



BANK OF CANADA
BANQUE DU CANADA

Discussion Paper/Document d'analyse
2012-6

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by Carlos Arango and Angelika Welte

Bank of Canada Discussion Paper 2012-6

September 2012

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Acknowledgements

We thank Pierre Duguay, Gerry Gaetz, Charles Spencer, Lorraine Charbonneau, Kim Huynh and Ben Fung for their support and advice. We also thank Alyssa Lee, Dylan Hogg and Leonard Sabeti for their research assistance.

Abstract

The authors present the methodology and main findings of the Bank of Canada's 2009 Methods-of-Payment survey, a detailed investigation of consumer payment behaviour in Canada. The survey targeted the 18- to 75-year-old Canadian resident population. During November 2009, participants answered a questionnaire about their demographics, personal finance, and payment instrument habits and perceptions. Of the 6,868 questionnaire respondents, about half also completed a 3-day shopping diary, recording close to 16,000 shopping transactions. The survey gives a detailed account of Canadians' cash management habits and payment instrument choices and provides important clues into the reasons why Canadians pay the way they do.

JEL classification: E4

Bank classification: Bank notes; Payment, clearing, and settlement systems; Financial services

Résumé

Les auteurs décrivent la méthodologie et les principaux résultats de l'enquête de 2009 sur les modes de paiement effectuée par la Banque du Canada, qui examine en détail le comportement des consommateurs en matière de paiement au Canada. Le sondage ciblait un échantillon de résidents canadiens âgés de 18 à 75 ans. Au cours du mois de novembre 2009, les participants ont répondu à un questionnaire portant sur leurs données démographiques, leurs finances personnelles et leurs habitudes et perceptions à l'égard des instruments de paiement. Environ la moitié des 6 868 répondants ont en outre tenu pendant trois jours un journal d'achats, consignait près de 16 000 transactions. Le sondage donne un compte rendu détaillé des habitudes des Canadiens quant à la gestion de l'argent liquide et à leurs choix d'instrument de paiement, et il fournit des éléments d'information importants sur les raisons qui expliquent la manière dont les Canadiens règlent leurs achats.

Classification JEL : E4

Classification de la Banque : Billets de banque; Systèmes de paiement, de compensation et de règlement; Services financiers

1 Introduction

The way Canadians pay for goods and services has changed profoundly over the past two decades. The annual value share of cash in retail payments dropped from a level of more than 50 per cent in 1990 to 20 per cent in 2009.¹ The decline of cash and the rise of debit and credit cards have been partially due to the introduction of debit card payments at the point of sale and the competitive edge afforded by a variety of credit card reward schemes. Further payment innovations such as contactless debit and credit card features, mobile payments and e-cash could become the next driver of change in cash usage.

In this context of innovation and change, the Bank commissioned the 2009 Methods-of-Payment (MOP) survey with two objectives:²

1. Develop a statistical instrument to collect accurate, reliable and affordable payments statistics, particularly about cash payments, for which there are no reliable sources.
2. Collect information on consumer characteristics, MOP attributes and transaction features that would help explain why Canadians pay the way they do.

In the following section we provide a detailed account of the survey methodology. In section 3 we report the main findings on consumers' MOP usage, and perceptions and attitudes toward alternative MOP. The last section concludes.

2 Methodology

The 2009 MOP survey collects data from 18- to 75-year-old Canadian residents about the payment methods used for day-to-day purchases of goods and services, but it excludes mortgage and bill payments, and investment and business transactions. The Bank commissioned Ipsos Reid to conduct the survey between 23 October 2009 and 1 December 2009.³

¹Cash retail payment shares are estimated as ATM cash withdrawals divided by cash withdrawals plus debit and credit annual payment values.

²The 2009 MOP survey is the latest in-depth survey commissioned by the Bank to provide insight into the use of cash in Canada. The Bank commissioned a survey in 2004 to study the public's confidence in bank notes as well as MOP habits and perceptions (Taylor 2006; Arango and Taylor 2009b). A 2006 survey of merchants addressed questions related to merchants' preferences and costs of accepting alternative MOP, as well as annual revenues by MOP (Arango and Taylor 2008-09, 2009a).

³The 2009 Methods-of-Payment survey marked a collaboration between Bank of Canada staff and external parties. Its development benefited from recommendations by Jean Dumais at Statistics Canada; the advice of various central banks, particularly the Federal Reserve Bank of Boston and the Deutsche Bundesbank, which provided samples of their survey instruments; and discussions among central banks about payment surveys facilitated by the International Association of Currency Affairs.

