

# Success Factors in Alternative Delivery Channels of Banking: Innovative Solutions to Meet the Challenges of Bank of the Future

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**Abstract** - This paper aims at understanding the success factors in the Alternative Delivery Channel (ADC) of different scheduled commercial banks in Bangladesh. This research includes the most commonly used channels provided by commercial banks such as ATM, POS, Credit/debit card, mobile banking, internet banking, agent banking, etc. The research methodology involves collecting both primary and secondary data. The primary data was sourced from the questionnaire prepared to find out the significant factors that responsible for the successful venture of any alternative delivery channel of the scheduled banks. The clients were selected based on their services received from ADCs and the sample size is 144. The study also focuses on the reasons why some banks are so successful in this area, why some banks are not. For the secondary data, the authors have taken the individual bank's data from Bangladesh Bank. The secondary data enabled to assess the present scenario of the ADC facilities of the commercial banks in Bangladesh. The study will help policymakers to detect the challenges of promoting alternative delivery channels in the banking sector and make solutions to meet the challenges of the future banking system.

**Keywords:** Alternative Delivery Channel, ATM, Mobile Banking, Internet Banking, Agent Banking, Credit/Debit Card, Covid-19

## I. INTRODUCTION

Alternative Delivery Channels (ADCs) have emerged as a strong alternate innovation in the technological world and a future banking tool. The channels, methods, and intermediaries, by which customers get access to the banking services without going to the traditional bank branches, are denoted as alternative delivery channels. Alternate Delivery Channels provide seamless banking services to the customers by ensuring time efficiency, convenience, and availability in service 24/7 with its ability to meet emergency demand by the customers. As a complement to existing banking services, ADCs have enabled commercial banks to reach a deeper level of the society across geographies with the advantages of smooth transactions and efficient banking by ensuring lower operational cost. Customers can reach banking facilities such as transactions through ATM/POS, Agent Banking, Internet Banking, and even on smartphones through Mobile Financial Services, etc. It can not be expected that ADCs will replace the conventional channels at this stage but it can be considered as a sideline interface to contribute as a new-age player in the future by expanding the horizon of

the banking services along with existing conventional channels. Eventually, people will shift towards branchless banking fully to meet their normal requirements on less complicated banking services by allowing the bank branches to concentrate on providing other complex services.

The Covid-19 pandemic accelerated access to financial services for all spheres of people, letting people more adaptable and comfortable with ADCs by limiting the spread of the virus. Before the outbreak, ADCs have been mostly used as supplementary tools to reach a financial inclusion target and ease the banking activities with convenience. However, the current crisis has brought attention to experts on a large scale about the ADCs and convinced people to accept ADCs, for those who were not even interested in using it. Thus, the rising demand for ADCs will decrease the operational cost and increase the efficiency of financial services with a more flexible attitude towards consumer demand.

Researchers have studied success factors of different alternative delivery channels previously, however, in the context of Bangladesh, some researchers (Bony *et al.*, 2013, Rahman, 2009) have studied specifically e-banking and its scenario in Bangladesh, where agent banking was not discussed. On the other hand, some studies (Nupur, 2010) had shown the impact of the factors of e-banking on the customer's satisfaction. Where, e-banking includes online banking, internet banking, mobile banking, telephone banking etc. Moreover, the Bangladesh Institute of Bank Management conducted a survey (Alam *et al.*, 2017) which highlighted the opportunities and challenges of ADCs. However, many researchers in different countries have studied major critical success factors of e-banking which are responsible for its success such as, for the UK, success factors are quick responsive services, flexibility in organization, expansion in services, systems integrity, and better customer service (Shah *et al.*, 2007). For Malaysia, trust and privacy concerns have the highest effect on e-banking adoption (Sohrabi *et al.*, 2013). For India, trust in technology, trust in the bank, perceived ease of use, perceived usefulness, complexity are factors for the success of e-banking (Sinha *et al.*, 2016). As studies on alternative delivery channels in Bangladesh are very limited, this study examines the factors that influence the alternative delivery

channels based on the opinion of customers and bankers both. For Bangladesh, the importance of ADCs is undoubtful since it plays a crucial role in achieving inclusive growth through financial inclusion. In this circumstance, it is vital to explore the influential factors of the alternative delivery channels for a user-friendly future banking system that will be very helpful for the policymakers to support the banking sector for further development. The broad objective of this study is to explore the influential factors of the alternative delivery channels of the banking sector to make it more user-friendly for future banking in Bangladesh, while the specific objectives are as below.

1. To identify commonly used alternative delivery channels for financial services.
2. To understand the variables or factors which influence customers' decision to take services under Alternative Delivery Channels of different scheduled commercial banks in Bangladesh.
3. Why some banks are so successful in this area, why some banks are not.

According to this study, the most influencing factors for customers to think them to use ADCs are: time saving, cost saving, easier to use, emergency banking facilities, 24/7 banking facilities, cashless transactions and allowing social distancing. In contrast, according to the bankers and experts, the factors for ADCs being successful are administrative decisions by banks, operational management by banks, product innovation, pricing factors, availability of banking services, banker-customer relationship, government intervention and organizational ability. Regarding the structure of this chapter, after introducing the background and objectives in the section "Introduction", the section titled "Literature review" reviews the existing literature. Section "Conceptual framework" discusses the concepts regarding ADCs. Study area, target population, data sources, data collection instruments, sample size and sample analysis are analyzed in section "Literature Review". The findings of the study are discussed in the section "Results and Discussion". Finally, the concluding remarks, along with policy recommendations are outlined in the section "Concluding Remarks and Recommendations".

## II. LITERATURE REVIEW

### A. Definition of Alternative Delivery Channels in Banking

Analysis of the contemporary literature reveals the dimensional definition of alternative delivery channels in banking. It has different terms and classifications based on regions, culture, and people. Almost all Indian commercial banks are providing services through the various alternative e-channels without constraints of time or geographical location, it is called 'Alternative Banking' (Kumbhar, 2011). Some researchers defined ADCs as digital banking or e-banking (Floh & Treiblmaier, 2006; Karjaluo *et al.*, 2002). However, some authors argued that the concepts of

digital banking and delivery channels are not clear and have differences (Shaikh *et al.*, 2016). The study also defined digital banking as a banking system, consisting of a variety of alternative delivery channels, products, and services developed and deployed by a banking company or microfinance institute and ADCs as information delivery channels (IDCs) which allows access to their banking information by using any electronic device. Liébana-Cabanillas *et al.*, (2015) defined Electronic banking as the primary alternative channel to traditional bank branches. Daniel (1999) defines electronic banking as the tools by which banks deliver information and services to the customers using different terminal devices such as a personal computer and a mobile phone with browser or desktop software, telephone or digital television. Alternative delivery channels are also known as Self-service technologies (Gupta *et al.*, 2013). These include all non-traditional means of banking (Gatto, 1996; Sathye, 1999). Karjaluo *et al.*, (2002) defined electronic banking as the provision of information or services by a bank to its customers via any electrical device. Banking transactions without any direct interaction with the bank personnel are called alternative delivery channels (Kumbhar, 2011).

### B. Success Factors of Alternative Delivery Channels

The review of the literature found diverse factors that influence customers significantly customers to use ADCs and the successful adoption of ADCs for different countries.

