# The Role of Bank Automated Services in Gaining Customers' Trust: A Practical Study in UAE

*(Peranan Perkhidmatan Automasi Bank dalam Meningkatkan Keyakinan Pelanggan: Satu Kajian Praktikal di UAE)*

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## ABSTRACT

*The main purpose of this paper is to highlight the significance of automated services factors on customer trust within United Arab of Emirates (UAE) banking contexts. The paper proposes a conceptual model of the relationship between automated factors and customers trust. Survey was designed and data collected through mall intercept method. AMOS 6 was used to test for the hypothesized relationships. Most of automated factors have direct relationship with customer trust. Queue management and convenience were the only factors that did not have any relationship with the dependent variable customer trust. The proposed model has the potential to help UAE banks' managers to strengthen the customer-bank relationship and, ultimately, to enhance customer trust especially at the light of the credit crunch the most banks in UAE are facing.*

## ABSTRAK

*Tujuan utama kertas ini ialah untuk mengetengahkan betapa pentingnya faktor perkhidmatan secara automasi terhadap keyakinan pelanggan, dalam konteks perbankan di United Arab of Emirates (UAE). Kertas ini mencadangkan suatu model konsep tentang hubungan antara faktor-faktor automasi dengan keyakinan pelanggan. Kaji selidik dibentuk dan data dikutip menggunakan kaedah pintasan pusat membeli-belah. AMOS 6 digunakan untuk menguji hubungan yang dihipotesiskan. Kebanyakan faktor automasi mempunyai hubungan yang langsung dengan keyakinan pelanggan. Pengurusan giliran dan keselesaan adalah merupakan faktor-faktor yang tidak mempunyai apa-apa hubungan dengan pembolehubah bersandar keyakinan pelanggan. Model yang dicadangkan mempunyai keupayaan untuk menolong para pengurus bank UAE untuk memperkukuhkan lagi hubungan pelanggan-bank dan akhirnya meningkatkan lagi keyakinan pelanggan terutamanya di kala terdapatnya masalah kredit sebagaimana yang dihadapi oleh kebanyakan bank di UAE.*

## INTRODUCTION

During the last two decades, United Arab of Emirates (UAE) has developed rapidly in terms of size, industry structure and variety of products and services. UAE financial system has been transformed from a relatively closed system based on traditional banking activities to a more open, effective and competitive system which is able to offer an extensive range of products and service. In recent years, UAE has had to face fierce competition. Accordingly, UAE needs to improve service infrastructure within which, banks play a very important role. Competition amongst commercial banks as well as between banks and financial institutions has made it important for banks to introduce new strategic marketing and research techniques and concepts within UAE. Today, banks are using more automated service to achieve more success in this dynamic environment. Firms should manage the level of service quality they provided to their customers to improve profitability and competitiveness. Automated service quality has become a competitive weapon because it is easy to duplicate a bank product, but not a level of service. Therefore, by understanding the link between automated service quality and customer relationship, benefits are available to banks in terms of enhancing the level of service quality, gaining competitive advantages, expanding market share, increasing innovation ability and finally, improving bank performance.

Analysing markets based on customer perceptions, designing a service delivery system that meets customer needs, and enhancing the level of service performance are very important objectives for banks to strive for to retain a competitive advantage (Yavas, Benkenstein & Stuhldreier 2004). Service quality has become a critical component in running a successful business in today's economy (Blose, Tankersley & Flynn 2005). Provision of high quality services enhances customer retention rates, helps attract new customers through word-of-mouth advertising, increases productivity, leads to higher market share, lowers staff turnover and operating costs, and improves employees' morale, and financial performance (Duncan & Elliot 2004).

The literature has provided a rigorous investigation of traditional service quality outcomes in which face-to-face interaction between customers and employees was the only focus. However, automated banking services are

highly becoming a favorable distribution channel among bank customers in UAE. Recently, however, provision of banking online services is increasingly adopted within UAE banks. Banks are motivating their customers to use more automated services, rather than using off-line services, for example, banks make some service only available and manageable through online (Herington & Weaven 2007). Within this context, it is becoming a necessity to bankers to provide a quality services to build ongoing and successful relationship with their customers. Relationship marketing is a complicated phenomenon and needs to be addressed within a specific context (Parasuraman & Grewal 2000).

