

Factors Affecting Adoption of Alternative Delivery Channels by Pakistani Banking Customers

Ahsan Naseer Abbasi*, Dr. Fayaz Ahmed

Institute of Business Management University of Karachi

ABSTRACT

The study upon the topic, "Factors Affecting Adoption of Alternative Delivery Channels by Pakistani Banking Customers," strives to find the factors that affect the adoption of ADCs of Pakistani banking customers. The emphasis of this particular research study revolves around the demographic elements of age, gender, level of income, level of education; and service delivery variables of cost savings, transaction security, convenience, and time savings. The adoption of ADCs in Pakistan is questioned in this quantitative study where 271 people are evaluated under the influence of service delivery as well as demographic factors. For reliable analysis, SPSS version 21.0 was used to analyze collected data. The sample type is non-probability utilizing convenience sampling technique. Data is analyzed using the statistical technique of Binary Logistic Regression. Other statistical tests performed on the data include Binomial Test of Proportions, Cronbach's alpha reliability test. Discussing the outcomes of the statistical tests, it is evident that the preferences of the customers for distinct alternative delivery channels that are offered by Pakistani banks differ mainly on the basis of gender, age, education and income levels while variables of service delivery also matter when the usage and adoption of alternative delivery channels is concerned.

Keywords: ADCs, Banking Customers, Pakistani Banking Customers

INTRODUCTION

Background of the Study

The scientific evolutions as well as its resulting technological miracles have altered every single aspect of human life, incorporating banking and transaction. Globally intense competition in the banking sector driven by progresses in the Information Communication Technology (ICT) has demanded most commercial banks to be inventive. The conventional branch model was not sufficient enough to fulfill the evolving needs of banking customers who desire services to be accessible at their door step [1]. Thus, all around the world, banks opened an ingenious gateway to offer their services.

Stiff rivalry among the commercial banks has also necessitated banks to embrace alternative banking channels with the major emphasis been agent banking as a means to lessen the cost of providing financial services, get rid of crowds in branches and launch existence in new areas.

Alternative delivery channels (ADCs) have slowly developed as a gateway to serve banking customers with the choice to utilize contemporary financial channels like ATM debit cards, internet

banking, credit cards, SMS banking, mobile banking, and phone banking etc., to perform banking transactions as a means of alternative delivery channels. ADCs are at the core of overall banking transformation. ADCs utilizing ICT platforms are considered to be opponent's differentiation strategy that would enable commercial banks to not merely compete but also empower them to impart their services to their customers 24/7; hence enhancing their financial performances [2]

In Asia, competition among banks for customers has driven to adoption of ADCs like internet banking in numerous nations. In Pakistan, all the commercial banks have understood the potential for direct channels of banking and have initiated their several ADCs products. Pakistani banking sector is ruled by the State Bank of Pakistan which is directly accountable for supervision of the overall banking sector under the 1962 banking companies' ordinance. The banking sector's contribution to the GDP is 16 percent as per the State Bank of Pakistan's annual report where the sector witnessed a growth rate of 11.7% in 2014.

This research will strive to get the answer for the research question regarding the factors impacting the adoption of alternative delivery channels by the Pakistani banking customers. The emphasis of this particular research study revolves around the demographic

*Correspondence to: Ahsan Naseer Abbasi, Institute of Business Management University of Karachi, E-mail: std_25060@iobm.edu.pk

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elements of age, gender, level of income, level of education; and service delivery variables of cost savings, transaction security, convenience, and time savings.

OBJECTIVES OF THE STUDY

The objectives of this research are:

- To analyze preferences of consumers for distinct alternative delivery channels that are offered by Pakistani banks.
- To assess the demographic elements impacting the clients' choice of utilizing alternative delivery channels.
- To assess variables of service delivery influencing the adoption and usage of alternative delivery channels.

Scope of the Study

This research is limited in terms of scope to the city of Karachi only. The rationale behind restricting the scope is to have a comprehensive consideration of the preferences of the people residing in Karachi city for adoption of different ADCs offered by the banks.

Statement of Purpose

Considering all the elements identified by distinct researchers round the globe, one still requires to explore, for a developing state like Pakistan, which factors impact their choice of varied channels of banking [3-8] .