Some studies identified visibility, availability, self-security, confidential transaction ability, easiness and simplicity in the procedure make ADCs more attractive to consumers in Bangladesh (Shohrwardhy *et al.*, 2016). Their study also suggests that the development of more secured and private alternative delivery channels for the reliability of their customers is necessary and the security of physical establishment of ADCs is vital though banks have given less importance to it. A study on customers' satisfaction with e-banking showed that because of its all functionality factors about accessibility, convenience, security, privacy, content, design, speed, fees and charges, adoption of e-banking had a positive effect on commercial bank customers' satisfaction in Jordan (Ahmad & Al-Zu'bi, 2011).

Key factors that influence customers to adopt ADCs are security, cost-effectiveness, problem handling, responsiveness, contact facilities, convenience, system availability and ease to use (Kumbhar, 2011) in India. Accessibility of the internet, awareness of e-banking, and customers' reluctance to change are the factors that significantly affected the usage of e-banking in Malaysia (Sohail *et al.*, 2002).

Another Malaysian study suggested that banks' operation management, product innovation and knowledge development are the most significant factors effecting the success of ADCs (Hway-Boon & Ming Yu, 2003). Success factors which influence the adoption of ADCs across the region are listed in Table I.

TABLE I SUCCESS FACTORS WHICH INFLUENCE THE ADOPTION OF ADCS

Countries	Success Factors	Author and Year
Bangladesh	Reliability, responsiveness, assurance, empathy, and tangibles	Nupur, 2010
	Visibility, availability, self-security, confidential transaction ability, easiness and simplicity	Shohrwardhy <i>et al.</i> , 2016
India	Trust in technology, trust in the bank, perceived ease of use, perceived usefulness, complexity	Sinha, 2016
Pakistan	Perceived Usefulness, Privacy and Security, Web Design and Trust in account	Mehmood, 2014
Kenya	Revenue, Speed, Convenience, Cost, Subscription	Mukhongo <i>et al.</i> , 2014
Malaysia	Trust, privacy concern, cost, security	Sohrabi, 2013
Mauritius	Reluctance to change, trust and relationship in banker, cost of computers, internet accessibility, the convenience of use, and security concerns	Padachi <i>et al.</i> , 2013
Nigeria	Perceived usefulness, perceived ease of use, awareness, perceived security and facilitating conditions	Salimon <i>et al.</i> , 2016
Spain	Ease of access, trust, ease of use and usefulness	Liébana-Cabanillas, 2016
UK	Quick responsive products/services, organizational flexibility, services expansion, systems integration and enhanced customer service	Shah <i>et al.</i> , 2007
Zimbabwe	Trust, cost, resistance to change, awareness and perceived usefulness	Sandada, 2016

### C. Challenges of Alternative Delivery Channels

Despite having some lackings, ADCs particularly MFS and Agent Banking have opened a new window to bring unbanked/under-banked people under the banking umbrella and hence deepening the financial inclusion of Bangladesh (Alam *et al.*, 2007). In this study, mobile financial services users face network problems, lack of information, lack of financial knowledge, fraudulence and lack of customer care facilities problems. Network link down is the most concerning problem for ATM users. Agent banking users get limited time for transaction and face difficulties to settle complaints. There are some risks such as cyber threats, fraud and less face-to-face interaction with customers for internet banking users as well.

The main problems of the study on the adoption of e-banking services are the low response rate from customers and the implementation of security and data protection mechanisms. The relatively low Internet usage, lack of information in technologically advanced devices and security and privacy issues are the main factors that have a negative influence on e-banking customers in Greece (Angelakopoulos *et al.*, 2011).

The major inhibiting factors in the study on problems of e-banking in Oman are the lack of top management support, information privacy and security issues in the financial sector of Oman (Khalfan *et al.*, 2004).

### III. CONCEPTUAL FRAMEWORK

Financial inclusion is the process of enabling access of all citizens to basic and formal financial services at an affordable cost. The basic formal financial services include access to savings, credit, payment, etc. Financial inclusion means having access of an individual to at least one of the

financial services offered by a formal financial institution. Financial inclusion emerges as one of the most effective tools among policymakers around the world to ensure inclusive and sustainable economic development. There are several aspects of access to financial services such as availability, cost, and quality of services. The conventional way of extending comprehensive banking services for the people in-branch banking.

Alternative Delivery channels are a complementary tool for financial inclusion. Usually, ADCs provide a wide range of banking services to the customers without going to bank branches. Modern banking using ADCs offers different modes of transactions that include ATM services, agent banking, mobile banking, internet banking etc. Introducing alternative delivery channels like Agent Banking or MFS provides banking services to the under-privileged, under-served population who generally live in a geographically remote area and beyond the reach of the traditional banking networks. Considering the cost of setting a full-fledged branch, banks prefer Agent Banking or MFS point as a cost-effective delivery channel.

In Bangladesh, there are five alternative delivery channels most commonly used and popular among people based on secondary data (Bangladesh Bank, 2020). They are ATM services, Credit or Debit card, Internet Banking, Mobile Financial Services, Agent Banking. The survey proceeded to meet the objectives in two ways, primary data analysis and secondary data analysis.

At first, a survey questionnaire was sent to potential clients of ADCs of different banks and then 20 officials from different financial institutions and experts on alternative delivery channels in Bangladesh were interviewed. The study has taken both customers' and bankers' opinions to get the right perspective from the survey. A visual

representation of the factors and survey results found from the survey is shown in Fig. 1.



Fig. 1 Conceptual framework on success factors of Alternative delivery services of Bangladesh

#### IV. RESEARCH METHODOLOGY

To achieve the study’s objective, this chapter follows both qualitative and quantitative analyses and uses descriptive research techniques. Different tables and charts are used to analyze the quantitative part of this chapter. The study involves collecting both primary and secondary data. The primary data has been sourced from the prepared questionnaire to find out the significant factors that are responsible for the successful venture of any alternative delivery channels of the commercial banks in Bangladesh. The study followed a sample of 144 participants selected randomly from the users of different alternative delivery channels of banking in the Dhaka division.

Some experts have also been interviewed in this field to find out why some banks are lagged in providing such facilities than other banks. The authors sent a questionnaire to the selected banks and their clients. Similarly, the authors chose the agent bank outlets from which clients of agent banking will be interviewed accordingly. Therefore, the sample collection represented a purposive and non-probabilistic population, rather than a random one. Necessary secondary quantitative data has been sourced from Bangladesh Bank to assess the present scenario of delivery channels of the commercial banks. For qualitative data, the existing literature, including journal articles, working papers, newspaper articles, website articles, and reports are the sources of inputs of this chapter.

##### A. Study Area

The study was conducted based on the data surveyed within the Dhaka division. Clients from different commercial banks have been surveyed. The majority of the clients are from urban areas, only agent banking clients are from rural areas.

##### B. Target Population

The targeted clients of this study are from different scheduled banks and who are located in the Dhaka division. In general, clients who use ATM services, credit or debit cards, internet banking, and mobile financial services are mainly from urban areas. However, agent banking clients are targeted from rural areas as this service is more effective there.

##### C. Data Sources and Data Collection Instruments

In the study, clients were chosen based on the most commonly used alternative delivery channels. The authors contacted the commercial bank representatives and randomly selected their clients who are willing to participate in the survey. Considering the Covid-19 situation, interviews were taken through telephonic conversation and an internet-based survey.

