

## Digital Banking in Nepal: Embracing the Potential During the COVID-19 Pandemic

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### Abstract

The digital banking system was introduced with the innovation and advancement of information and communication technology but because of the hesitancy of customers and the lack of initiation from the banks, it did not keep pace in Nepal. In this context, the epidemic of COVID-19 seemed to have a noticeable impact on accelerating digital banking, even though it has caused great damage in other areas of social life. This study seeks to provide a comparative analysis of before and during COVID-19 on customer access and effectiveness of digital banking services, and changes in customer behavior. The research uses annual reports of NRB, newspapers, and article reviews as secondary data and semi-structured interviews with banking customers and bank employees as sources of primary data. This research examines how the COVID-19 pandemic has affected digital banking in Nepal, and it may also serve as a model for future studies in the area. This study found that in the post-pandemic scenario customer access to digital banking services has significantly increased and it consequently led to an increase in customer confidence and it is helpful to reduce the cost of digital transactions. This study will also be helpful to make digital banking more effective.

**Keywords:** digital banking, digital transaction, COVID-19 pandemic, customer behavior, cost-effectiveness

### Introduction

Digital Banking is the automation of traditional banking that enables customers to access banking services using online and electronic platforms. It is a digitized approach to eliminate the foot visit inside a brick-and-mortar bank. The fast development of information technology and innovation have made traditional banking shift towards a

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digital banking approach.

Banks started digital banking in the 1980s with the emergence of the Internet and it has been continuously growing in the worldwide banking system. After the diversified availability of the Internet and the invention of smartphone modern digital banking came into practice and use.

Over the past two decades, the digital banking scenario raised along with advancements in information technology. “Banking is necessary, but banks are not” Bill Gates, 1994 as cited in Beck, (2001), it is becoming true all over the world with advances in technology and changing customer behavior. Banks prefer other alternatives to conventional banks; i.e.; digital banking. This reflects the truth, that the world is going to become digital. Digital transactions are preferred by bank customers. These transactions are digitally taking place among persons through cell phones and the internet worldwide.

In Nepal, the traditional banking transaction started with the establishment of Nepal Bank Limited in 1937 but modern banking started in Nepal in 1990 with the introduction of the credit card by Nabil Bank. Thereafter all the commercial banks started to digitalize their transactions with ATM cards, Internet banking, and mobile banking and wallet services. This shows that before 2019, almost all the banks of Nepal gradually connected the people through digital banking services, however, the pace of transformation was very slow in Nepal.

COVID-19 first appeared in December 2019 in the Wuhan state of China and expanded all over the world like a pandemic. When COVID-19 pandemic cases were reported in excessive numbers in Nepal, it affected the various aspects of the economy as well as the banking sector but due to the social distancing and lockdown digital money transmission has become a necessity. To solve daily life problems related to money, digital banking became the only solution. Various studies show that COVID-19 played a positive role in accelerating digital banking worldwide. The report of NRB (2020/21), shows that during the COVID-19 outbreak, the use of digital banking services significantly increased in Nepal. In this regard, a limited study is found but an integrated academic study is not available on issues like digital banking, cost-effectiveness, and customer preference. This study was conducted to compare the access and effectiveness of digital banking and identify the changes in customers' behaviors towards digital banking before and during the COVID-19 period.

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## **Statement of the Problem**

The digital system is indispensable to making the banking business effective, and cost-efficient, and minimizing human error in banking transactions. It plays a vital role in increasing customer satisfaction by increasing the competitiveness of banks. However, this sector could not remain untouched by the effect of the coronavirus epidemic. The existing literature reveals that no specific work has been carried out to examine and ascertain the impact of COVID-19 on digital banking services in Nepal. The present study is an attempt in this direction. Therefore, it aims to enrich the literature on the impact of the COVID-19 pandemic on digital banking in Nepal.

The study seeks to answer the research questions encompassing the status of digital banking before and during COVID-19 and the effectiveness of digital banking during COVID-19. Further, the article seeks to answer the question related to the change in customer behaviors during and after COVID-19.

## **Objectives of the Study**

The main purposes of this study are:

- To compare the access and effectiveness of digital banking before and during the Covid-19 period.
- To identify the changes in customers' behaviors towards digital banking.

## **Significance of the Study**

This study helps to explore the impact of the pandemic (COVID-19) on digital banking in Nepal. It helps to open the door for further study. The findings of the study will be helpful to bank customers, bank employees, and bank policymakers. Further, the study will be significant for the officials of the central bank involved in banking policy-making. Similarly, the study will be important for the students of banking too. The findings of the study will be beneficial to the business houses in making their payment policies.