Understanding the effects of automated banking quality on customer relationships in UAE banking context has received little or no attention in the services marketing area. In the literature, building long and trustable relationships with customers have often been identified as important values of business performance. Research into automated service quality related to UAE is limited in the marketing literature. Despite the theoretical background underpinning the importance of automated service quality in building a strong customer relationship, empirical research is required to examine the extent to which

automated service quality enhances or diminishes customer relationship in UAE automated banking context. This study attempts to develop first a comprehensive model of measuring automated service quality, then, to find out how delivering a high automated quality service could help UAE banks to sustain a strong relationship with their customers.

## LITERATURE REVIEW

Outcomes of automated service quality such as customer satisfaction and customer loyalty have received much attention in the literature (Al-hawari & Ward 2006; Al-hawari 2006; Ribbink et al. 2004; Parasuraman et al. 2005). In this paper, some other potential important outcomes of bank automated service quality have been proposed. The main focus was on those outcomes that did not receive much attention at the body of automated service quality literature or have been tested in other services context rather than banking context. In particular, a proposed relational model between automated service quality factors and trust has established to be further tested within UAE banking context (Figure 1).
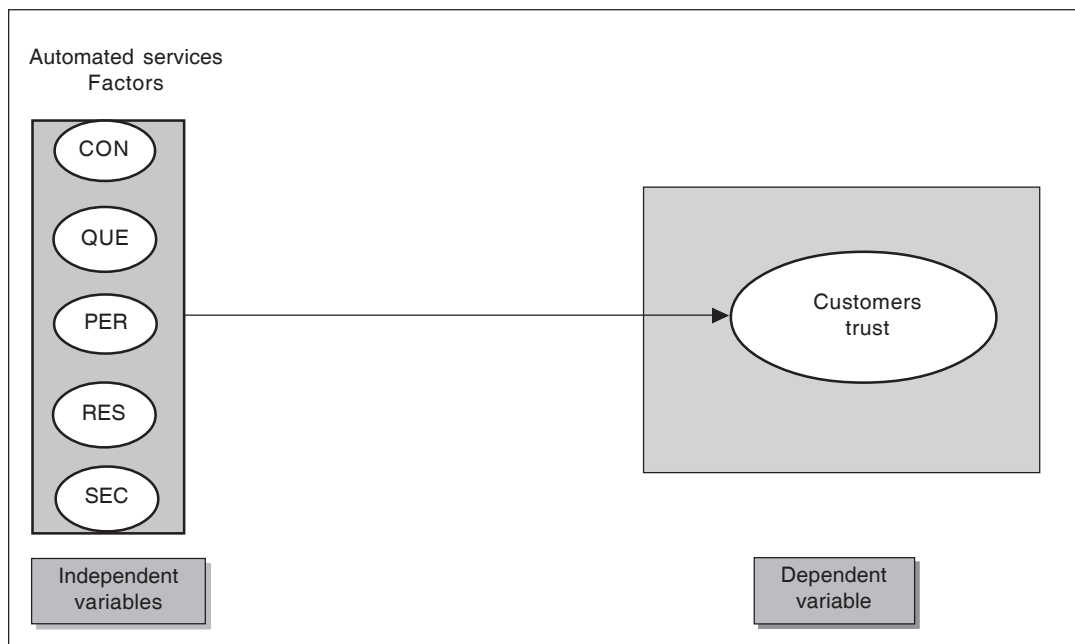


Con → convenience, Que → queue management, PER → personalization, RES → responsiveness, SEC → Security
*Source*: Developed for this research

FIGURE 1. The conceptual model

## BANK AUTOMATED SERVICE QUALITY

Even though that e-service quality concept has received a lot of academic and researchers' attentions, the conceptualisation of this concept still limited (Loonam & O'Loughlin 2008). A review of the current conceptualisation of automated service revealed that general automated service definitions included specific reference to the internet, but they negated the inclusion of other important automated service types, such as telephone service and automated service delivery outlets. For example De Ruyter et al. (2001: 2) describe e-service as "content-centred and internet-based customer service, driven by the customer with the goal of strengthening customer-service provider relationships". Moreover, Surjadjaja, Ghosh and Antony (2003) identified automated service as web-based service delivered through the internet whereby the customer's interaction or contact with the organisation was limited to the information and communication technology (ICT) itself. A recent study that has been done by Parasuraman, Zeithaml and Malhotra (2005) was also similar to these previous definitions and they referred to automated service as a web sites-based customer service.