##### D. Sample Size and Sample Analysis

The study collected data from 144 participants who are clients of 20 private commercial banks, 4 state-owned commercial banks, 1 financial institution and 4 mobile financial service providers. Frequency distribution and percentages were described for each of the questions relevant to understand the clients’ characteristics. Demographic information describing the characteristics of the respondents participated in the survey are summarized in Table II.

The survey reveals young and educated people are the largest group of users of ADCs in Bangladesh. The survey result shows that 74 percent of users of ADCs falls in the range of 21-40 years. In the case of gender, the majority of ADC users are male, only 23.6 percent are female. Female participants are less than male participants in all categories of the age range. Graduate and above are the largest group of ADC customers, around 66.7 percent. Those with HSC and SSC equivalent accounted for 20.1 percent and 8.3 percent, respectively. The educational qualification of 4.9 percent of users is below SSC. The service holders are the largest group of ADC users, around 51.4 percent, followed by 20.1 percent are business. Only 4.2 percent are housewives, 5.6 percents are labor or worker, and other professions like advisors, consultants, and retired officials are 2.8 percent.

Some bilateral relationship between the respondents’ characteristics is also explained in Fig. 2. In the figure, 31 percent male belongs to the 31-40 years age range, which is the most proportionate number among the participants. Female participants are less than male participants in all categories of the age range. Among the urban respondents, most of the participants, (47.6 percent) are service holders, whereas, among rural participants, most of the respondents (11.9 percent) are business persons.

TABLE II DEMOGRAPHIC INFORMATION ON RESPONDENTS (N=144)

Characteristics	Frequency	Percentage	Characteristics	Frequency	Percentage
<b>Age</b>			<b>Profession</b>		
21-30	56	39.2%	Service	74	51.4%
31-40	50	35.0%	Business	29	20.1%
41-50	18	12.6%	Housewife	6	4.2%
Above 51	19	13.3%	student	22	15.3%
			Labor/Worker	8	5.6%
			no employment	1	0.7%
			others	4	2.8%
<b>Gender</b>			<b>Educational Qualification</b>		
Male	110	76.4%	Below SSC	7	4.9%
Female	34	23.6%	SSC or equivalent	12	8.3%
			HSC or equivalent	29	20.1%
<b>Location</b>			Graduate and above	96	66.7%
Rural	28	19.6%			
Urban	115	80.4%			

Out of 144 respondents, most of the graduates (33.6 percent) use ATM booths. Clients who are SSC passed and below SSC, use only mobile financial services (9.1 percent) and agent banking (2.8 percent). Among the respondents, 28 percent and 25 percent of service holders use ATM services and credit/debit card services, and 11 percent of business

owners use agent banking. People that are more educated are prone to use ATM and card services, while, less educated people are prone to agent banking services. Mobile banking services are popular among both more and less educated people.

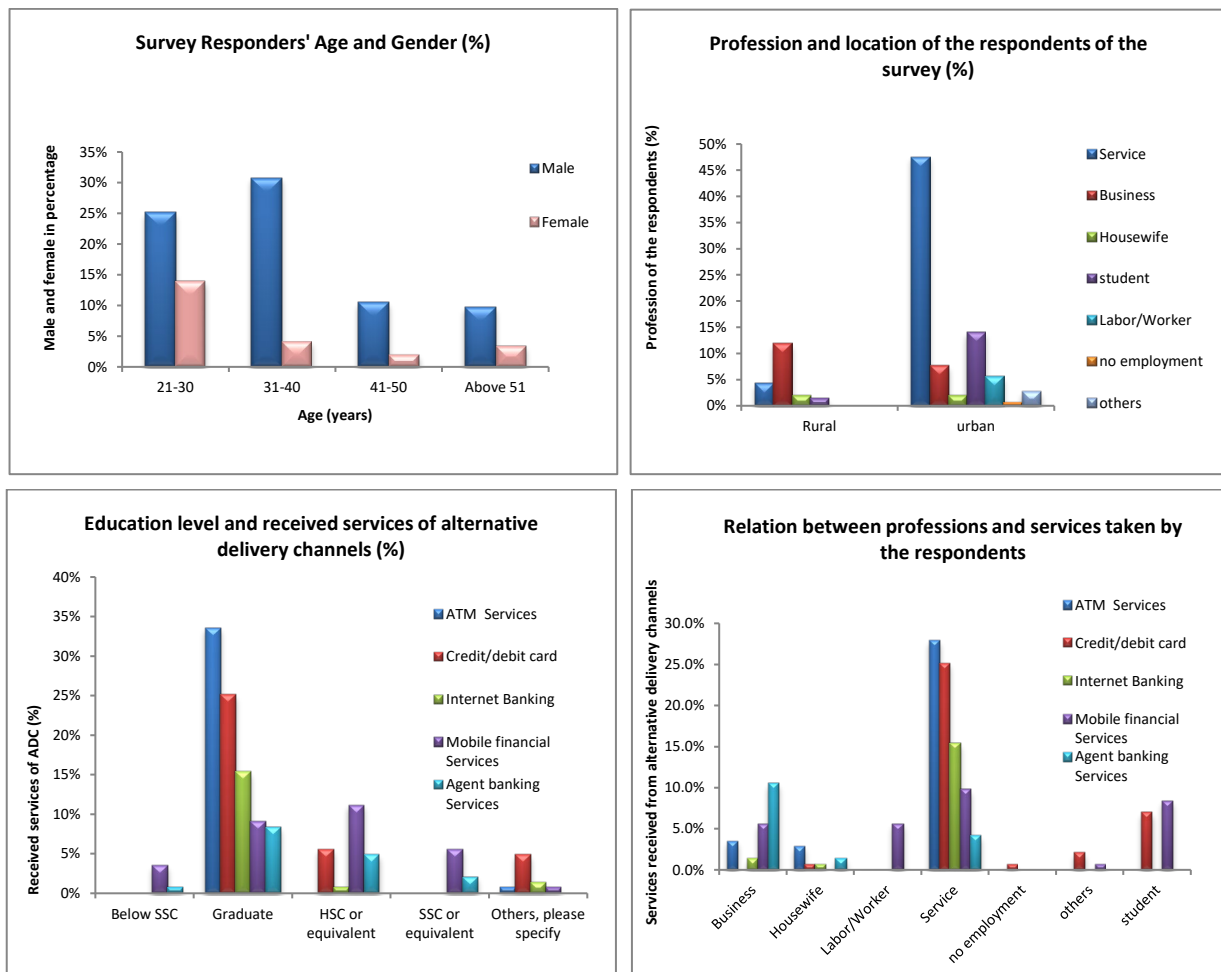


Fig. 2 Bilateral relationship between respondents' characteristics

**V. RESULTS AND DISCUSSION**

Among the survey participants, 92.7 percent of customers prefer alternative delivery channels over branch banking. On the other side, only 7.3 percent of customers like branch banking more than alternative delivery channels.

