

The Revolution in Banking Method and The Total Transaction in Canada

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Abstract. In this century, as the digitalization of banks continues, the payment methods evolved from paperwork to online. While more and more consumers accept new banking methods, it appears to have increasing doubts about whether this digitalization really provides convenience to consumers and encourages people to make more transactions, or banks are merely following the trend, which in fact makes things more complicated. The topic of this paper is how innovations in banking methods change the volume of transactions in Canada. The three major methods of payment involved in this paper are credit card payment, internet payment, and mobile payment. The discussion is based on a prediction that the transaction volume would be positively influenced if more advanced banking methods are launched. The goal of this essay is to evaluate the reliability of this prediction by referring to real-world data, research results, and articles. In the end, based on the results concluded from the analysis, the conclusion will be drawn.

Keywords: Canada bank industry; banking methods; transaction volume.

1. Introduction

Nowadays, technology developing rapidly has revolutionized our world, including the methods of communication, the way of shopping, and of course, the methods of banking. As for the banking methods, it was innovated swiftly in this century. Since the 1960s, the appearance of credit cards unleashed a storm of renovation of banking methods. Decades later, internet banking was innovated when people started using cell phones and computers in their daily life. In 2010, as mobile devices carried most of the necessary functions for people's daily lives, mobile banking applications were launched [1].

Those innovations in banking methods made a great change in the banking industry in many countries. Indeed, the Canadian banking industry also faced this change. Banks started to provide more services to people in a more convenient and flexible way, which enabled consumers to make payments or transfers easier. This fact leads to the idea that the revolution in payment methods probably encourages people to make more transactions. The supportive evidence for this prediction can be found in different research. Michael Tompkins's research in 2018 illustrated that from the impact of digitalization on the world's banking industry and financial markets, it is deductible that wider adoption of electronic payments by businesses [2]. Moreover, from research about cash demand in Canada, statistics showed that the demand for cash dropped since 1980, while the value and volume of transactions made by credit cards and other digital banking methods rose annually [3].

2. Methodologies

In this part, three banking methods, credit card payment, internet payment, and mobile payment will be introduced chronologically. Their functions and historical process in Canada will be expressed separately. Also, the research and data involved in the discussion will be stated.

2.1 Historical Process and Functions of Credit cards

A credit card is a card that can be used for purchasing, paying bills, and withdrawing cash depending on the card. There is a credit limit set according to the cardholder's creditworthiness that does not allow spending above the limit in a period. Unlike the debit card which cannot be used for

purchasing unless it carries savings, cardholders can use credit cards for any allowed banking purposes if the limit is not reached. Of course, cardholders need to pay back in a fixed period [4].

Credit cards became widely acceptable since 1958, when the first credit card, BankAmericard, was launched by the Bank of America. The impact of credit cards expanded rapidly. By the middle of 1966, there was a boom in the demand for credit cards in 4 years in most states of America [5]. Gradually, this influence expanded overseas, and Canadian banks tried to make their own credit cards. On August 19th, 1968, TD Bank was the first Canadian bank who launched the Chargex card to provide individuals with more professional services of deposits and credits. This significantly changed the Canadian bank culture of focusing on trading with big businesses [6].

However, Chargex cards were less competitive compared with VISA card and MasterCard internationally. When VISA card and Master Charge launched successively and entered the Canadian market, Chargex was replaced and faded from the public view. Still, Chargex was a milestone in the Canadian banking industry and has a far-reaching impact on Canadian households' banking habits.

After the Bank of Montreal and the Provincial Bank chose Master Charge as their preferred credit card in 1973, there was a boom in the rate of having a credit card in Canada. From statistics, about 8 million Canadian adults held credit cards, and the value of transactions was more than \$3 billion annually [7]. In the early 1990s, the transactions made by credit cards accounted for 18% of the total number of transactions [8]. This proportion seemed to be small, however, the total credit card transaction value was about half of the total transaction value.