Hypotheses Development

H1: There is significant difference in population regarding preference for using ADCs

H2: There is significant association between gender of customer and use of ADCs

H3: There is significant impact of age of customer on usage of ADCs

H4: There is significant impact of education level of customers on their use of ADCs

H5: There is significant impact of income level of customers on their use of ADCs

H6: There is significant impact of convenience on the use of ADCs by the customers

H7: Time savings have significant association with customer's use of ADCs

H8: Cost savings have significant impact on customer's use of ADCs

H9: Transaction security has significant impact on customer's use of ADCs

LITERATURE REVIEW

Theoretical Foundation

Diffusing Innovation Theory

This work would be focused on the principle of diffusion of innovation principle, the diffusion of innovation theory aims to

understand and identify the processes for the introduction and development of new inventions; in this case alternative banking networks. The ease of use and novelty of an innovation (in terms of persuasion, knowledge and decision to adopt) can determine how an individual will respond to an innovation. This theory addresses research seeking to unpack the influence of several factors affecting the adoption of ADCs by Pakistani banking customers.

Demographic Factors and Alternative Delivery Channels Adoption

According to [4], the population-based statistics could disclose a greater insight into the causes which can help or hinder the means of ADCs propagation in Pakistan. The age of the client could impact his preference for banking channels. For cell phone banking acceptance has slight considerable association among the use and age of clients by recognizing that clients particularly students among the age of 26 to 31 reveal greater keenness towards approval of the direct banking channel. Likewise, the gender of the clients could as well be the factor to have a consequence on the acceptance of ADCs as male and female clients might fluctuate in their choices.

[9] Added that apart from gender specification, employment status and age group possess the correlation with the usage and adoption on internet banking services, so banks should take on different strategy for different target groups of customers. Research also revealed that employment status is positive in relation to internet banking.

Further, [10] did contend that high literacy rates among banks' clientele did lead to high rates of adoption of mobile banking by commercial banks in the country. This they argue was because of high demand for this type of e-banking channel. Clientele' level of literacy especially in relation to understand ability and functionality was reported to influence the adoption of internet banking among commercial banks found in Estonia. The study observed that commercial banks in Estonia had the highest number of internet banking (I.B) users in the world due to the existence of high literacy levels among banks' customers. This they report did lead to the rapid adoption of internet banking among commercial banks in the country.

Service Variables and Alternative Delivery Channels

Apart from demographic variables, literature review as well assists to recognize a set of service delivery variables that might possess their impact over the usage of ADCs. The banking industry is service leaning in temperament & the services offered by the banks in the shape of ADCs are naturally intangible for instance data service regarding account balance inquiry, short statements & virtual disbursements of utilities via SMS or cell phone, online transfer of funds, etc. All the services are offered via assured channels like ATM appliances, credit cards, debit cards, POS terminals, and phone banking or e-banking through online mechanisms. Clients get services if they obtain some advantages from such channels

The aspects that are considered to be linked with delivery of service are chiefly the element of handiness, safe transaction, time & cost savings. Such variables craft their basis from various prior studies of various states or countries. Furthermore, the study found that charges of utilizing ATM, simplicity in managing the appliance & security of the penetrated data & fiscal value, all perform a critical function in drawing clientele of bank towards this mode of service.

Clients' Convenience Factor and Alternative Banking Channels Adoption

The decision to adopt a particular alternative banking channel that relies on ICT platforms by commercial banks is dependent on the perceived ease of use by commercial banks' clientele. These findings were supported by a past study by [11] that observed that clients' technology literacy levels did inform their use of ADCs which in turn influenced commercial banks' decision in adopting this type of alternative banking channels.

Further, [12] did observe that low perceived ease of use among farmers in India did lead to low demand for M-banking services which resulted to slow adoption of this alternative banking channel by commercial banks. Most farmers could not understand M-banking functionality which meant that few did use it resulting to slow adoption by commercial banks in rural towns where these banks operated. Low levels of understand ability of the functionality of mobile banking among customers were reported to slow the rate of adoption of this alternative banking channel by commercial banks.

[5] Noted that a lack of awareness on how to use mobile banking among banks' clients has been reported to have had a positive impact on the derailed adoption of alternate banking platforms by commercial banks in Ghana. These findings were however disputed in an earlier study by Dankwah (2012) who had postulated that internet banking was in the right course in Ghana especially among the elite.

In a study [8], did observe that ease of functionality of internet banking among banks' clientele did inform their use of this banking channel which in turn contributed to an increase in demand for these e-banking channel which resulted to the rapid adoption of this particular channel by commercial banks in Ireland.