2.1 Survey instruments

The 2009 MOP survey consisted of two parts: a survey questionnaire (SQ) and a 3-day shopping diary (SD). Compared with surveys, which rely on the recollection of respondents regarding their MOP usage, diaries help prevent memory gaps. This is especially true for cash transactions, which are high in volume, low in value and not easily tracked. Such methodology has been used, for example, by the Australian, Austrian, Dutch and German central banks as a key tool to obtain reliable and detailed cross-sectional statistics on the use of cash and other MOP, which could be replicated over time.⁴

The questionnaire The SQ covers 52 questions,⁵ which can be divided into the following categories:

- Personal finances, particularly knowledge and access to financial products and services, including details about consumers' bank and credit card account plans.
- Consumers' frequency of use of cash, debit cards, credit cards and cheques.
- Attitudes and perceptions regarding MOP attributes such as ease of use or speed, costs, record keeping, acceptance, and security.
- Cash holdings, cash management practices such as cash balances, and cash withdrawing practices.
- A rich set of socioeconomic indicators such as age, income, education, marital status, household size, place of residence and ethnic origin.

The diary The SD was limited to three days, since other diary studies have found strong fatigue after the first few days of transaction recording.⁶ The diary had three sections:

- The front section collected information about the amount of cash by denomination (coins and bank notes) and the number and types of cards participants carried in their wallets.
- In the main part of the diary, participants recorded their purchases of goods or services, and when cash was obtained from different sources. For each purchase, participants

⁴See, for example, Hoffmann et al. (2009); Jonker and Kosse (2009); Mooslechner, Stix and Wagner (2006).

⁵Some of the questions in the SQ are based on the Survey of Consumer Payment Choice of the Federal Reserve Bank of Boston, which collaborated with the Bank of Canada in the development of the survey instruments (see Foster et al. 2010).

⁶That is the case in the pilot study made by the Dutch central bank, the Australian central bank 2-week diaries, and the Deutsche Bundesbank 7-day diaries; see Jonker and Kosse (2009) and Schmidt (2011).

recorded the transaction amount, the MOP used, the top two reasons for choosing that particular MOP, the type of good, where the transaction was made (at a store, online, by phone, etc.), the number of terminals if at a store, and the MOP perceived as not being accepted. When obtaining cash, participants recorded the amount and whether it was obtained from an ATM, a teller, cashback⁷ from debit cards or other sources.

- Respondents also recorded the amount of cash on hand at the end of each day.

2.2 Sampling and data collection

The sample was drawn from Ipsos Reid access panels, which are databases of people who have signed up to participate in surveys on a regular basis. In the 2009 MOP survey, an online panel and a mail panel were used. The members of the online panel accessed and submitted the survey material on the Internet, and the members of the mail panel received the material on paper and mailed it back by post. This way, people without access to the Internet (about 20 per cent of Canadian households in 2009)⁸ had a chance to participate in the survey.

Sample quotas ensured that the data would be representative of Canadian consumers. A minimum of 2,000 diaries were targeted from the online panel and 1,000 diaries from the mail panel, of which at least 400 had to come from households without Internet access at home. The quotas for the age, income, gender and place-of-residence strata guaranteed a margin of error below 8 per cent in every stratum.

Invitations were sent to a stratified random sample of around 50,000 members of the online panel, and around 5,000 members of the mail panel. Online participants were allowed to opt out of the SD component, but mail participants were required to complete both parts. The survey was distributed in waves over the month of November 2009. There were six online and four mail waves. Diaries started on different days of the month based on the time of arrival of the invitations to participate. The sample therefore provides a good representation of a month's worth of payment behaviour.

The final sample consists of 6,868 questionnaires, 3,405 diaries and around 16,000 transactions. From the online panel, 5,701 SQs were collected, together with 2,238 completed SDs,⁹ and 1,167 completed SQs and SDs from the mail panel.¹⁰

The editing phase of the survey garnered complete data for the majority of the SQs. First, callbacks helped to correct most missing values or entry errors in the SQ. In a few SQ questions,

⁷Cashback is the cash a user requests from a merchant when using a debit card, over and above the value of the purchase.

⁸Canadian Internet Use Survey, Statistics Canada 2009.