TABLE III SUCCESS FACTORS OF ADCS ACCORDING TO RESPONDENTS'/CUSTOMERS' RESPONSES

Indicators	Frequency	Percentage
Time Saving	99	24
Easier to use	85	21
24/7 banking facilities	72	18
Emergency Banking Facilities	67	16
Cost saving	37	9
Cashless transaction	33	8
Allows social distancing	23	6

Table III indicates the most commonly identified successful factors mentioned by the selected clients. According to the survey participants' preference order, reasons to prefer ADCs over branch banking are time saving, easier to use, 24/7 banking facilities, emergency banking opportunities, cost saving, cashless transaction, and allowing social

distance. Of which, by providing financial services with the feature of cashless transaction and maintaining social distancing amidst the Covid-19 pandemic makes ADCs more preferable all around the world with the advantage of limiting the spread of the virus.

However, reasons behind preferring branch banking over ADCs are lack of their interest, lack of trust in ADCs, lack of adequate information, not enough technical knowledge, unavailability of preferred services and high cost, according to the survey participants' preference order.

After the question of their preference regarding ADCs, they were asked if they are satisfied with their ADCs' facilities. Out of 144 respondents, 90.3 percent were satisfied and 9.7 percent were not. Since, the identified factors not only influence customers to maintain regular use of ADCs but also keep influencing the usage of ADCs to be increased during the Corona pandemic. Clients were asked whether they increased their usage of ADCs during the pandemic or not, 64 percent of the participants mentioned the increase and 35.9 percent declared no increase in their usage. This paper identified the success factors from the survey result which are responsible for the satisfaction of consumers and the increased use of ADCs during the Corona Pandemic, is shown in Fig. 3.

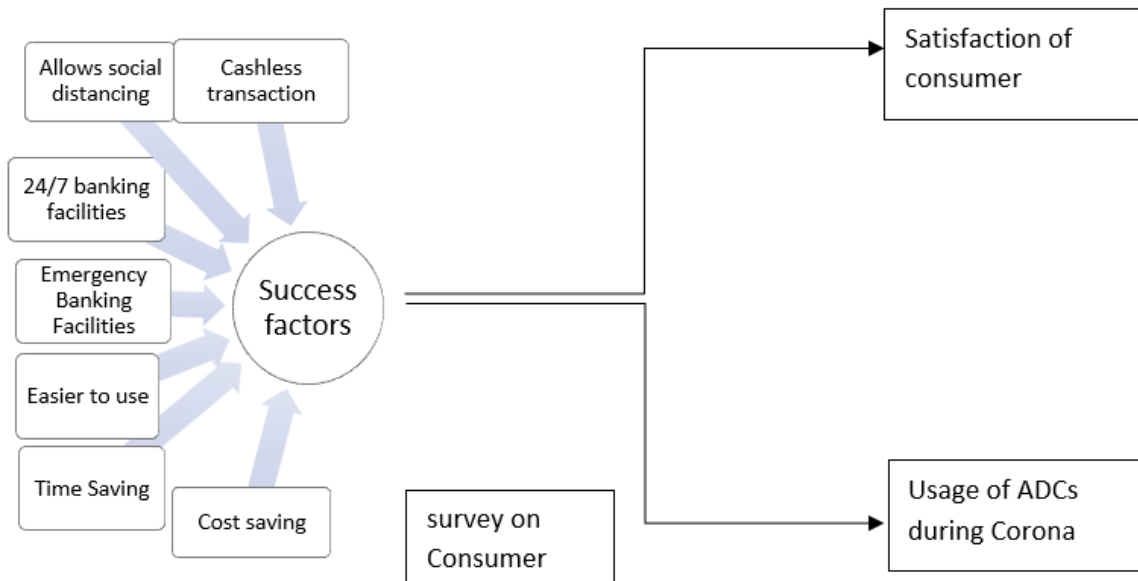


Fig. 3 Conceptual framework on success factors of ADCs based on the survey result

*A. Banker's Perception about Success Factors of ADCs*

The authors have also interviewed 20 bank-officials and experts in this area. They were asked, why some banks are successful in implementing the alternative channels in the delivery of banking services and why some banks are not. According to them, the success factors for ATM services would be depending on the bank's administrative decision and operational management. Similarly, for credit and debit card services, with the administrative decision, and operational management, product innovation and pricing

factor also affect the success of the credit and debit card facilities. Availability of banking services and banker-customer relationship also have an impact on the success of the ATM services and debit and credit facilities. However, the success factors for agent banking and mobile financial services are the availability of banking services, government intervention and the bank's administrative decision. As for internet banking, success factors would be operational management and organizational ability in their opinion. They also opined that the government's intervention can contribute to the success of the delivery channels like



mobile financial services and agent banking. Recently, a state-owned bank has launched mobile banking services which have already contributed to disbursing cash assistance for corona affected people from the government. Experts also opined that along with private commercial banks, state-owned commercial banks can also be the pioneer in providing ADC facilities for people in

Bangladesh if the government and Bangladesh Bank take proper initiatives. From their perspective, it is revealed that not only the benefits of ADCs which are responsible to make people use more ADCs but also some innate factors are also responsible for the success of ADCs. According to the expert’s opinion, success factors of ADCs are listed in Table IV.

TABLE IV SUCCESS FACTORS ACCORDING TO THE BANKERS AND EXPERTISE

Success Factors	ATM Services	Credit/debit Card	Internet Banking	Mobile Financial Services	Agent Banking
Administrative decision taken by Banks	✓	✓		✓	✓
Operational management by Banks	✓	✓	✓		
Product innovation		✓			
Pricing factor		✓			
Availability of banking services	✓	✓		✓	✓
Bankers-customers’ relationship	✓	✓			
Government’s intervention					
Organizational ability			✓	✓	✓

*B. ATM Services*

ATM is the abbreviation of the automated teller machine. ATM acts as a teller in a bank and allows customers to make some basic transactions, cash withdrawal, balance inquiry, bill payment, cash and cheque deposit, saving and credit account. Through ATM, banks appear as an e-banking platform that can serve customers outside the bank building and without any interaction from bank representatives (Kadir *et al.*, 2011).

ATM was first introduced in 1993 in Bangladesh. Customers prefer ATM as an alternative channel for

delivery of banking services due to its time and cost-saving nature, faster transaction, easy to use and inquiry balance through a small statement.

ATM banking has gained tremendous popularity for banking transactions in Bangladesh and has undergone considerable growth in recent times in Bangladesh. The total number of ATMs for every 100,000 adults in Bangladesh stood at 9.39 as of 2019, which was 2.11 in 2010. At the same time, ATMs per 1000 Km<sup>2</sup> stood at 85.62 which was 16.29 in 2010 is shown in Fig. 4.

