.

LIMITATIONS AND RECOMMENDATIONS

This study is not without limitation. The sample size is not as much appropriate as it could be. Data was collected from two universities of Pakistan, and also from general public, though sample of informants indicated representation of population of two cities of Pakistan. During data collection some difficulties were faced and the sample was too small to lead to generalizability of results. The potential for key informant bias may still exist. Thus, research employing more number of respondent's designs, or direct investigator observation would be useful to confirm results. The sample included Pakistani citizens and the study cannot guarantee that these results can be generalized for different countries.

Finally, purpose of this research study was on the issue of automated service quality within traditional and automated context on brand loyalty and examined the importance of customer knowledge toward those automated services quality for enhancing more customer satisfaction and brand loyalty. Further study is suggested to include others variables such as customer trust. Future studies in additional industry and country contexts would help establish generalizability.

CONCLUSION

In conclusion, the purpose of this research revealed a positive relationship between the automated services and brand loyalty. According to the literature and framework of this research, it helps to understand the important of customer knowledge about automated service quality's impact on customer satisfaction. Customer knowledge is an important antecedent of customer satisfaction and automated services channels have a positive role in shaping the customer satisfaction.

The findings emphasize that industries should realize the importance of customer knowledge towards those automated services channels for getting their higher level of customer satisfaction. The results indicate that customer knowledge of Pakistani consumers had significant relationship among all the variables of reference group influence. Although, hypothesis were supported but this study could also be directed well by increasing the number of respondents in survey and get more desirable results accordingly. There is no doubt that automated services quality and customer knowledge should have a positive impact on brand loyalty.

According to the results of this study, the industries should pay their attention to improve the automated service quality, that leads to the brand loyalty. Industries should examine customer knowledge about those automated services and response to the automated services channels.

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