In the banking sector, customers have tended to use different service delivery channels in a complementary way; consequently developing a relationship with the customer can be achieved through any one of these media and more likely, a combination of them (Al-Hawari & Ward 2006; Lang & Colgate 2003). Ibrahim, Joseph and Ibeh (2006) indicated two main shortcomings in regard to the previous studies of e-service quality conceptualization. One of these shortcomings that the conceptualisation of the E-service quality is being synonymous with a web site quality or, in particular, web interface design quality. The second is the arbitrary nature of the suggested factors in some studies of the concept of E-service quality which reflect to a large extent the conceptual character of the latter. Accordingly, A more holistic definition adopted for the purposes of this research is that which is proposed by Santos (2003) as it is recognised as not only providing a more general definition of automated service quality but one that extended beyond the internet channel. Automated service quality was defined by Santos (2003) as the customer's overall evaluation of the excellence of the provision of services through electronic networks such as the internet, Automated Teller Machine (ATM), and telephone banking. This definition seemed to be the most appropriate fit for this research, as the internet banking channel was not the only automated service delivery channel that can be identified in the banking sector.

To fit with the previous definition of e-service quality a model of e-service quality developed by Ibrahim, Joseph and Ibeh (2006) specifically to measure customer perception of all electronic banking means was modified to be adopted by this study. Ibrahim, Joseph and Ibeh (2006) developed six different factors of e-service quality taking in their consideration the nature of all of electronic means of banks. Those factors are accuracy/convenient, accessibility/ reliability, good queue management, personalization, friendly/ responsive customer services, and targeted customers. In this study, the six factors developed by Ibrahim, Joseph and Ibeh (2006) were used as bases for developing an exclusive automated service quality factors to this paper.

## QUALITY – TRUST RELATIONSHIP

The trust concept has been studied in different fields. In the business discipline, trust has treated as an essential in building good relationships (Ribbink et al. 2004). Pennanen, Tiainen and Luomala (2007) argue that the trust proposed by Mayer et al. (1995: 712) is the most widely used in the literature. Mayer et al. (1995: 712) defines trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party". Moreover, Ribbink et al. (2004) defines trust as the willingness to rely on an exchange partner in whom one has a confidence. They further indicated that this definition was consistent with Lewicki et al. (1998: 439) conceptualization of trust as "a confidence in the other intentions and motives". Ribbink et al. definition of trust is more straightforward and easy to apply. Accordingly, this paper will adopt Ribbink et al. (2004) definition.

Trust is a key factor in establishing a long term relationship between organisations and their customers. Coulter and Coulter (2002) proposed that to reduce the level of uncertainty, buyers will look for signs of the service quality. Further, they suggested that the quality should raise comfort level thereby reducing the perception of risk and contributing toward establishing of trust. As the elements of risk within the automated context are higher than the traditional context, trust considers as an important factors in influencing customer intentions within the context of E-commerce (Sahdev & Purani 2008). Sharmma and Patterson (1999) indicated that trust develops to a large extent over time from receiving both technical and functional quality. Those studies which tried to investigate the nature of the relationship between e-service quality and e-trust (trust with the organization web site rather than the organization itself) such as Ribinik et al. (2004) and Gro¨nroos et al. (2000) found a positive relationship between the two constructs. However, there are few studies has directly linked e-service quality factors with organization trust rather than e-trust (for example Sahdev & Purani 2008) and non with bank trust. In this research I will link automated banking service quality with trust in the UAE banking context. Therefore, based on the theoretical and some of the empirical findings, I expect that there is a positive relationship between bank automated service quality and customers trust toward their banks.

H1: Convenience quality has a positive influence on customer trust of their banks

H2: Queue management quality has a positive influence on customer trust of their banks

H3: Personalization quality has a positive influence on customer trust of their banks

H4: Responsiveness quality has a positive influence on customer trust of their banks

H5: Security quality has a positive influence on customer trust of their banks

## RESEARCH METHODOLOGY

A quantitative study, involving the administration of a survey, was conducted in order to empirically measure and then test the relationship between variables. The survey instrument consisted of 24 items (as shown in Table 1) which were identified through a comprehensive literature review of automated services quality and Customer trust.

Measuring automated service quality – five Factors (dimensions) of automated service quality were identified from the literature (Ibrahim, Joseph & Ibeh 2006; Ribbink et al. 2004; Loonman & O'Loughlin 2008): Convenience, Queue management, customization, responsiveness, and security. Items were identified in relation to:

1. Convenience – refers to availability of different services, accuracy, and operating hours. The items of this construct were extracted from various studies such as, Ibrahim, Joseph and Ibeh (2006) and Sahadev and Purani (2008). Four dominant items were selected from these studies.