⁹The online panel response rate for completing the SQ was 11.5 per cent.

¹⁰There was a 23.3 per cent response rate for offline participants.

Ipsos Reid edited the responses based on clear rules where the cause of error was evident. In the final data set, the proportion of missing answers was below 0.5 per cent for almost all SQ questions.¹¹ To guarantee the quality of the SD responses, SDs were eliminated from the sample if less than 70 per cent of the mandatory questions had a valid response.

2.3 Sample weights

Ipsos Reid produced two sets of sample weights: one for all SQ respondents and another for SD respondents only. Sample weights, in general, correct biases that arise because some socioeconomic groups are overrepresented or underrepresented in the survey sample. For the 2009 MOP survey, the sample weights were constructed to match the weighted estimates of important reference statistics with the corresponding estimates from two other surveys, as follows:

- The 2009 Canadian Internet Use Survey (CIUS), conducted by Statistics Canada, which was used as a proxy for the distribution of Canadian adults by demographic strata, online shopping and Internet access.
- The Canadian Ipsos Reid Omnibus telephone survey (OMNI), which, during November 2009, carried four of the key questions from the MOP survey and provided information about access to, and use of, different payment methods.

Both the CIUS and the OMNI are considered reliable and unbiased.

The weights for the 2009 MOP survey are based on demographics, MOP usage and adoption, which were taken from the CIUS where applicable, and from the OMNI. Also, the weights for the SD reflect differences between those who completed only the SQ and those who completed the SD. The calculation of weights was done by “raking,”¹² which iteratively adjusts weighting factors so that the marginal totals of the adjusted weights agree on specified characteristics with the corresponding totals for the population.

The weights for the online and the mail samples were calculated separately before the two samples were fused into the final weighted sample. To justify this fusion, special attention was paid to the different profiles of the online and the mail samples. After weighting the sub-

¹¹The questions about cash in the wallet and cash stored elsewhere, as well as bank account plans and fees and credit card plans, fees and interest rates, showed higher-than-average responses of “not sure” or “don’t know.” Also, a level of missing information remains at the diary level for some entries, such as the questions about the main reasons to use the chosen MOP. Participants often also answered “don’t know” to the question on what MOP are perceived as not being accepted. See Arango, Huynh and Sabetti (2011) for imputation strategies to deal with some of these issues.

¹²See, for example, Izrael, Hoaglin and Battaglia (2000).

samples to match the OMNI and the CIUS distributions, there were no significant differences in payment behaviour between the online and mail samples.

The 2009 MOP unweighted sample is close in composition to the CIUS sample, which demonstrates the effectiveness of using quotas (Table 1).

On average, a respondent who completed the diary made 5.8 transactions in the 3-day period; the average transaction amount was \$48.4. The majority of transactions recorded in the SD are classified as groceries or drugs (33 per cent) and entertainment and meals (22 per cent). In terms of value share, groceries and drugs are also at the top, accounting for 27 per cent. The vast majority of all transactions (83 per cent) are conducted at a physical store.

As for possible fatigue effects due to the duration of the diary, there are no significant differences in the total number of transactions as well as the number of transactions by payment method between day one, day two and day three.

3 Main Results of the Survey

The 2009 MOP survey provides a snapshot of the payment behaviour and MOP usage of Canadian consumers. The MOP covered are mainly cash, debit cards, credit cards (with or without contactless capabilities), personal cheques and stored-value cards.¹³ Most consumers use at least four of these MOP in a typical month.

3.1 Canadians' MOP management

Cash Canadian consumers carry about \$70¹⁴ in cash with them. On average, they keep \$242¹⁵ in cash stored in other places such as their home or vehicle (Table 2). About 5 per cent do not have any cash on hand, and 37 per cent do not have any cash stored elsewhere. The SQ average monthly cash spending is \$382.

There are significant differences in cash usage across socioeconomic groups. For example, cash on hand and cash spending increase with household income. Also, older consumers have the most cash on hand, but the lowest monthly cash spending. In contrast, young people have the highest monthly cash spending and most cash held in store, but carry the lowest amount of

¹³ Any MOP could be recorded in the diaries if used for a day-to-day purchase (e.g., online PayPal or travellers cheques). Also, the diary defines a stored-value card as one that can be reloaded and excludes gift cards.