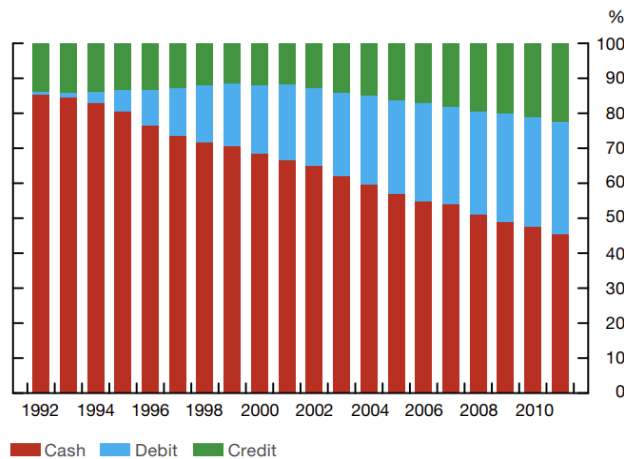


Figure 1. The Volume of Transaction (Arango et al.,2012)

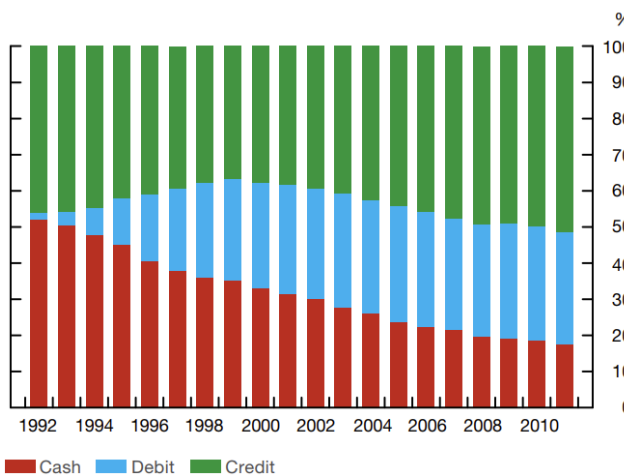


Figure 2. Value of Transaction (Arango et al.,2012)

Figure 1 and Figure 2 are from the report on cash demand in Canada. The impressive trend displayed in them shows how Canadians prefer using credit cards to cash from 1992 to 2010.

2.2 Historical Process and Functions of Internet Banking

Presently, almost every bank provides banking services on the internet. Internet banking, also known as web banking, is an online banking service including financial transactions, deposits, transfers, online bill payments, and other functions, working through the official website of each bank [9]. According to the statistics, in Canada, more than 99% of adults hold an account with a financial institution.

Back in the 1980s, the first internet payment worked through the telephone. Later, when the internet and computers became widespread, the Bank of Montreal created the first official website of a bank for online banking services in 1996, right after the first internet banking application launched in America. This was the first full-service internet banking system in Canada, even in North America [10]. In the same year, RBC also launched its online bank. Besides, in the early 2000s, all mainstream Canadian banks were able to provide online services.

With the convenience of online banking, consumers can have access to most banking services and transactions anytime and anywhere if they have a computer and a bank account. Immediately, Internet banking entered millions of Canadians' lives, which had a huge impact on their lifestyles and established their need of using online banking services.

As for the advantages of internet banking, except for its convenience, it has high efficiency in making transfers. For users making a transfer between two accounts in the same banking system, this action only takes seconds to complete. Besides, the users can monitor their accounts in real-time to protect their property, with notification services provided by the bank. However, the data privacy issue is the major disadvantage of online banking. This would result in the risk of fraudulent using [9].

Moreover, the internet bank may not be convenient in some situations, because at that time, computers were not as light as mobile laptops. Usually, people can use computers only in a few fixed places: workplaces or home, as computers were too heavy to carry. Therefore, it was impossible to check or monitor the online banking account outside in case of an emergency. That is why people need mobile banking soon.

2.3 Historical Process and Functions of Mobile Banking

The rapid development of the internet and mobile technology brought the world the mobile banking system. Banks seized on the trend of digitalization, coordinating most financial services into an application. Eventually, in 2010, mobile banking was first introduced in Canada by CIBC, and people started to use mobile banking gradually when the technology of the IOS and Android smartphone systems became mature [11]. Around 99% of Canadian individuals have a financial institution account [12].