2. Queue management – refers mainly to the required time of completing bank transactions. Items were drawn from many models which measure customer perceptions of online services quality (Ibrahim, Joseph & Ibeh 2006; Al-Hawari & Ward 2006). This factor was represented by three items

3. Personalisation – refers to the possibilities of services personalisation through automated services channels. Items were generated from different a studies that were mainly conducted to evaluate the outcomes of automated services quality (Ribbink et al. 2004; Coulter & Coulter 2002; Herington & Weaven 2007). Four distinct items were identified from those studies.

4. Responsiveness – refers to the ability of automated services in handling customer queries and problems. It was noted from the literature review that the responsiveness elements has frequently been included in measurements of different dimensions of e-service quality. For this research, it was important to measure as many as possible of the different aspects of the responsiveness element which might impact on the perception of service quality. This led to the extraction of 4 items in the first instance (Yen & Lu 2008; Loonman & O'Loughlin 2008; Coulter & Coulter 2002).

5. Security – refers to the ability of automated services in offering a safe environment free of privacy interruption. It was found in the literature that security have been consistently used by many marketing scholars to measure customer perceptions of service quality. Items from different scales were extracted to form the pool for this variable. This process led to the identification of four items (Loonman & O'Loughlin 2008; Sahadev & Purani 2008; Yen & Lu 2008)

6. Measuring customer trust – Customer trust has been defined in this research as a confidence of the customers toward their bank intention and motives. In the literature, there were many examples of studies of operationalising customer trust. Most of those studies used multiple-items scale to measure this concept as it gives more comprehensive and accurate view of the level of customer trust. Thus, five items were used in this study to measure customer trust toward their banks. Those items are mainly adapted from Morgan and Hunt (1994), Sharma and Patterson (1999), and Caceres and Paparoidamis (2007).

TABLE 1. The measurement items

| Critical dimensions | Related items |
| --- | --- |
| Convenience | – All my banking needs are included in the electronic banking menu options |
| | – Electronic banking services are easy to use |
| | – Electronic banking services has a user-friendly system |
| | – Electronic banking services available 24/7 |
| Queue management | – Electronic banking provides a friendly environment, including musical entertainment, to customers in the queue |
| | – Electronic banking provides other relevant information about financial services to customers waiting in the queue |
| | – There is no waiting time involved in obtaining electronic banking services* |
| Personalizing | – I feel that my personal needs have been met when using My bank different automated options |
| | – My bank automated options provide me with information and products according to my preferences |
| | – My bank Individualized their emails regarding latest financial offers |
| | – Electronic banking acknowledges me by name during the transaction* |
| Responsiveness | – My bank is always interested in feedback through the electronic channels |
| | – My bank quickly replies to online requests |

TABLE 1 (*continued*)

| Critical dimensions | Related items |
|---|---|
| Security | – My banks offers constantly Electronic complaint forms<br>– My bank automated services offer Real time communication option<br>– Elements of security are incorporated and the customer is made aware of these<br>– My bank automated services are trustworthy - I feel secure that my private information will not go to another party<br>– The confidentiality of customer data is ensured |
| Trust | – My bank can always be trusted<br>– My bank can be counted on to do what is right<br>– My bank has a high integrity<br>– My bank can be relied on to keep its promises.<br>– I have confidence in my bank |

\* Items deleted in the confirmatory factor analysis stage

## RESEARCH DESIGN

This study involved a convenient sample of people from the general public from the main emirates in UAE. A mall intercept method was used to administer the survey with 327 useable surveys being collected using the face-to-face interview method. A response rate of 60% was obtained in gaining the 327 completed responses

## MEASUREMENT MODEL

Structured Equation Modelling was used to analyse the data and test the hypotheses. To assess the measurement model, four analyses were conducted (Al-Hawari, Ward & Newby 2009; Al-Hawari 2006; Al-Hawari & Ward 2006). Unidimensionality was assessed first, prior to examining reliability and validity (Hair, Anderson, Tatham & Black 1995). In order to test for unidimensionality, Confirmatory Factor Analysis (CFA) was conducted on measurement models for each of the constructs. In this study, the Comparative Fit Index (CFI) indices for all of the 6 constructs were above the 0.9 level which indicated evidence of unidimensionality. Second, Squared Multiple Correlations ($R^2$) for each measurement item, composite reliability, and variance extracted for each factor were used in this study to test the construct reliability (Hair et al. 1995). The first run of the measurement model indicated that the ($R^2$) for the majority of measurement items was greater than 0.5, which indicated a good reliability level (Holmes-Smith 2001). Two items, however, were deleted as the ($R^2$) values ranged from 0.3 to 0.4 which was less than 0.5 (shown with one asterisk at table 1). In the second run of testing the measurement model ($R^2$) values for all measurement items were greater than 0.5 or very close (see Table 2). The values of composite reliability, variance extracted exceeded or around the minimum acceptable values of 0.7, 0.5, 0.7, respectively (Holmes-Smith 2001), thereby indicating the reliability of measures and subsequently yielding very consistent results (see Table 2) (Zikmund 2003).