¹⁴ The survey question was: “[H]ow much Canadian cash do you personally have at the present time [i]n your wallet, purse or pocket?” Excluding responses > \$1,000, which are less than 1 per cent of all survey questionnaire responses.

¹⁵ The survey question was: “[H]ow much Canadian cash do you personally have at the present time [n]ot in your wallet, purse or pocket or in your bank accounts, but stored elsewhere (e.g., your home, vehicle, safety deposit box, etc.)?” Excluding responses > \$10,000, which are less than 1 per cent of all survey questionnaire responses.

cash with them. Residents of rural areas and males tend to hold more cash in store and spend more cash than the average Canadian (Table 2).

The most popular way of obtaining cash is through the ATM network. On average, consumers withdraw cash from an ATM once a week, and the typical ATM withdrawal is around \$113. They also obtain cash from a teller or in the form of cashback on a debit card transaction about once or twice a month. The average amount for withdrawal from a teller is \$236 and for cashback it is \$60 (Tables 3 and 4).

Bank accounts and debit cards Nearly all of the respondents have a bank account and a debit card (Table 5). Bank accounts have different features and fee structures. About half of the consumers pay monthly fees on their bank account associated with their main debit card, but monthly fees are often waived if the balance in the bank account stays high enough throughout the month. Also, about a third of respondents pay additional fees for debit card transactions if they exceed 20 transactions per month (Table 6).

The average consumer has a bank account balance that fluctuates between \$1,800 and \$4,100 every month. However, about half of the respondents have minimum balances below \$500 and maximum balances below \$4,000 (Table 7).¹⁶

Credit cards Almost 80 per cent of Canadian adults own a credit card, in most cases issued by the bank at which they have their bank account. About half of them own two or more credit cards. Credit card ownership increases with household income, and so do the number of credit cards (Table 5).

Two-thirds of the credit card owners can be considered as “convenience” users: they usually have credit card reward plans, do not pay annual fees, have interest rates higher than or equal to 15 per cent and pay balances in full at the end of the billing period. Others, usually called “revolvers,” carry credit card debt across billing periods. More than half of those revolving have carried debt on their credit card for five or six months preceding the survey (Table 8). If consumers have experienced a major income fluctuation over the previous year, they are two times more likely to be revolvers.

Consumers charge, on average, \$1,300 a month to their main credit card; 45 per cent of them charge less than \$500 dollars a month. The median credit card limit of consumers’ primary credit cards is about \$6,000 and 42 per cent of them have limits above \$10,000. For those with an outstanding credit card debt, the average debt balance is about \$3,000 (Table 9).

¹⁶In interpreting these results, one should keep in mind that many people in Canada are paid twice a month. Also, 34 per cent of respondents reported that two people actively use their main bank account.

Cheques and stored-value cards Almost all Canadians have a chequing account which allows them to use cheques. The survey explicitly excluded payments for rent and utility bills, expenses related to operating a business, and similar non-retail payments. With these exclusions in mind, Canadians write about one personal cheque per month, for an average amount of \$196.

A quarter of Canadians have a stored-value card in their wallet, which they use approximately once a week. There are many different stored-value cards in Canada, from single-purpose cards, which can be used only at a particular store or chain, to multipurpose stored-value cards offered by the credit card networks. The transaction values for stored-value cards are generally low, although some larger payments occur; half of the payments are below \$5, but the mean value is \$27.

3.2 Canadians' choices of MOP

The intensity of MOP usage can be measured in two ways: by frequency (how often consumers use an MOP), and by value share (how much of their expenses are paid with an MOP). Cash, debit, credit cards and cheques are used at least once a week by 86 per cent, 68 per cent, 47 per cent and 11 per cent of all Canadians, respectively (Table 10). These results are confirmed in the diaries, where cash dominates other MOP in volume, accounting for 54 per cent of all transactions, followed by debit cards with 25 per cent and credit cards with 19 per cent (Table 11). However, credit cards lead in terms of payment values, accounting for 41 per cent of all SD expenses.

Transaction type and payment choices One of the key advantages of the diaries is their ability to provide a detailed description of where and when consumers use different MOP.