Similar findings were reported on a different alternative banking channel in a study by [13] the lack of ease of functionality and understand ability were major bottlenecks in the rapid adoption of ATMs by commercial banks in Tanzania. Most ATMs were first introduced with English as the functionality language putting off most banks' clientele especially in rural towns which in turn slowed the adoption of ATMs by commercial banks.

Time Savings Factor and Alternative Banking Channels Adoption

It is stated by [14] that in the era of e-banking there subsists no requirement to calculate days for getting statement of account balance at the ending of the month; also with the propagation of ADCs, a client of the bank don't require to linger or hang around for his number to get bank workers' services due to now the bank is accessible at the doorstep in the shape of online banking, cell phone banking, etc.

[15] Maintained that numerous times save advantages is provided by banks to a broad client base via alternate delivery channels. Moreover, the study found that if the person identifies alternate delivery channels as being more outlay effective, time saver & client-friendly, then the probability of customer for accepting cell phone banking or online banking would boost or rise.

Cost Factor and Alternative Banking Channels Adoption

A former research postulated that financial firms that utilize the knowledge of ICT, invest more, and experience speedy growth and are more profitable and productive in comparison to those that do not. These findings have been supported by [12] who contended

with ADCs as ways of reducing overhead costs for commercial banks. This can, however, take about one and a half years in terms of asset returns and about three years in terms of equity returns.

According to [16] high infrastructural and connectivity costs in Pakistan had at first derailed the adoption of e-banking channels by commercial banks in the country. However, [14] argued in their report on the effect of alternate banking platforms by e-banking on the financial performance of commercial banks in Pakistan that these emerging innovations not only minimize costs but also increase bank revenues. They also report that mobile banking had been successfully adopted by commercial banks in Pakistan where Easy Paisa is successful and T-cash in Haiti. This they attributed to low costs of operations associated with mobile banking that also improves banks' profitability.

Transaction Security Factor and Alternative Banking Channels Adoption

It is stated that the sentiment of security or protection while using the services of ATM is one of the elements that have appeared as a cause of barrier in the proliferation of such alternate delivery channels. The perceived security factors especially among customers are reported to influence the slow adoption of alternative banking channels by commercial banks. This was echoed in a study by Grabner-Kra"uter and Faullant (2008) who observed that security issues such as; pin theft, phishing and hacking are the biggest hurdles to the rapid adoption of alternative banking channels by commercial banks. However, in their study they did point out these are mostly challenges related to the adoption of internet banking.

Nonetheless, [17] in their study did also contend that perceived risk was a dissuading factor towards the adoption of mobile banking among banks' customers a situation that had adverse effects on the adoption of this channel by commercial banks.

According to [18] threats of phishing and hacking did have an adverse effect on the adoption of internet banking by banks' clientele which in turn resulted to the slow adoption by commercial banks. Challenges related to hacking and phishing did lead to the slow adoption of internet banking by commercial banks (Figure 1).

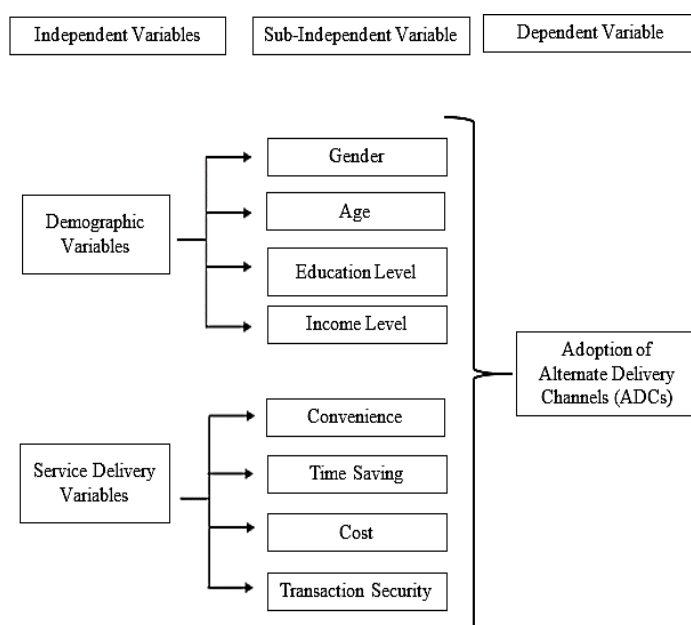


Figure 1: Conceptual Framework.