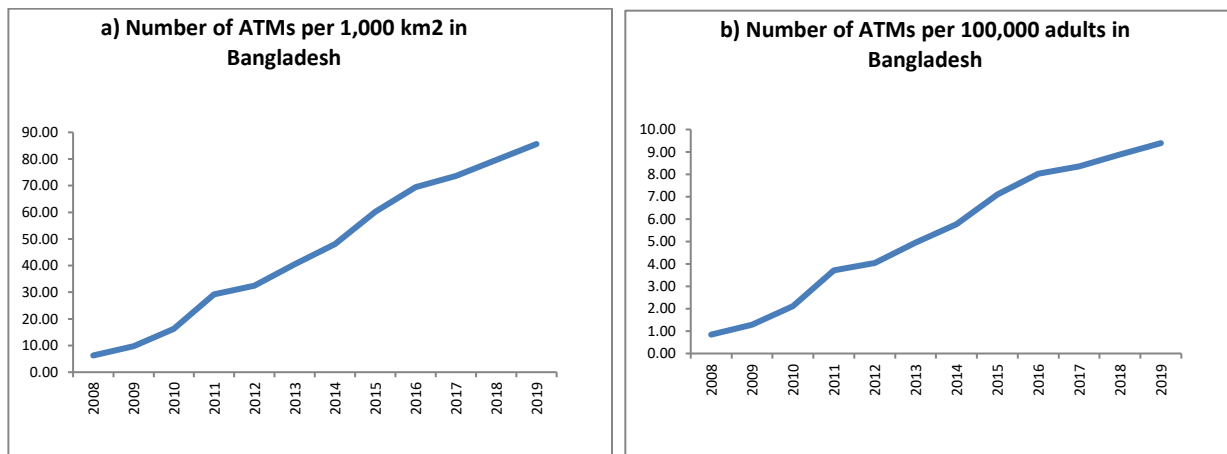
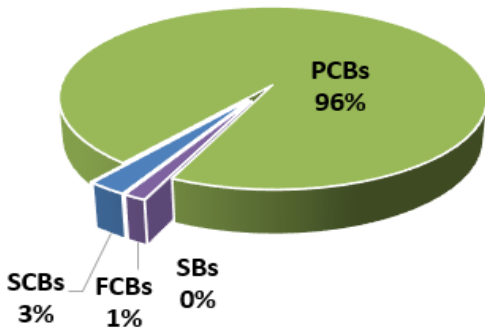


Fig. 4 Distribution of ATM outlet in Bangladesh

As of August 2020, the number of ATMs deployed stood at 11206, which was 6346 in June 2015. Among the deployed ATMs 70 percent are installed in the urban areas. In the case of distribution, 96.0 percent of ATMs are installed by Private Commercial Banks, 1.5 percent are by State-Owned

Commercial Banks, 0.1 percent are by Specialized Banks and the rest of the 1.5 percent is by Foreign Commercial Banks as of June 2020 is shown in Fig. 5. The total volume of transactions through ATMs by cards across the country stood at Tk. 1585.1 billion in FY20.



Source: Bangladesh Bank website

Fig. 5 Distribution of ATMs by Categories of Banks

Survey findings show that network or technological problems are the topmost problem for ATMs, followed by geographic distance to ATM booth from customers home/office. Among the survey respondents, 40.7 percent and 37.0 percent mentioned network/technological problems and geographic distance to ATM, respectively. Network or technological problem includes network unavailability, faulty machine, receipt malfunction, card reader malfunction, etc. Among the respondents, 24.1 percent mentioned that there are no cash deposit machine (CDM) facilities in the ATM booth. CDM is a self-service terminal that facilitates customers to make deposits and payment transactions by cash immediately. Clients may have to go far away from their home if the nearest one does not provide CDM facilities. In Bangladesh, only 13.2 percent of total ATM booths have CDM facilities and 3.4 percent of total ATM booths have Cash Recycle Machine (CRM) facilities as of August 2020 (Bangladesh Bank, 2020). In a CRM, after depositing cash, it automatically recycles the money and prepares for withdrawal. Commercial banks need to emphasize providing CDM and CRM facilities in Bangladesh. Fraudulence using ATM booth is a major concern for ATM users, since the security features such as PIN, the password can be stolen. Among the respondents, 20.4 percent fear ATM fraud. The liquidity problem in the ATM booth was also mentioned by 20.4 percent of respondents. Long queue in front of ATM is another common problem during office hour, salary day, before any occasional event and holiday mentioned by 13 percent of the respondents. Unhealthy booth, high transaction charges, unavailability of desired notes, lack of the customers' technical efficiency, help desk crisis, security issues are also some common problems customers have been facing. Therefore, taking immediate action on network problems, providing immediate help from the customer care centers, establishing ATMs in a secured area, establishing CDM and CRM, solving liquidity issues, immediate action against fraudulence and facilitating waiting room in busy ATM booths are suggested solution of these problems, according to the customers' point of view.

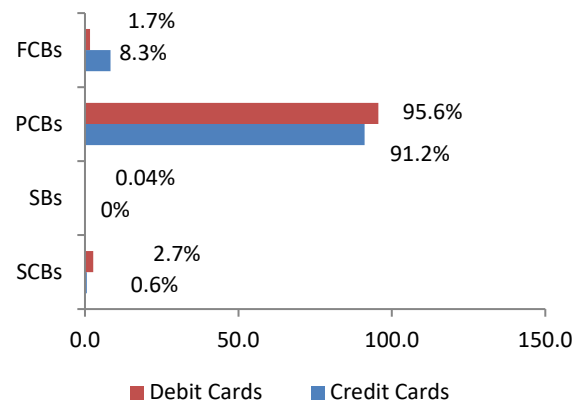
### C. Credit and Debit Card services

The debit card, a cash alternative, allows bank customers to spend money by withdrawing funds that they have already

deposited on their account at the banks or other financial institutions. On the other side, a Credit card allows consumers to borrow money from the card issuer that must be repaid within a certain time (Baumann, 2013). As of the end of August 2020, the number of issued cards stood at around 2.2 crore which was 0.92 crore in June 2015. Among the issued cards, around 90 percent are Debit cards, 7.3 percent are Credit cards and the rest are Prepaid cards as of August 2020. The total volume of transactions through Debit and Credit Cards across the country stood at Tk. 1759.5 billion in FY20, which was Tk. 940.5 billion in FY15.

As of June 2020, in FY20, Private Commercial Banks issued 95.6 percent of debit cards, transacted 91.9 percent of the total value of Debit card transactions. State-Owned Commercial Banks, as a provider of 2.7 percent of Debit cards transacted 2.5 percent of the total value of transactions. Foreign Commercial Banks as a provider of 1.7 percent of Debit cards, transacted 5.5 percent of the total value of transactions. Specialized Banks as a provider of 0.04 percent of Debit cards, transacted 0.04 percent of the total value of Debit card transactions.

Similarly, Private Commercial Banks, as a provider of 91.2 percent of credit cards, transacted 85.5 percent of the total value of Credit card transactions. State-Owned Commercial Banks, as a provider of 0.6 percent of Credit cards transacted 0.5 percent of the total value of Credit card transactions. Foreign Commercial Banks as a provider of 8.3 percent of credit cards, transacted 14.0 percent of the total value of Credit card transactions. Specialized Banks have no Credit card facilities in Bangladesh is shown in Fig. 6. Among the survey participants of this study, 36.1 percent of clients are using either Debit or Credit card.