Transaction value, for example, is a key predictor of MOP usage. There is a decreasing relationship between cash usage and transaction values. Cash prevails for transactions up to \$25, accounting for 76 per cent of all transactions below \$15, and for 49 per cent of those in the \$15 to \$25 dollar range. Debit cards do not dominate in any transaction range, whereas credit cards clearly dominate payments above \$50. However, there seems to be strong substitution among cards, since debit cards surpass credit cards for transactions below \$50 (Table 12).¹⁷

The relationship between transaction value and the choice of MOP is further highlighted by the fact that half of all cash payments are below \$8. The average cash transaction is \$16.9. In contrast, the average transaction values are much higher for debit (\$51.2) and credit cards

¹⁷Arango, Huynh and Sabetti (2011) show that credit card rewards, which are proportional to the transaction value, may act as an incentive to use a credit card instead of a debit card for higher transaction values.

(\$84.5), as reported in Table 13.¹⁸

The diaries also reveal interesting links between the choice of MOP and purchase categories. For everyday items and services, such as groceries and drugs, travel and parking, and entertainment and meals, cash is the preferred payment method by volume, accounting for half or more of all payments (Table 14). However, in terms of total amount spent, cards dominate in all retail sectors, with credit cards being predominant, except for entertainment and meals, where cash still accounts for 45 per cent of total spending (Table 15).

As would be expected, cash dominates in transactions where physical presence is required, such as at a store, accounting for 51 per cent of transaction volume, and in person-to-person payments, accounting for 81 per cent. In contrast, credit cards are the most used payment method for purchases by phone or online (Tables 16 and 17).

Payments and socioeconomics Socioeconomic payment traits are similar to those found previously in Canada and also in the United States.¹⁹

Consumers with the highest annual incomes use cash relatively less and credit cards more intensively than debit cards, compared with those in the lower income ranges. Table 18 summarizes the payment frequencies by strata. In terms of value shares, income differences are even bigger. Those with the highest annual incomes use credit cards for 58 per cent of their spending, compared with 12 to 42 per cent in the lower income groups (Table 19).

There are also significant differences between age groups: younger people use debit cards more intensively and credit cards less intensively than older people.²⁰

3.3 Perceptions of MOP attributes

Consumer perceptions and attitudes about MOP attributes such as acceptance, ease of use or speed, fees and rewards, safety, and record keeping provide many clues as to why cash is so popular in terms of volume, but cards are more popular as transaction values increase.

Participants rated, on a scale from 1 to 10, how important different attributes are when choosing a payment instrument. Although all payment attributes receive high ratings, the attributes that rank at the top are security, in terms of protection against fraud, counterfeit or theft; ease of use or speed; and costs. A second group of attributes in order of importance includes

¹⁸According to the Bank for International Settlements' data for Canada in 2009, the average values for debit card and credit card transactions are about \$45 and \$110, respectively.

¹⁹See Arango and Taylor (2009b) and the references therein.

²⁰Arango, Hogg and Lee (2012) argue that socioeconomic factors such as income and age affect payments mainly because they matter for the likelihood of owning a credit card. Among those with access to the major payment instruments, socioeconomic factors have little impact, once individual perceptions about MOP attributes and transaction characteristics are taken into account.

overall acceptance by merchants, the ability to facilitate record keeping and the possibility of delaying the payment. Last in importance are anonymity of payment, control of overspending and potential rewards (Table 20).

Participants also rated different payment attributes by payment method (cash, debit cards, credit cards and stored-value cards). Cash ranks best in terms of ease of use or speed, wide acceptance, and low costs, but it is considered riskier than debit and credit cards. Debit and credit cards rank similarly on most factors when used in Canada, in particular for ease of use, record keeping, risk and acceptance. However, debit cards fall short on ease of use or speed and acceptance when travelling abroad (Table 21). Stored-value cards, on the other hand, do not seem to offer any outstanding advantage in terms of the surveyed attributes.

3.4 MOP attributes and payment choices

The diaries provide direct evidence about which MOP attributes are most relevant in choosing a payment instrument during a transaction. For each transaction, the respondent identified the two most important reasons for the choice of MOP, as well as the MOP that the respondent perceived as being unavailable for the transaction.

In about 83 per cent of all transactions, ease of use or speed is the top reason for choosing the MOP, being deemed most important when choosing cash and debit cards. The next most important reasons are security and low costs for cash and debit cards, and the potential to earn rewards and delay payment for credit cards (Table 22).