## **Literature Review**

In towns and villages, there has been a significant increase in the use of digital payment services through various applications villages during the pandemic COVID-19 as compared to the use of digital payments before the pandemic of COVID-19 (Gupta &

Singhal, 2021). Likewise, Alber (2020) states in his conclusion that "even the substantial effects of social distancing on digital dealings have been seen in each of the deals' volumes and values." However, these studies do not consider the customer's preference.

Saha (2021), found that as people's mobility was confined due to restrictions to prevent COVID-19 spread the usage of digital dealings and virtual fund transfers was stimulated during the pandemic. In the same way, Sachdeva & Jain (2020) also agree with that idea and state that during COVID-19 times from January 2020 onwards, people in India were diverted to Digital Dealings as lockdown forced them to stay behind doors. Another research conducted in Turkey shows that during the lockdown period, the banking sector has given services like online or telebanking (Agan, 2020).

Research conducted by Ahmed and Sur (2021) on "Change in the uses pattern of digital banking services by Indian rural MSMEs during demonetization and Covid-19 pandemic-related restrictions", found that convenience, perceived self-efficacy, demonetization, performance expectancy, and pandemic effect have a significant effect on the attitude to adopt Digital Banking System. Whereas, Agarwal, Poddar, and Karnavat (2020) show in "A study on the growth of mobile banking in India during COVID-19," the younger generation who are well-skilled in using the digital payment platform such as mobile banking & e-wallets, are seen as the major contributor for the uses of mobile banking.

Jindal and Sharma (2020), and Khan, et al., (2021) all show that there is a paradigm shift in banking transaction manual to digital. The Corona pandemic plays a significant role in increasing the use of digital services with customer satisfaction and loyalty. Studies further claim that this is the avenue of digital banking for developing countries.

When every sector was damaged because of the abrupt and widespread cessation of public functioning, digital banking flourished as the physical counters of the banks were closed or running with too many restrictions. In this context, the epidemic of COVID-19 seems to be positive to accelerate digital banking, even though it has caused great damage in other areas of social life.

Agrawal (2020) identifies that Nepal has had a fundamental shift in the financial industry on digital banking during the Corona pandemic. Further, she claims that consumers' willingness to adapt to digital banking services has been cataloged by the

coronavirus pandemic. Like Agrawal, Rayamajhi, (2022) argues after the COVID-19 pandemic "digitalization" has been a very popular word for banking customers of Nepal and other people. She claims around 255,000 people made their first-ever transaction using mobile banking and the average daily transaction count grew by 47 percent and the average daily transaction volume grew by 68 percent. The average daily Fonepay Direct Inter-bank fund transfer (IBFT) count grew by 196 percent.

At the time of the pandemic in Nepal, researchers identified significant growth in the use of digital wallets such as e-Sewa, mobile wallets, and IME pay has seen a 25% to 35% increase in users between March and August 2020 with 60% new users are from rural and semi-urban parts of Nepal (Adhikari, 2022).

Therefore COVID-19 positively affects the digitalization process of banks. It helps to accelerate cashless transactions, especially in developing countries where the rate of digitization is very slow. The impact of COVID-19 on digital banking has been investigated in many countries but the study conducted in this regard has not sufficiently explored the effect of a pandemic on digital transactions and consumer's perception in Nepal so there is still a gap, which this study wishes to fulfill. This research also focuses on how banking customer changes their behavior toward cashless transactions.

### **Research Methodology**

This study is based on a mixed approach combining both quantitative and qualitative research methods. The research uses annual reports of NRB, newspapers, and article reviews as secondary data and semi-structured interviews with banking customers as sources of primary data. The population for this study is all the customers and staff of private and public banks in Nepal. As samples for data collection, 10 bank customers and five bank staff were purposively selected and this study was interviews conducted in Dhangadhi Nepal. They represented different backgrounds of knowledge, age, profession, and territory. The questions were asked in such a way that respondents would be free to express themselves. Ethical issues have been taken into consideration while interviewing. The respondents were informed about the purpose of this study prior to the study. The content analysis approach is used for analyses and interpretation. The data collected for the study have been collected, presented, and analyzed and the findings have been drawn.

### Discussion and Findings

Before COVID-19, the cashless market in the Nepali economy was not used much. The banks were operating a few e-payment platforms, and the people using them were a limited number. However, with the beginning of the COVID-19 pandemic, all physical activities had to be restricted including the money transaction. The concept of a physical contactless economy became heavily popular.

### Access to Digital Banking

Cards: Though the majority of the payments are still made through cash and cheques in Nepal, transactions through digital payment instruments (ATM, Wallet, POS machine, QR code, etc.) are also gradually increasing. The following table provides the number of debit, credit, and prepaid cards.