Source: Bangladesh Bank website

Fig. 6 Distribution of Debit and Credit cards by Categories of Banks

The survey result revealed that fear of technological fraud is the topmost concern for debit or credit card users reported by 42.6 percent of respondents. Network failure or technological problem is another major problem for card users. Due to network failure, clients might have gone through difficulties to pay their bills, stuck card in POS (Point of sale) in the outlet, and facing long queues at cash



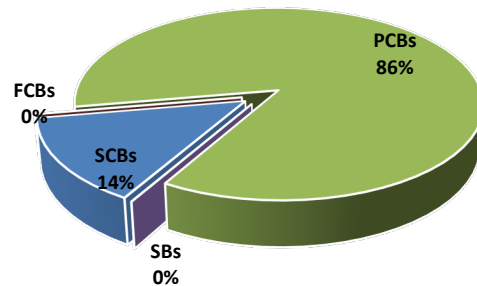
machines. Around 35.2 percent of respondents reported problems they faced during network failure of the issued cards. The survey result revealed that high service charge is one of the major problems stated by the clients of Credit/debit card services. Clients have to pay annual charges including service charges, SMS services fee, transaction alert fee, annual interest rate, etc. varies from bank to bank. Customers have to pay this fee for the privilege of using certain credit and debit cards issued by various banks. 37 percent of clients think that annual fees or service charges are costly for them. Some credit card issuer may not allow the interbank transaction, some may charge additional fees for these services. In the survey, 22.2 percent of our respondents stated their problems regarding having no facilities of interbank transaction offered by their issuer. Transaction cost means when the card issuer charges some fees for transferring the balance to other accounts using a credit card. Among the participants, 18.5 percent reported high transaction costs incurred by their credit/debit cards. For security purposes, a credit or debit card is issued with a PIN (Personal Identification Number) system. Usually, a 4 digit number is assigned to a particular cardholder and without this number no transaction is possible to be made. Nearly 13 percent of clients reported that they forgot their PIN and had to face the hassles to reissue the PIN.

#### D. Mobile Financial Services (MFS)

The invention of Mobile Financial Services, One of the growing tools of ADCs which is now dramatically changing the dynamics of ADCs and the financial system. Mobile Financial Services is a system by which financial institutions provide services to both banked and unbanked people with the assist of mobile networks that enables users to perform banking transactions. MFS provides basic banking services and facilities such as cash deposits, withdrawals, and send money or receive funds. Since the MFS has great potential to extend the network of financial inclusion, Bangladesh Bank introduced Bank-led MFS in 2011. Since the inception of MFS, the flow of money into the rural parts of Bangladesh has been increasing significantly (Bangladesh Bank, 2019). As of August 2020, 14 banks and a subsidiary organization are engaged in MFS in Bangladesh. Disbursement of inward remittance, transaction through agent/bank branch/ATM/mobile operator outlet, utility bill payment, payment of salaries, payment of poor, widows, elderly and freedom fighters, personal transactions, micro-credit distribution, insurance premium have been provided by these service providers (Bangladesh Bank, 2020). Mobile banking applications are now also becoming part of the regular services provided by the bank. As of August 2020, the total number of MFS agents stood at more than 1 million, which was 0.5 million in June 2015. The number of registered MFS clients stood at around 9.4 crore, which was 2.9 crore in June 2015. Among the clients, 51.9 percent are male and 47.8 percent are female as of August 2020. Up to August 2020, the majority of the MFS account holders (around 62.5 percent) are from rural areas. It indicates

financial services through MFS are reaching the rural mass and underprivileged segments of the society in Bangladesh. The total volume of transactions through MFS across the country stood at around Tk. 4690.4 billion in FY20, which was Tk. 1422.9 billion in FY15. In August 2020, a total amount of Tk. 414.0 billion was transacted through 27.0 crore transactions. At the same time, the amount of average daily transaction was Tk. 13.4 billion. In FY20, Private Commercial Banks, with 86.1 percent of total mobile banking agents and 78.7 percent of total mobile banking subscribers, transacted 99 percent of the total value of mobile banking transactions.

State-Owned Commercial Banks with 13.9 percent of total mobile banking agents and 21.3 percent of total mobile banking subscribers, transacts only 1 percent of the total value of mobile banking transactions. Foreign Commercial Banks and Specialized Banks have no mobile banking facilities in Bangladesh is shown in Fig. 7.



Source: Bangladesh Bank website  
Fig. 7 Distribution of Mobile banking agents by the categories of banks

A potential risk of using mobile financial services is the threats of technological fraud, 51.9 percent of the respondents reported that problem. There are also technological or network problems regarding MFS accounts (31.4 percent) and knowledge gap (3.8 percent) of the users recorded by the participants in the survey. Among the survey participants of this study, 36.2 percent of clients are using an MFS account.

The high rate of transaction charges is the topmost concern for MFS users. A certain amount of fees will be charged when someone takes services like transfer the balance or cash out from the account. Among the respondents, 81.5 percent have claimed they have faced the problem of a high rate of transaction fees and high cost of maintaining this account. A potential threat of using mobile financial services is the risk of technological fraud, that is reported by 51.9 percent of respondents. With the widespread use of mobile financial services, transferring funds to other accounts provided by different service providers is an uprising demand from the clients. As for, 36.5 percent of the respondents are not able to transfer their funds to other accounts under different service providers. Similarly, sometimes they face liquidity problems since the agent becomes out of cash, reported by 15.4 percent of

participants. Among respondents, 15 percent of the participants faced the problem of geographical distance from their home/workplace to the MFS outlet and 15.4 percent of the respondents reported having problems with a limit in cash withdrawal. Besides, a few clients have reported the problems such as, lack of cooperation from the mobile financial services agent (7.7 percent), long queue in the outlet located at busy places (3.8 percent), unhealthy or not clean outlet (5.8 percent).

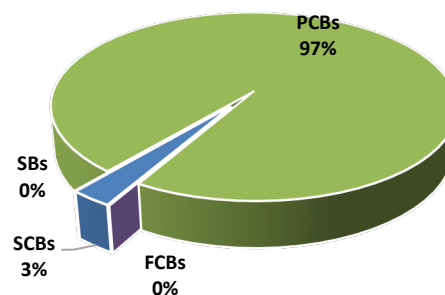
#### E. Agent Banking

A limited scale of banking and financial services is being provided by the banks to the underserved population who generally live in a geographically remote area and beyond the reach of the traditional banking networks. Banks are engaging agents following the agent banking policy and signing a valid agreement with the agents. The owner of an outlet acts as a representative of a bank and performs banking transactions on behalf of the bank. Bangladesh Bank has been promoting Agent Banking to reach the poor segment of the society where people are not well aware of the traditional banking facilities. Along with existing bank customers, agent banking is ensuring the inclusion of marginalized people especially in remote areas or geographically dispersed places.

Since its introduction in December 2013, agent banking has gained much popularity and proved itself as an effective tool for financial inclusion in Bangladesh. As of August 2020, 23 banks in Bangladesh have undertaken agent banking operations through 9627 agents with 13394 outlets and opened a cumulative of more than 7.9 million accounts. An impressive share of 43.6 percent of the total agent banking accounts belongs to female customers. Overall 77.4 percent of accounts belong to the rural people, bringing financially deprived and underprivileged segments of the society under the financial system. A total of 3778 agent outlets and more than 4.3 million accounts were added in FY20. The growth of the number of agent outlets and accounts were 43.6 percent and 125 percent respectively.

The total volume of transactions through Agent Banking across the country stood at around Tk. 1912.2 billion through 65.4 million transactions in FY20. In August 2020, a total amount of Tk. 243.9 billion transactions and a number of 6.4 million transactions took place. At the same time, the amount of average daily transaction was Tk. 7.9 billion. In FY20, Private Commercial Banks own 97.2 percent of total agents, 97.4 percent of total agent banking clients, and recorded 98.7 percent of the transaction of the total agent banking transactions.