Finally, perceived acceptance plays an important role in cash usage. Even though the share of cash payments in all transactions in the SD is 54 per cent, it is significantly lower (34 per cent) where consumers perceive cards as being accepted.²¹

4 Conclusion

The Bank of Canada's 2009 Methods-of-Payment survey provides a rich data set to study the use of cash and alternative payment methods in Canada. It also provides a reference point to understand future developments in the Canadian retail payment system and existing differences between Canada and other countries.

Overall, the survey provides a detailed account of how and why Canadians pay the way they do. The decision to use a payment instrument seems to be based on preferences for different

²¹Given that respondents found it particularly challenging to provide information about payment methods that were not accepted, "Don't know" was the answer in many diary transactions. We imputed acceptance values to about 10 per cent of the diary transactions for this calculation based on merchant size, type of good and payment instrument used (Stata package ICE).

payment method attributes, the type of purchase (e.g., its transaction value) and the acceptance of alternative payment methods. The results also underscore the significant heterogeneity in the way Canadians perceive and manage their methods of payment. Further analysis of the survey should provide clues about consumers' reactions to payment innovations or to changes in incentives such as fees and rewards.²²

²²See, for example, Arango, Hogg and Lee (2012); Arango, Huynh and Sabetti (2011); and Fung, Huynh and Sabetti (2012).

References

- Arango, C., D. Hogg and A. Lee. 2012. “Why Is Cash (Still) So Entrenched? Insights from the Bank of Canada’s 2009 Methods-of-Payment Survey.” Bank of Canada Discussion Paper No. 2012-2.
- Arango, C., K. P. Huynh and L. Sabetti. 2011. “How Do You Pay? The Role of Incentives at the Point-of-Sale.” Bank of Canada Working Paper No. 2011-23.
- Arango, C. and V. Taylor. 2008-09. “Merchants’ Costs of Accepting Means of Payment: Is Cash the Least Costly?” *Bank of Canada Review* (Winter): 15–23.
- . 2009a. “Merchant Acceptance, Costs, and Perceptions of Retail Payments: A Canadian Survey.” In *Evolving Payment Habits*, 99–142. Proceedings of the Bank of Finland Payment Habits Seminar 2008. Edited by H. Leinonen. Helsinki: Bank of Finland.
- . 2009b. “The Role of Convenience and Risk in Consumers’ Means of Payment.” Bank of Canada Discussion Paper No. 2009-8.
- Foster, K., E. Meijer, S. Schuh and M. A. Zabek. 2010. “The 2008 Survey of Consumer Payment Choice.” Federal Reserve Bank of Boston Public Policy Discussion Paper No. 09-10.
- Fung, B., K. Huynh and L. Sabetti. 2012. “The Impact of Retail Payment Innovations on Cash Usage.” Bank of Canada Working Paper No. 2012-14.
- Hoffmann, A., H. Wörlen, A. Friedrich, N. Knaust, U. von Kalckreuth and T. Schmidt. 2009. “Payment Behaviour in Germany - An Empirical Study of the Selection and Utilisation of Payment Instruments in the Federal Republic of Germany.” Deutsche Bundesbank.
- Izrael, D., D. Hoaglin and M. P. Battaglia. 2000. “A SAS Macro for Balancing a Weighted Sample.” In *Proceedings of the Twenty-Fifth Annual SAS Users Group International Conference*. SAS Institute.
- Jonker, N. and A. Kosse. 2009. “The Impact of Survey Design on Research Outcomes: A Case Study of Seven Pilots Measuring Cash Usage in the Netherlands.” DNB Working Paper No. 221.
- Mooslechner, P., H. Stix and K. Wagner. 2006. “How Are Payments Made in Austria? Results of a Survey on the Structure of Austrian Households’ Use of Payment Means in the Context of Monetary Policy Analysis.” *Monetary Policy & the Economy* (Q2): 111–34.

- Schmidt, T. 2011. "Fatigue in Payment Diaries - Empirical Evidence from Germany." Deutsche Bundesbank Discussion Paper Series: Economic Studies No. 2011-11.
- Taylor, V. 2006. "Trends in Retail Payments and Insights from Public Survey Results." *Bank of Canada Review* (Spring): 25–36.