THEORETICAL FRAMEWORK

Methodology

This study adopted the research design of an explanatory research, following a deductive approach to assessing the research hypotheses. Explanatory research design is used to assist the researcher in gathering data on how variables including both the demographic (age, gender, education level, and income level) and service delivery variables (convenience, time savings, cost savings, and transaction security) influence the adoption of ADCs by Pakistani banking customers. All these independent variables are to be assessed against the usage of ADCs, which serves as the dependent variable of the research. This research design also fully portrays the characteristics of a population.

Instrument

A structured questionnaire consisting of thirty-three closed-ended questions having multiple choices was physically distributed to the walk-in banking customers. The questionnaire comprises of a total of three sections. Section A is organized to collect data related to the demographics of the customers. Section B is organized to gather data from customers regarding their six different usages of ADCs; and section C is formulated to attain data about service delivery variables incorporating subsections named as convenience, time savings, cost savings, and transaction security. All the 23 questions of section C are founded on the 5-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree).

Sample Size and Sampling Technique

The sample type is non-probability utilizing convenience sampling technique. The researcher has collected data from a sample size of 271 participants. All the respondents were familiar with the variables under study and how they influence the adoption of alternative banking channels by banks in the study locale.

Data Analysis

For reliable analysis, SPSS version 21.0 was used to analyze collected data. The chosen confidence level is 95 percent. Results of the analysis made it easy for the researcher to make valid conclusions on the topic of study. Data is analyzed using the statistical technique of Binary Logistic Regression. Other statistical tests performed on the data include Binomial Test of Proportions, Cronbach's alpha reliability test.

RESEARCH LIMITATION

The research faces challenges associated to time and cost constraints that were lessened by changes in sample size and study design so as to maintain reliability and validity. The study participants were not generally ready to unpack entire information because of the sensitive nature of the research topic. The research validity is maintained by verifying against records accessible to assure reliability.

FINDINGS AND DISCUSSION

Descriptive Analysis

Reliability Analysis (Table 1).

Table 1 mentioned the alpha value of convenience variable is 0.740

Table 1: Reliability Test.

Variables	Cronbach's Alpha	No. of Items
Convenience	0.740	5
Time Saving	0.693	5
Cost Saving	0.894	3
Transaction Security	0.833	5

≥ 0.6 with a sum of 5 items for the measure and so it is reliable while on the other hand the measure of time saving variable with 5 items included is $0.693 \geq 0.6$; slightly higher and so reliable.

Descriptive Statistics

Frequency Distribution (Table 2).

Considering all the 271 respondents, Table 2 is representing the descriptive statistics for users as well as non-users of ADCs. While according to the figures, it is clearly identified that majority of the respondents use ATM or Debit cards as 242 responses are positive among 271 respondents. While when credit cards are focused so almost 35.05% respondents claim that they prefer to use credit cards as compared to other means of banking showing that trend of using credit cards among the respondents is not as high as it is for the debit or ATM cards. Further the Table 2 also has values for internet, phone, mobile and SMS banking. Comparing the percentages as mentioned for the users and non-users of ADCs, it is identified that internet and phone banking are more popular among people of Pakistan as 54.61% and 54.98% respondents are showing positive response for using these ADCs, respectively. On the other hand, when it comes to mobile and SMS banking, so people prefer not to use them as frequent as the other ADCs.

Hypothesis Testing

The conduction of the binomial proportion test is being performed using 2 groups with $N = 271$. These two categories divided in group one and group two are having different set of respondents; the Group 1 is having the respondents who are not using any of the ADCs while on the other hand the Group 2 is having all the respondents who use ACDs.

The expected test proportion is 0.50 and the hypothesis of this research is tested against that test proportion. Table 3 provided that the 2-tailed Sig value is 0.000 which is less than 0.05 and so it can be declared that there is a significant difference in the preferences of people related to adoption of ACDs. In this regard, it is found that there is significant difference in population for their preferences of using ADCs and so alternate hypothesis 1 is accepted. Considering the test results, it is provided that only 19% of the respondents are not using ACDs however, rest of the (Table 3).

81% of the respondents avail the banking services via alternate channels.

Furthermore, using the Logistic regression test for testing the hypothesis 2 – 9, following statistical results are obtained. The 95% Confidence level is considered to calculate the odd ratios while Table 4 mentioned the results.

According to the statistical summary table (Table 4), the Sig. value of the demographic variable of gender is 0.000 which is less than 0.05; this can be interpreted as the customers' gender has a significant impact on the adoption of ADCs and so hypothesis 2 is accepted.