Mobile banking can be seen as a branch of internet banking transferring almost all the financial services and functions to an app installed on mobile devices including smartphones, iPad, and tablets. After users download the mobile banking app and set up an online banking account, the mobile banking app will be ready to use. Moreover, mobile banking can be seen as a nonphysical bank branch that opens for the whole day. The most notable advantage of mobile banking is its convenience. It allows users to make transactions anywhere without going to a specific branch physically.

Although mobile banking saves clients time to get financial services from the bank, what clients are most concerned about is the security problem. According to the data from Forrester, 36% of Canadian adults believe that mobile banking has security flaws [13]. Hence, for solving those security problems, banks spend a large budget on technology related to cyber security. In Canada, the six largest Canadian banks spent \$100 billion in the past ten years to strengthen internet security technology [14].

2.4 Margin's Research about Risk Modelling

Mangin's research discussed the influence of risks on the acceptance of internet banking by individual users, using the TAM model to test the risk and its influence on the consumer's acceptance of internet banking. His test result statistically showed that the risk and consumers' trust in internet

banking are related, and on average, the appearance of risks will reduce the consumers’ trust by 32% [15].

2.5 Result from Surveys

In the survey of KPMG about consumers’ level of confidence in data privacy in 2020, 87% of consumers believe that data privacy is a basic human right. Yet, 68% say they worry about companies selling their data [16].

Moreover, in the survey about consumers’ attitudes to online banking conducted by Entersekt, over a third of British people participated in it. The result of the survey demonstrated that 43% of participants aged 55 and above disbelieve online banks, and 33% of them were afraid of being victims of fraud through using digital channels. Conversely, only a minority of participants in age 18-24 thought the same way [16].

3. Results and discussion

In this part, the focus point is how the transaction volume changing corresponds to the increase in the volume of credit card payments, internet banking payments, and mobile payments. Also, for some parts, the data of the value of the transaction will be summarized as a reference.

3.1 Credit Card Payment

In this increasingly digital world, credit cards are at the forefront of cashless transactions. In Canada, credit card payment is the most common method of banking, and it has a significant positive influence on the volume and value of transactions. By analysing the data from Payments Canada of the proportion of credit card payments and cash payments of total volume and total value, 2 following figures are generated to show this importance.

Figure 3 shows that since 2008, the proportion of credit card payments has increased annually. In 2020, credit card payment was the most popular method of payment whereby 31.4%, which was the greatest proportion among all payment methods, of transactions were made through credit cards. On the contrary, the proportion of cash payments dropped from 50% to about 15% until 2020, and the volume of cash transactions reduced by 10% on average for each year.

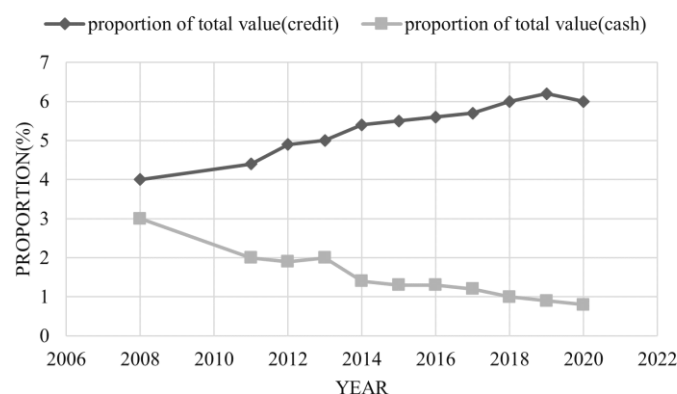


Figure 3. Annual statistics of volume of credit payments and cash payments

As the total volume of transactions kept increasing during this period, assuming that the population was not shrinking or rising obviously, these trends implied that an increasing number of people choose credit cards as their transaction method instead of using cash, and their annual transactions increased.