State-Owned Commercial Banks, with 2.8 percent of total agents and 2.6 percent of total agent banking subscribers, transacted only 1.3 percent of the total value of agent banking transactions. Foreign Commercial Banks and Specialized Banks have no agent banking facilities in Bangladesh is shown in Fig. 8.



Source: Bangladesh Bank website  
 Fig. 8 Distribution of number of agents of agent banking services by the categories of banks

Among the survey participants of this study, 16 percent of clients are using an agent bank account. Geographical distance is a basic problem of the agent banking services and 34.3 percent of the respondents reported having a distance between their home and nearby outlet. In consequence, Agent banking clients face a shortage of enough agent banking outlets near their home or workplace. In some agent points, all the procedures are being carried out only by few officials that make long queues at the outlet and the overall process took more time than usual. As a result, 34.3 percent of the respondents reported having a long queue when they went to the agent banking outlet. In such cases, one agent may have to carry out all the procedures of the service providers and that was time-consuming for the agent banking clients as reported by 34.3 percent of the respondents.

Among the respondents, 22.9 percent claimed that they have faced problems with a limit in withdrawing cash and 20 percent of respondents do not have sufficient technical knowledge. Sometimes an agent may not have sufficient cash to provide to his customers. Therefore, 20 percent of the respondents mentioned the agent's liquidity problems during their withdrawal of money from the agent. Most of the agent banking clients are from rural level who are usually involved with small business and agriculture. Some clients shared that if they can borrow an agriculture loan or SME loan from their agent banking account that would be a great advantage for them. In this regard, 2.9 percent of the participants reported the problem of unavailability of other services provided by traditional banking. Around 2.9 percent of the respondents said they have trust issues regarding the agent and other frauds.

#### F. Internet Banking

Internet banking did not achieve as much popularity as its allies alternative delivery channels like MFS and credit/debit card. Still, a low percentage of users are facilitated by this service. As of August 2020, around 40 banks in Bangladesh have undertaken internet banking operations with a cumulative of more than 2.9 million internet banking customers (Bangladesh Bank). The growth of customers was 29.7 percent in August 2020 compared to the same month of the previous year. As of August 2020, 25

Banks are connected with NPSB (National Payment Switch Bangladesh) and all banks have EFT(Electronic Fund Transfer) facilities. A trend in the increasing number of customers of internet banking is shown in Fig. 9.

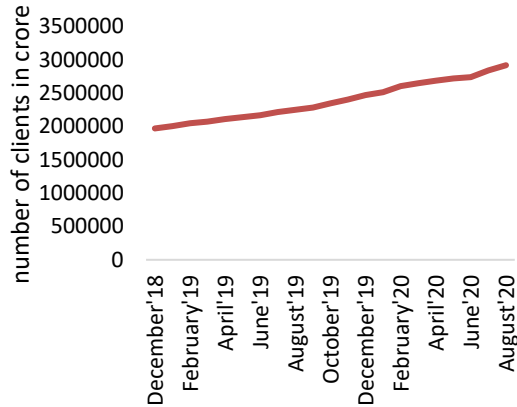


Fig. 9 Number of internet banking users

The total volume of transactions through Internet banking across the country stood at around Tk. 715.6 billion in FY20, which was Tk, 203.8 billion in FY15. In August 2020, a total amount of Tk. 68.0 billion was transacted through 2.0 million transactions. At the same time, the amount of average daily transaction was Tk. 2.2 billion. In FY20, Private Commercial Banks own 92.7 percent of total internet banking customers and recorded 31.4 percent transaction of the total value of internet banking transactions. Foreign Commercial Banks, with 7.3 percent of total internet banking customers made the transaction of

68.6 percent of the total value of internet banking transactions. Out of all the state-owned commercial banks including the specialized banks, the rate of internet banking users is almost zero percent is shown in Fig. 10.

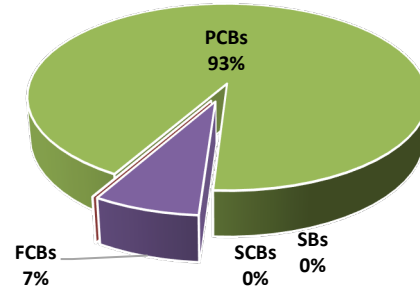


Fig. 10 Distribution of Internet banking users by the categories of banks

Internet banking services exacerbate internet security risks. Security threats may come from inside or outside both ways. The risk of advanced technological fraud is one of the main threats that may arise from using internet banking. Among the participants, 36.7 percent reported the fear of technological fraud. Fifty percent of the respondents have faced slow website problems. Besides, 13.3 percent of respondents reported the host bank’s customer care facilities are not so good and 20 percent reported limit in the transaction of funds is a problem. As for 20 percent of respondents, the cost of an internet banking account seems to be very high. Problems regarding all ADCs recorded in the survey are included in Table V.

TABLE V PROBLEMS FACED BY CLIENTS WHEN USING ALTERNATIVE DELIVERY CHANNELS

ATM Services	Credit/Debit Card	Mobile Financial Services	Agent Banking	Internet Banking
Technological Problem (40.7%)	Fear of Fraud (42.6%)	High rate of transaction (81.5%)	Geographical distance (34.3%)	Slow website (50%)
Geographic distance (37%) of booth	High service charge (27%)	Fear of technological fraud (51.9%)	Time Consuming (34.3%)	Fear of technological fraud (36.7%)
No Deposit facility (24.1%)	Technological/network problem (35.2%)	Transaction to other MFS accounts is not available (36.5%)	Long Queue (34.3%)	Cost of internet banking account is high (20%)
Liquidity problem (20.4%)	No interbank transaction facilities (22.2%)	Geographical distance (15.4%)	Lack of technological knowledge/information (20%)	Limit in transaction (20%)
Fear of fraud (20.4%)	High transaction cost (18.5%)	Liquidity Problem of agent/Out of cash (15.4%)	High rate of transaction charges (11.4%)	Lack of customer care facilities (13.3%)
Lack of technical knowledge (13%)	Pin Problem (13%)	Limit in cash withdraw (15.4%)	Fear of fraud(2.9%)	Technical problem/Network problem (6.7%)
Long Queue (13%)	Others (3.8%)	Lack of cooperation from outlet agent (7.7%)	Unavailability of other services (2.9%)	Lack of information/Knowledge gap (3.3%)
High transaction rate (13%)		Unhealthy atmosphere in outlet (5.8%)	Network Failure (31.4%)	Others (3.3%)
Unhealthy/unclean booth(11.1%)		Network/technological problem (5.8%)	Liquidity Problem (20%)	
Time Consuming (3.7%)		Lack of technological knowledge (3.8%)	Limit in withdrawing cash (22.9%)	
Unavailability of other notes (1.9%)		Long Queue (3.8%)	Lack of cooperation from outlet agent (5.7%)	
Others (1.9%)			Others(8.6%)	

Survey respondents were asked if they have ever complained about the ADC related services to their host bank. In response to the question, 88 percent of the respondents said yes and 12 percent said no. Twenty-eight percent clients of ATM services, 39 percent clients of credit/debit card services, 5 percent clients of internet

banking services, 22 percent clients of mobile financial services, 6 percent clients of agent banking have complained against their services. From our participants, we recorded the complaints they mentioned as given in the Table VI.