**Table 1**

#### *Outstanding Cards*

FY	Debit Card		Credit Card		Prepaid Card	
	Number	Growth (Percent)	Number	Growth (Percent)	Number	Growth (Percent)
2017/18	55,44,253	-	1,04,721	-	96,816	-
2018/19	67,08,521	20.9	1,23,146	17.5	67,386	-30.3
2019/20	73,29,202	9.2	1,60,297	30.1	63,775	-5.3
2020/21	88,39,855	20.6	1,92,370	20	68,265*	7

\* Also includes cards issued by PSPs

Source: NCHL

Table 1 shows that debit card holders increased by 9.2 percent in 2019/20 which is less than the previous fiscal year and 20.6 percent in 2020/21. The count number reached 88,39,855. The incremental of a credit card seems to be significant during COVID-19 which is 30.1 percent. Prepaid card users are very low in numbers. It found that card users increased during the COVID-19 period.

Automated Clearing House: Another major product offered by NCHL is the Inter-Bank Payment System (IPS) which allows direct debit or direct credit facilities to the customer.

**Table 2***Transaction Number/Count through IPS*

FY	Total Transaction Presented Count (Yearly)	Growth (Percent)
2018/19	49,31,949	-
2019/20	58,75,765	19.1
2020/21	1,08,41,023	84.5

Source: NCHL

Table 2 shows that the transactions also increased during this period. In 2020/21, the total number of IPS transactions increased by 84.5 percent, and the number of cards issued reached 10,841,023. This shows the massive digitization of the inter-bank payment system during the Covid period.

**QR Code-based Payment:** According to the Nepal Rastra Bank report payment using the QR (Quick Response) code has increased speedily. The report shows that in 2018 digital transactions amounted to NPR 712 billion, a data in 2019 shows the number of digital transactions increased by 118 percent and reached NPR 1559 billion (NRB report 2021).

**Connect-IPS:** Connect-IPS is one of the most popular products offered and operated by NCHL where the system allows the bank customers to make instant payments.

**Table 3***Number/Count of Transactions through Connect-IPS*

FY	Total Transaction Presented Count (Yearly)	Growth (Percent)
2018/19	1,86,041	-
2019/20	28,49,964	1431.9
2020/21	1,88,33,752	560.8

Source: NCHL

Nepal Rastra Bank allows a connect-IPS system which is more popular among bank customers to make short-time payments. Before COVID-19 (till 2018/19), total number of the connect-IPS transaction was 186,041. In 2019/20 total number of connect-IPS transactions increased drastically by 1431.9 percent and reached 2,849,964. Further, it increased by 560.8 percent and reached 18,833,752. This data shows that the number of connect-IPS users significantly increased during the COVID-19 pandemic.

**Mobile and Internet Banking:** Mobile and Internet banking services are being provided by the BFIs to their customer which allows users to perform financial transactions in a digital mode like Electronic Fund Transfer, QR Payments, and Utility Payments.

**Table 4**

*Number of Customers Using Mobile and Internet Banking*

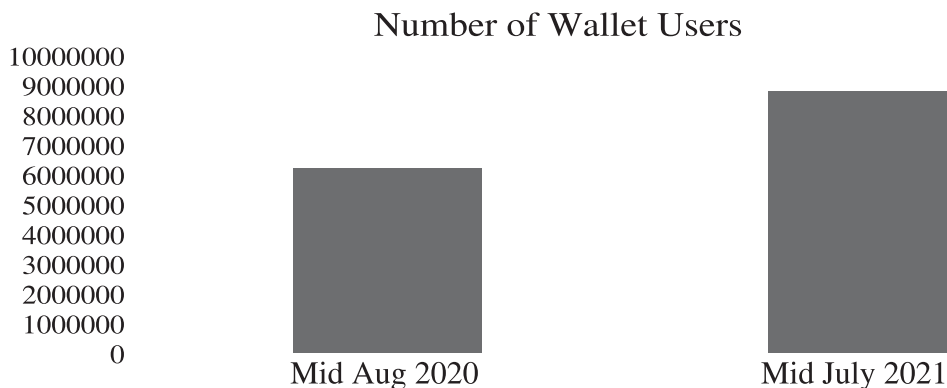
FY	Mobile Banking	Internet Banking
	Number	Number
2017/18	50,86,069	8,34,302
2018/19	83,47,187	9,17,344
2019/20	1,13,06,797	10,31,227
2020/21	1,41,94,839	11,60,321

Source: NCHL

The above table shows that the number of Mobile Banking users before COVID-19, in 2018/19 was 8,347,187. After that during the COVID-19 in 2020/21, the number of mobile banking users increased and reached 14,194,839. In the same way, the number of Internet banking users in 2018/19 was 917,344 which increased and reached 1,160,321 during the COVID-19 up to 2020/21. According to the above data, there seems to be a heavy increase in the number of Mobile Banking and Internet Banking users during COVID-19. As a whole mobile banking has made a huge contribution to digital transactions.