TABLE 2. Reliability test outcomes for each factor

| Variable name | λi | $R^2$ | Critical ratios | Composite reliability | Variance extracted |
|---|---|---|---|---|---|
| Convenience of the automated banking options | | | | 0.83 | 0.55 |
| All needs are included | .804 | .646 | 17.131 | | |
| easy to use | .848 | .720 | 17.578 | | |
| user-friendly System | .867 | .751 | 13.411 | | |
| available 24/7 | .700 | .490 | 12.337 | | |
| Queue management | 0.66 | 0.50 | | | |
| friendly environment | .801 | .641 | 12.554 | | |
| other relevant information about financial services | .828 | .685 | 12.874 | | |
| Personalizing | 0.76 | 0.51 | | | |
| my personal needs have been met | .741 | 0.549 | 12.548 | | |
| automated options according to my preferences | .810 | 0.656 | 14.144 | | |
| Individualized their emails | .703 | 0.494 | 12.259 | | |
| responsiveness | 0.85 | 0.59 | | | |
| interested in feedback | .739 | 0.546 | 13.452 | | |
| quickly replies | .750 | 0.563 | 13.185 | | |
| complaint forms | .827 | 0.684 | 14.575 | | |
| Real time communication option | .792 | 0.627 | 13.953 | | |
| Security | 0.81 | 0.53 | | | |
| security are incorporated | .761 | 0.579 | 15.895 | | |
| trustworthy | .849 | 0.721 | 16.330 | | |
| information will not go to another party | .917 | 0.841 | 17.834 | | |

TABLE 2 (*continued*)

| Variable name | λi | R² | Critical ratios | Composite reliability | Variance extracted |
|---|---|---|---|---|---|
| The confidentiality is ensured | .872 | 0.760 | 16.842 | | |
| Trust | 0.87 | 0.58 | | | |
| My bank is trusted | .898 | 0.806 | 24.967 | | |
| counted on to do what is right | .898 | 0.806 | 24.967 | | |
| high integrity | .860 | 0.740 | 22.583 | | |
| Relied on to keep its promises. | .854 | 0.729 | 22.223 | | |
| confidence in my bank | .876 | 0.767 | 23.543 | | |

Evidence of convergent validity was gained as the measurement items represented their factors significantly; the critical ratio of every item exceeded the 1.96 value (Anderson & Gerbing 1988) (see Table 2). To test for discriminant validity the procedure described by Fornell and Larker (1981) was used. The analysis showed that the average variance extracted for each pair of variables was greater than the squared correlation for the same pair, indicating that each construct was distinct (see Table 3). Finally, CFA was conducted to empirically investigate whether the proposed model reasonably fitted the data. The model Chi square is 581 (df = 194, p = 0.000). It should be noted that if the model chi-square significance is < 0.05; this indicates a problem with the model fitness by this criterion. However, the model chi-square criterion could be misleading as it is so conservative and very sensitive to sample size (Kline 1998). Accordingly, researchers who use SEM believe that if they achieve a reasonable sample size > 200 and appropriate fit indicated by other fit tests such as CFI and RMESA, the significance of Chi-square test can be disregarded and is not a reason by it self to modify the model (Byrne 2001). In this research the overall fit of the model was acceptable, with a chi square $x^2$/df ratio of 2.995, RMSEA of 0.078, and the (CFI) of 0.931 (Byrne 2001).