Table 2: Frequency Distribution.

ADCs	Yes	No	Total	Percentage of Users	Percentage of Non-Users	Total Percentage
Debit Card/ATM	242	29	271	89.29	10.70	100
Credit Card	95	176	271	35.05	64.94	100
Internet Banking	148	123	271	54.61	45.38	100
Phone Banking	149	122	271	54.98	45.01	100
Mobile Banking	133	138	271	49.07	50.92	100
SMS Banking	126	145	271	46.49	53.50	100

Table 3: Hypothesis 1 – Binomial Test.

	Category	N	Observed Proportion	Test Proportion	Exact Sig. (2-tailed)
Do you use any one of the Alternate Delivery Channels (ACDs)?	Group 1	No	52	.19	.50
	Group 2	Yes	219	.81	.000
	Total		271	1.00	

While the Sig. value of the demographic variable of age is 0.064 which is greater than 0.05; this can be interpreted as the customers' age do not have any significant impact on the adoption of ADCs and so hypothesis 3 is rejected.

In addition to this, hypothesis 4 is accepted showing that decision of adopting ADCs can be influenced by the level of education of customers as the Sig. value for education level is 0.000 which is less than 0.05. The odd-ratio statistical findings indicate that postgraduates would favor the use of ADCs 0.419 times more than basic bachelor degree holders. Such figures suggest that a bank account holder will prefer to use ADCs to a greater extent when the education standard is higher.

Whereas hypothesis 5 is accepted as well showing that decision of adopting ADCs can be influenced to some extent by the level of income of customers as the Sig. value for income level is 0.020 which is less than 0.05 (Table 4).

In addition to this when the service delivery variables are considered so it is identified that the Sig. value of the variable of Convenience is 0.002 which is less than 0.050; so alternate hypothesis 6 in this research is accepted providing that there is a significant impact of convenience over the adoption of ADCs. While it is identified that according to the value of odd ratio statistics calculated at 95% confidence level for quantitative variable of convenience there will be an increase in the use and adoption of ADCs by a factor of 2.387 for every 1-unit change in the convenience offered by ADCs.

Further, focusing on the Sig. value for service delivery variable of time savings it is identified that the alternative hypothesis 7 is accepted as it is 0.002 which is less than 0.05. However, the null hypothesis is rejected as the factor of time savings demonstrate significant association with the adoption of ADCs. In addition to this, for this hypothesis, the odd ratio statistics demonstrated that each unit increase will increase the adoption of ACDs in factor of time savings by 1.974 times establishing strong link between time saving variable and use of ADCs.

Moving forward, the cost savings variable demonstrates the Sig value as 0.330 which is greater than 0.05, it means the cost saving variable has no significant impact on customer's use of ADCs. Hence the alternate hypothesis 8 is rejected. For the variable of transaction security, the Table 4 shows that there is no significance of transaction security on the use of ADCs by the customer as the Sig value is 0.683 greater than 0.05, it means that alternate hypothesis 9 is rejected.

Table 4: Statistics for Binary Logistic Regression Test.

Characteristics	Odd Ratio	Sig. Value	95% C.I. for Odd Ratio	
H₂ Gender				
Female	0.282	0.000	0.139	0.571
Male	1.000			
H₃ Age (years)		0.064		
18 – 24	0.225	0.155	0.029	1.754
25 – 32	0.738	0.788	0.080	6.770
33 – 40	0.250	0.254	0.023	2.711
More than 40	1.000			
H₄ Education level		0.000		
Matriculation/O-levels	0.110	0.010	0.020	0.591
Intermediate/A-levels	0.126	0.000	0.046	0.346
Graduation	0.419	0.057	0.171	1.027
Post-Graduation	1.000			
H₅ Income level (Rs.)		0.020		
Less than 25,000	0.216	0.003	0.079	0.590
25,001 – 40,000	0.396	0.034	0.168	0.934
40,001 – 80,000	0.501	0.110	0.215	1.170
80,000 +	1.000			
H₆ Convenience*	2.387	0.002	1.386	4.113
H₇ Time Saving*	1.974	0.002	1.289	3.023
H₈ Cost Saving*	1.271	0.330	0.785	2.059
H₉ Transaction security*	1.119	0.683	0.653	1.915

Note: Scale Predictor *

DISCUSSION

Conducting the detailed research over the adoption trends of ADCs with respect to the factors including service delivery and demographics of the customers. The statistical analysis provided that 81% of the respondents from the sample size of 271 respondents claimed that they prefer to use ADCs while the frequencies provided that unlike the rest 19% of these respondents do not prefer to use these alternate banking channels.