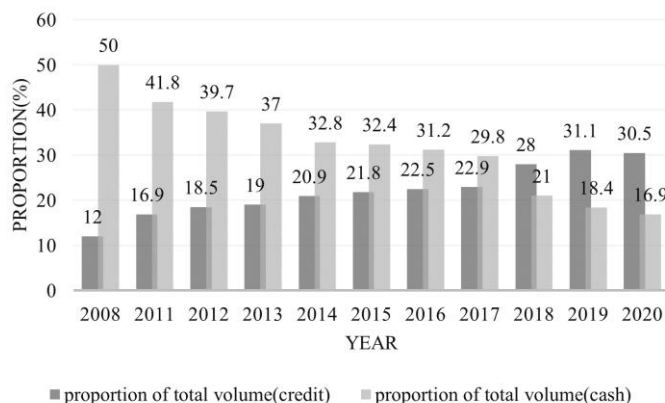


Figure 4. Annual statistics of the value of credit payments and cash payments

Figure 4 displays the trends of the proportion of credit card payments and cash payments to the total value of transactions. The trends are similar to that from Figure 2: the proportion of credit card payments increased continuously, yet the proportion of cash payments slid to less than 1% by 2020. Although the proportions were not high for both methods of transactions, it was acceptable. For the credit card, it has a limit. Hence, when purchasing things, such as a car, generally consumers would choose to pay by cheque or debit, not to mention cash.

Comparing the two figures, the fact is that even

though the proportion of cash transactions to total volume was greater than the proportion of credit card transactions in the period of 2008-2017, its proportion to total value was lower all the time. Knowing that the total value of transactions rose annually, this infers that the average value of cash transactions is lower than that of credit card transactions. This result is reasonable since consumers can use credit cards to purchase high-priced products online and offline, while they must carry huge amounts of cash with them inconveniently for offline purchasing only.

Consequently, it can be concluded that the increase in total value and volume of transactions is apparently contributed by the increasing popularity of credit card transactions.

3.2 Internet Payment

According to the research, Canada has one of the greatest accessible banking systems globally. However, the proportion of online bank transactions was shockingly low. In the recent report of 2021 from Payments Canada, the volume of the online transfer only accounted for 4% of the total volume of transactions, and the value of online transfers contributed to 2.6% of the total value of transactions. The reason for this could be, as mentioned in the methodology, that unreliable network safety is the main concern for most people who choose not to use online banking. The research result from Dr. Mangin’s research in 1970 can be used to support this claim.

In a world where people keep claiming human rights and privacy, the security of online banking in particular attaches to most consumers. According to a survey by KPMG in 2020, as the technology of stealing information from online databases develops, people can hardly trust the information protection of online banking, even though bank institutions assert that the consumer’s information is well-protected.

Except for the insecure environment of online banking affecting the general acceptance of online banking, research shows that the consumers in different age groups diverge their opinions on online banking. Referring to the result of Entersekt’s survey, it is more difficult for middle-aged and senior people to accept online banking than young groups.

According to Figure 5, Government of Canada summarized that the proportion of senior citizens accounts for about 20% of the total population, and it was forecasted to exceed a quarter in 2080. Those people would prefer using credit cards and cash, as they did for decades, but getting familiar with high-tech payment methods would be difficult.

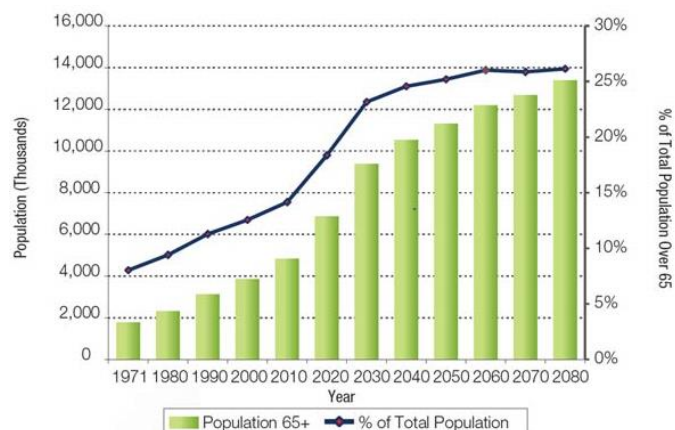


Figure 5. Statistics of the senior population

To conclude, internet banking contributes to the total volume and value of transactions to a petty extent due to its existing problems. Banks probably need to establish the reputation of online banking by disseminating the benefits of online banking, and continuously pumping money into the reinforcement of the protection of consumer information. Also, popularizing and extending the use of online banking to seniors would be persistent difficulties for Canadian bank institutions.