TABLE 3. Discriminant validity test outcomes

| * | Conv | Queue | Perso | Resp | Secu | Trust |
|---|---|---|---|---|---|---|
| Convenience | | 0.525 | 0.53 | 0.57 | 0.54 | 0.565 |
| Queue | 0.214 | | 0.505 | 0.545 | 0.515 | 0.54 |
| Personalisation | 0.50 | 0.490 | | 0.55 | 0.52 | 0.545 |
| Responsiveness | 0.423 | 0.461 | 0.490 | | 0.56 | 0.585 |
| Security | 0.228 | 0.228 | 0.47 | 0.388 | | 0.555 |
| Trust | 0.400 | 0.349 | 0.450 | 0.420 | 0.410 | |

* The upper level represents the average extracted variance while the lower level represents the squared correlations for every pair

STRUCTURAL MODEL

Assessing the model in the last section reduced the data and resulted in a manageable number of valid and more reliable measurement items which were then used to evaluate the structural model in this section. The overall fit indices for the proposed structural model were $x^2 = 581$

(df = 194, p = 0.000), $x^2$/df ratio of 2.99, a CFI of 0.931 and the root mean square error of approximation (RMSEA) of 0.078 (Hair et al. 1995; Byrne 2001). These values indicated that the model fits the data well.

Having established the final structural equation model, it was possible to test the hypotheses developed for this study. These hypotheses can be tested by evaluating the path coefficients and the significance levels among the constructs in the model. Analysing the results showed that convenience and queue factor were the only automated service quality factor out of the five factors which has not a significant relationship with customer trust. Thus H1 and H2 have rejected. However, the analysis shows there are as strong and positive relationships between personalisation, responsiveness, and security with trust. Thus H3, H4, and H5 were accepted.

RESEARCH FINDINGS AND IMPLICATIONS

The aim of the study was to highlight the significance of customer trust in the context of the twenty-first century banking environment in UAE. This paper proposed a conceptual model which was empirically validated by perceptual data collected from customers of banks in United Arab of Emirates (UAE). The results of the survey provided strong empirical support for three hypotheses of the five hypothesised relationships between the constructs. Figure 2 shows the final model and highlights the significant relationships in bold.

The findings of this paper confirm the literature and showed that most of automated service quality factors have positively influenced customer trust except the queue and convenience factors. Those results are consistent with the literature speculation on the importance of automated service quality factors in reducing the risk associated with using such a channels and then building trustable relationship. The provision of convenience and good queue management is obvious not enough to build a strong and trustable relationship as customers might perceive those automated services factors as normal and expected offered services by all banks.

Banker in UAE trying hard to increase the coverage of ATMs, technical aspects of internet banking, and the prompt response of telephone banking reducing the required time by customers to get the service delivered to
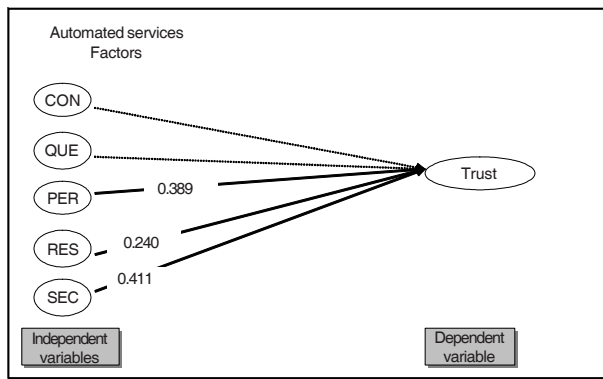
*Source*: Developed for this research

FIGURE 2. Final model

them. Customers might perceive no difference in terms of waited time among the different banks in UAE. Thus, focusing on other aspects of automated services rather than queue management seems more efficient for bankers to increase the level of customer trust. When bank managers consider enhancing the level of automated service quality they should engage customers in the design process and respond earlier than their competitors to customers' needs, in order to eliminate some of the negative aspects of automated banking service quality (Al-Hawari 2006).

The findings of this research showed the largest significant importance of the security compare with other automated services factors in gaining customers trust. Accordingly, bankers need to concentrate and continually improving the security issues of the offered automated services as well as emphasizing the safety aspects of their automated services when they communicate with their customers. Personalisation factor come second in influencing customer trust. It seems that UAE banks' customers are welling to maintain relationship with their banks because of the ability of banks in personalisation automated services. The literature has warned that automated services might enhance the feeling of disconnection and isolation the matter that influences the trust relationship between customers and banks. Offering automated services that allow direct and personal interaction between customers and the related bank, will have fruitful consequences on the customers relationship. Speed, speed, and speed are one of the most critical factors that banks has to meet in order to maintain a good level of customer relationship as most customer those days lack of time. The more responsive the bank is to their customers' queries and needs, the more trustable bond the bank can create as supported by the result of this paper.

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