Sustaining the work of [9,19] this research found that there is a significant difference among the adoption trends that people

demonstrate in terms of their use of ADCs. While according to [20] as well as [18] people have different preferences towards different ADCs such as mobile banking and internet banking, both have different significance level in statistical tests. In addition to this, [20,21] supported the claims presented in this research that the demographic factors have impressive influence over the attitudes and preferences of people towards ADCs.

Discussing the outcomes of the statistical tests, it can be mentioned that the preferences of the customers for distinct alternative delivery channels that are offered by Pakistani banks differ mainly on the basis of gender, age, education and income levels while variables of service delivery also matter when the usage and adoption of alternative delivery channels is concerned.

Further this study concludes that the level of education of the customer can impact the use of ADCs as chances of adopting ADCs are 7.9 times greater among post-graduates as compared to the intermediate or people with O-levels. In addition to this, the results showed predicted odds for a person with education level up to postgraduate that they prefer ADCs 9.1 times higher than customer with education level up to matriculation. [22,23] supported this finding as they also have similar results assessing banking sectors in Pakistan as well as Hong Kong.

Furthermore, this research has brought into light the facts that income level also has influencing impact on the usage of ADCs by the consumers in Pakistan as results demonstrate that ADCs are preferred by the consumers with higher income level. This is consistent with the work of [24] showing that high-income consumers are making 28 per cent more electronic purchases.

The research revealed that cost savings is not having significant impact as a factor over ADCs adoption in Pakistan while in the same manner the factor of transaction security has similar impact on the preference for ADCs in Pakistan. [25-27] also presented similar findings.

Whereas research shows that the factor of time savings is having significant association with use and adoption of ADCs by consumers in Pakistan as [2,7] also provided that one of the major reasons of using ADCs is that it saves a lot of time.

The paper provided that as a result of advances in information and communication technology and a change in customer preferences, alternative distribution channels (ADC), described as those channels which extend service scope beyond the conventional banking branch channel, have evolved. Alternative delivery channels (ADCs) have slowly developed as a gateway to serve banking customers with the choice to utilize contemporary financial channels like ATM debit cards, internet banking, credit cards, SMS banking, phone banking, and mobile banking etc., to carry out banking transactions as a means of alternative delivery channels. However, the adoption of ADCs in Pakistan is questioned in this quantitative study where 271 people are evaluated under the influence of service delivery as well as demographic factors.

CONCLUSION AND RECOMMENDATIONS

This research discussed the factors impacting the adoption of alternative delivery channels by the Pakistani banking customers. It is identified that gender, education and income level are some of the demographic variables assessed in this research as having significant impact on the preference of ADCs. While on the other hand, service delivery variables including cost savings, transaction

security, convenience, and time savings are also assessed. However, detailed assessment provided that time saving and convenience influence people in Pakistan to use ADCs while considering the cost saving and transaction security concerns, people avoid using ADCs.

Conducting the detailed research over the adoption trends of ADCs with respect to the factors including service delivery and demographics of the customers. The statistical analysis provided that 81% of the respondents from the sample size of 271 respondents claimed that they prefer to use ADCs while the frequencies provided that unlike the rest 19% of these respondents do not prefer to use these alternate banking channels.

RECOMMENDATIONS

On the basis of the findings of this research, different recommendations are provided for the commercial banks as well as respective stakeholders.

- In order to be more efficient, the banks should conduct penetration testing on annual basis at least while establishing the network surveillance as well as security monitoring procedures using the network scanners, security alerts and intrusion detectors. This ensures transaction security helping people to adapt ADCs.
- In addition to this the Commercial banks should consider the technical standard of their consumers when designing new products.
- Furthermore, the banks should take into account all costs associated with these alternate banking platforms and the perceived benefits.
- However, installing the intrusion detection-prevention devices as well as firewalls between the external and internal networks and between the geographically separate sites can help them improve the performance.
- While security analysis of programs uses a combination of source code analysis, tension loading and exception checking to find flaws in vulnerable coding techniques and systems.
- The banks are also recommended to hire qualified technology consultants to determine the capabilities and vulnerabilities of software apps, frameworks and networks.
- There will be stronger interest of stakeholders in the development of new platforms for banking. This will reduce stakeholder opposition and encourage ownership.

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