3.3 Mobile Payment

The well-developed smartphone provides a convenient environment for mobile banking to grow strong. The increase in the number of mobile banking users is remarkable. Until 2018, 65 percent of Canadians were mobile banking users.

In 2010, when mobile banking was just invented, the value of mobile transactions in Canada was \$3.4 million. By 2018, this number reached \$288.6 million. This significant increase in mobile payment transactions in Canada has a strong relation to the growth of the use of smartphones in Canada. Roughly half of the young generation uses mobile banking as their main tool for making transactions. In 2020, the use of mobile banking presented considerable growth due to the COVID-19 pandemic, and this trend will continue until the pandemic fades.

Even so, Mobile banking flourishing largely depends on the booming of credit/debit cards, because at least a debit card is required to create an account. In the report on Canadian payment methods and trends in 2018, credit transactions accounted for 28% of total transactions. Compared to last year, the credit transaction volume increased by 52%, and credit card transaction volume grew by 29%. Accompanying the great increase in the transaction volume of credit card transactions, the transactions of mobile banking increased sharply due to the dominance of credit and debit cards.

In fact, there exist examples of mobile banking apps that are independent of credit/debit cards or any bank institution in China, namely Alipay and WeChat Pay, both are third-party payment platforms. People can deposit money into their Alipay or WeChat accounts and use their savings to make face-to-face or online payments and purchase assets. As WeChat Pay and Alipay become widely accepted across China, the daily volume of transactions exceeded \$15 million in 2021. Apparently, the appearance of those third-party payment platforms significantly enhanced the volume and value of total transactions in China.

Moreover, as a new digital banking method merely launched a few years, mobile banking has the same shortcoming as internet banking that is not welcoming for middle-aged and senior generations. Because the invention of mobile banking is even later than that of online banking, the operation of mobile banking is a headache to everyone not familiar with mobile technology, and it will take more time to be popularized.

In general, the use of mobile payment working as a branch of credit card transactions is getting frequent currently, and the transaction volume and value are small unless under a particular period. However, thanks to the enormous numbers of smartphone and mobile device users, the volume of

mobile transactions is increasing exponentially in recent years. The use of mobile transactions will be more habitual along with the further digitalization of the Canadian bank industry and our daily life.

4. Conclusion

To sum up, from our analysis, evolving banking methods are justified to have an astonishing contribution to the volume and value of transactions in Canada. However, the credit card is especially influential in the industry whereby online banking and mobile banking only assist a small proportion of the increase in the volume and value of transactions. This fact could be the result of centuries of accumulation of people's confidence and trust in credit cards, while the other two methods were released lately.

Also, knowing that the most common type of transaction is daily spending, usually offline, Canadian consumers can only use credit/debit cards or cash to complete because of the absence of the

functions of face-to-face payment for all mobile banking apps in Canada. Therefore, new banking methods are launched, the banking method for most Canadians will not switch from cash payment and credit card payment easily, since they are not invented as substitutions to credit cards. This would also result in an impediment to the further development of increasingly digital banking institutions.

These years, when countries across the world witness the success of China's Third-party banking platforms, it can be expected the Canadian banking system to study from it and make more progress in the banking method soon.

Overall, credit cards, internet banking, and mobile banking make people's way of banking easier and encourage people to make more transactions to a great extent, which implies the evolution of banking methods has some positive influence on the volume of transactions. While for now, the position of credit cards is unassailable in Canada since other methods are complements to it. Still, economists believe in the potential of mobile and internet banking that can simplify people's method of banking further and multiply the volume of transactions in later years.

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