**Mobile Wallet:** The use of mobile wallets (e-money) provided by PSPs is increasing significantly in Nepal.



**Figure 1***Number of Wallet Users*

Source: NCHL

The above chart shows that the number of mobile wallet users was 6,274,129 in mid-August 2020 and it increased significantly to 8,885,914 in mid-July 2021. They transacted Rs. 114.43 billion in the review year. This is an indication of the heavy impact of COVID-19 on increasing mobile wallet users.

From the above data, it is found that the increasing trend of online banking significantly increased in the first phase of COVID-19 however it increased slower than after. Furthermore, the number of users and transactions is significantly raised.

**Effectiveness in Digital Banking Transactions**

As per the customer's viewpoint, it seemed that there is a cost-benefit, (transportation cost and other miscellaneous) as well as the service, is faster with digitalization. One of the respondents who is a college student of Dhangadhi commented, "With digitalization, now, we don't have to sit in a long queue to open an account, withdraw cash, get inquiry about banking services, balance information, money transfer, etc. everything can be done with just a click anywhere which saves a lot of time". Digital banking helps customers to get quick service at a low cost and saves transportation costs.

Moreover, from the conversation with the bankers, it is found that e-banking is not effective only for customers but it is more cost-effective for banks. It helps the huge reduction in staffing costs, physical facility costs, and operating costs.

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**Customers' Changing Behaviors in Digital Banking**

The responses taken from 15 respondents were qualitatively dealt with and analyzed in the themes below:

**Enjoying the Technology:** The youngsters enjoyed using technology for their banking behavior. The interview reveals that most young customers are enjoying technology and they think digital banking is safer and more useful. However, they want greater flexibility and security.

**Convenience:** Another respondent who is a businessman of Dhangadhi comments, "I took online banking service so that I could make the business transaction easy and less risky. It's being far easier than conventional banking". Convenience was found as another reason why customers adopt online banking. Adults who adopted e-banking due to compulsion during COVID-19 time now also feel more comfortable than the physical transactions. Other participants describe convenience in the workplace uses, bill payment, fund transfer, waiting time, etc. whereas some complain about site slowness

**Access and Usability:** A question, "How often do you go to the bank?" asked the respondent who is a teacher in the rural municipality of Kailali replied that although, "I have not been to the bank, I very often do banking transactions through digital transactions". A female respondent who is a housewife commented, "I have taken mobile banking service for mobile recharge and to apply IPO". The interview, reveals that easy access and multi-use of a digital banking application are vital factors in modifying customers' behavior to make digital transactions such as 24/7 days, and electronic bill payments and fund transfers.

The selected sample was separated into rural and urban areas. It is found that they have the almost same perception about e-banking but rural customers are facing technical difficulties due to poor internet connection.

The interview revealed that banking customers changed their behavior after the COVID-19 outbreak as they tend to do more digital banking than before. The respondents showed their trust in digital transactions meaning that Nepal is going to shift towards sustainable cashless transactions.

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### **Conclusion**

This study was conducted to assess the impact of COVID-19 in Nepal on digital transactions and customer behavior. The result of this study is more likely to reflect the exact scenario of digital banking in Nepal during the COVID-19 pandemic. It is found that all the indicators of digital transactions are remarkably increasing during the pandemic period. However, it increased slower in the second phase. Additionally, the respondent's view shows that they are strongly motivated to adopt digital banking services however they need better security, easy access, and strong network connection. In part of the cost, it is more cost-effective than traditional banking.

Hence, it can be concluded that banks prefer to provide digital services, and customers themselves prefer virtual banking. In this virtual era, the COVID-19 pandemic became an opportunity to expand rapidly cashless transactions. However, this study was limited to NRB data and a small sample size.

Although COVID-19 aims as a crisis for world economics including the banking sectors, this period provided a positive signal for digital banking in Nepal a beyond. It has taught a lesson that e-banking can be a very good alternative for people facing difficulties of pandemics, natural disasters, or geographical barriers.

### **Recommendation for Future Research**

This study primarily deals with the digital banking sector. So, the results of the study do not explicitly incorporate other fields of banking services and social life. Further research works on other modes of banking services are required for a comprehensive understanding of overall banking services. Similarly, the study uses the secondary data published by the Nepal Rastra Bank.

Thus, more empirical research works that use longitudinal qualitative research designs and primary data would help delving into more insights into the field of digital banking. As the study seeks information from a limited number of participant (15), their interpretation and findings may not be sufficient to fully conceptualize the digital banking issues. Further research with a wider range of participants would bring more valid and reliable results that can be generalized and implemented into the wider scope of banking phenomena.

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