TABLE VI COMPLAINTS RECEIVED FROM CUSTOMERS REGARDING ADCS TO THE SERVICE PROVIDER BANK

	ATM services	Credit/Debit Card	Internet Banking	Mobile Financial Services	Agent Banking
Complaints	<ul style="list-style-type: none"> <li>No cash out, but it reported cash out in the bill statement</li> <li>Network problem</li> <li>Default machine</li> <li>Cash shortage</li> <li>Card got stuck in ATM</li> </ul>	<ul style="list-style-type: none"> <li>Bill pay recorded, but not paid in the store</li> <li>Fraud transaction after losing credit card</li> <li>Double payment recorded for single transaction</li> <li>Late activation of EMI facility</li> <li>Payment rejected in POS (Point of Sale)</li> <li>Unavailability of services for 24 hours</li> <li>Late payment fee is overcharged</li> <li>Credit card agent's misbehavior</li> </ul>	<ul style="list-style-type: none"> <li>Slow network</li> <li>Late in transaction</li> </ul>	<ul style="list-style-type: none"> <li>Mobile app was crashed</li> <li>Transfer payment over charged</li> <li>Network problem</li> <li>Money sent to the wrong account</li> <li>Account was blocked for no reason</li> <li>Money was stolen from account</li> </ul>	<ul style="list-style-type: none"> <li>Taking a long time for depositing money</li> </ul>

G. Case Studies from Survey

In this section, some case studies from the survey are described shortly with their experiences with ADCs services.

TABLE VII SOME CASE STUDIES ON ALTERNATIVE DELIVERY CHANNELS USERS FROM THE SURVEY

Case study:1
Ms. Ritupornaroy, Age:21-30 years, gender: female, location: urban, Profession: service holder. She frequently uses the ATM booth for withdrawing cash and her salary. She thinks, ATM booth should be more spacious and every ATM booth should provide money deposit facilities. Since she is holding more than one credit card from different service providers, if the ATM booth allows using cards from different service providers without extra fees,that would be very helpful in her regards.
Case study:2
Mr. Shauket Hossain, age:41-50 years, gender: male, location: urban, Profession: service holder. He uses both credit and debit cards to purchase and withdrawing cash. After he lost his card, he went through some hassles to reissue it. He proposed to facilitate touchless transactions in POS machines, better customer care facilities, fewer service charges from the card issuer.
Case study:3
KanizTabassum, age:21-30 years, Gender: Female, location: Urban. She is an internet banking user and student. She sometimes faces some hassles regarding customer care facilities by her service provider bank since customer care facilities are not so available. She thinks internet banking should be available in mobile apps too. She added the Online banking system against a bank account should be automatically generated while opening the account for the first time in any bank.
Case study:4
Mr. Mohidul, Age: 21-30years, gender: male, Profession: Labor/Worker, lives in the rural area. He uses mobile financial services for his daily necessity and other payments. He suggested that mobile financial services should lower their transaction cost and upgrade security issues. He also shared his experience of how he lost his money through scams or fraud using his PIN.
Case study:5
Mr. Abdul Hamid, age:31-40 years, gender:male, location: rural, an agent banking client. He has a small business related to agricultural products. He uses agent banking for depositing money, pays bills, emergency money withdrawal, and transaction purposes. He thinks agent banking eased his business style and living as well. He is satisfied with his banking facilities. However, he thinks if he could borrow or issue an agricultural loan through his account with fewer conditions and documentation procedures, it would make his living more blessed.

## VI. CONCLUDING REMARKS AND RECOMMENDATIONS

The survey tried to find the answers to all three objective questions of the study. First, the study identified commonly used five (05) alternative delivery channels for financial services, ATM services, Credit or debit card, Mobile Financial Services, Agent Banking and Internet Banking. Second, the questionnaire was prepared and responses were taken from the potential clients to understand the factors that influence customers' decision to take the services under the Alternative Delivery Channels of different scheduled commercial banks of Bangladesh. Third, the expert's opinion was taken to understand why not every bank is not on the same platform when providing ADCs facilities to the customer. The study identified 7 factors that influence people to use ADCs more. These factors are, time saving, easier to use, 24/7 banking facilities, emergency banking opportunities, cost saving, cashless transaction, and allowing social distance. Based on the experts' opinion, administrative decisions taken by banks, operational management by banks, product innovation, pricing factor, availability of banking services, bankers-customers' relationship, government intervention, the organizational ability also act as major factors of successful alternative delivery channel.

However, the alternative delivery channels of the banking sector in Bangladesh have significantly expanded over the years, it is concentrated in some specific banks, particularly to private commercial banks. Thus the share of ATMs (around 96 percent), debit cards (around 96 percent), credit cards (around 91 percent), MFS (around 79 percent customers), Agent banking (around 97 percent customers), and Internet Banking (around 93 percent customers) is very high for PCBs compared to other categories (SCBs, SBs, and FCBs) of banks. The number of ATMs has significantly increased over the years, however, it is concentrated in the urban areas (around 70 percent). Considering the inclusive growth, the rational distribution of ADCs both in rural and urban areas is highly recommended. In this context, the expansion of ADCs by all categories of banks can help to reach the financial inclusion goal. This Covid-19 pandemic situation creates a necessity to reform the banking industry into a new shape and thus the financial sector gets a new direction to prepare themselves for this new-normal world.

From the analysis of this study, it is observed that the ADCs have been facing many impediments in both the demand and supply side that need to be dealt with for further development of this sector. In this regard, the study suggests the following policy measures for successful alternative delivery channels of the banking sector in Bangladesh.

1. Promote self-service in banking by educating their clients on financial and technological information on banking services and their products.
2. Ensure network availability, increase server capacity, ensure privacy, and riskmanagement strategies.

3. Improve customer care facilities and prompt actions to the complaints, customers' needs and queries about the ADC-related services.
4. Ensure adequate cash deposit and recycle machine in ATM booths.
5. Transaction facilities between the two accounts from different service providers where that services are not available.
6. Facilitate other banking services to agent banking and mobile financial services for the convenience of the marginal people.
7. Reduce account charges, fees and transaction costs of all modes of alternative delivery channels.
8. Ensure adequate liquidity in ATMs, MFS and Agent point.
9. Increase the limit of volume and number of transactions per day through MFS, Agent and internet banking services.
10. The state-owned commercial banks including the specialized banks need to introduce internet banking facilities for their clients in Bangladesh. Besides, private commercial banks need to emphasize more on internet banking as they are lagged in the case of internet banking transactions as compared to foreign commercial banks.
11. Introduce eXtreme Transaction Machine (XTM) as a new delivery channel and an alternative to the traditional bank branch system. XTM is a device containing improved ATM functionalities that do not require customers to come to the bank branch. Customers can do transactions as in the branch using it any time they wish, alone or with the help of an operator as they are having a face to face talk with a bank representative by video conferencing.
12. All banks should be featured with the efficient online platform, Electronic Fund Transfer Network (EFTN), Real Time Gross Settlement (RTGS) and National Payment Switch Bangladesh (NPSB).
13. Train and educate bank officials and their agentson new delivery channels, products and services and how to deal with people from different classes.
14. Develop strategies to motivate non-users of ADCs through awareness, education, extending personalized services, and demonstrating the functions of ADCs.

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