Table 1: Effect of weights on sample composition

	SQ unweighted	SQ weighted	SD unweighted	SD weighted	CIUS
Age					
18–34	26.5	30.2	27.4	29.8	30.6
35–54	41.8	40.9	42.0	40.9	40.8
55–75	31.7	28.9	30.5	29.3	28.7
Income					
<30 K	26.3	17.1	26.8	16.8	16.8
30K–60K	33.3	28.0	32.7	27.9	27.5
60K–100K	24.9	28.5	24.8	28.5	28.5
>100K	15.4	26.4	15.8	26.7	27.3
Gender					
Female	53.1	51.2	51.5	51.0	51.1
Male	46.9	48.8	48.5	49.0	48.9

Note: Comparison of unweighted and weighted estimates with CIUS estimates.

Table 2: Cash management (\$)

	Cash on hand	Cash held in store	Cash spent per month
Overall	69.5	242.0	382.2
Region			
West	76.5	243.3	392.5
Ontario	65.7	282.6	369.5
Quebec	64.7	134.9	393.6
Atlantic	75.3	395.3	367.9
Age			
18–34	55.7	292.6	412.6
35–54	67.7	199.5	395.7
55–75	85.7	249.5	333.7
Income			
<30K	60.4	127.9	295.0
30K–60K	66.8	276.1	414.0
60K–100K	71.8	202.4	399.0
>100K	75.2	312.4	379.3
Gender			
Female	60.4	190.5	315.2
Male	79.2	297.2	450.8
Urban/rural			
Urban	66.3	235.8	377.6
Rural	82.7	258.0	395.9
Financial role			
Not responsible	62.7	244.9	394.4
Responsible	73.9	240.1	374.5

Note: Based on SQ responses (SQ weights used).

Table 3: Frequency of cash withdrawals per month

	ATM	Branch	Cashback
Overall	4.4	1.6	1.9
Region			
West	4.3	1.7	1.3
Ontario	4.7	1.6	1.4
Quebec	3.5	1.5	3.4
Atlantic	5.7	2.0	2.2
Age			
18–34	4.8	1.8	2.5
35–54	4.7	1.6	1.9
55–75	3.5	1.6	1.3
Income			
<30K	3.4	1.6	1.9
30K–60K	5.0	1.9	2.2
60K–100K	4.3	1.6	1.8
>100K	4.4	1.3	1.7
Gender			
Female	3.8	1.6	1.9
Male	5.0	1.7	1.9
Urban/rural			
Urban	4.7	1.5	1.9
Rural	3.5	1.9	2.0
Financial role			
Not responsible	4.3	1.7	1.8
Responsible	4.4	1.6	1.9

Note: Numbers represent the average number of withdrawals conducted using a certain method. Based on SQ responses (SQ weights used).

Table 4: Typical amount withdrawn (\$)

	ATM	Branch	Cashback
Overall	113.0	235.5	59.6
Region			
West	112.7	185.3	48.7
Ontario	107.0	322.9	51.9
Quebec	130.0	129.5	90.4
Atlantic	110.2	185.5	37.6
Age			
18–34	94.5	165.2	60.9
35–54	113.8	206.5	62.4
55–75	132.1	318.7	52.1
Income			
<30K	106.8	180.8	54.2
30K–60K	122.7	325.8	54.7
60K–100K	111.2	225.3	61.5
>100K	109.3	192.4	64.8
Gender			
Female	101.0	160.8	47.8
Male	124.7	303.2	74.3
Urban/rural			
Urban	111.2	263.1	54.8
Rural	120.9	169.7	75.6
Financial role			
Not responsible	99.8	151.4	73.5
Responsible	120.4	276.6	52.2

Note: Numbers represent the average amounts withdrawn using a certain method. Based on SQ responses (SQ weights used).

Table 5: Debit and credit card ownership by strata

	Credit cards		Debit cards	
	Ownership (%) ¹	Number of cards	Ownership (%) ¹	Number of cards
Overall	79.8	2.2	97.1	1.4
Region				
West	80.8	2.3	97.0	1.3
Ontario	80.3	2.3	96.6	1.3
Quebec	79.3	1.9	98.0	1.4
Atlantic	74.2	2.0	97.8	1.4
Age				
18–34	73.6	1.6	97.6	1.4
35–54	81.3	2.3	97.6	1.4
55–75	84.2	2.7	96.0	1.3
Income				
<30K	53.1	1.3	94.8	1.2
30K–60K	77.0	2.0	96.9	1.4
60K–100K	85.3	2.3	98.0	1.4
>100K	94.0	2.8	98.0	1.4
Gender				
Female	79.9	2.2	97.9	1.4
Male	79.6	2.2	96.3	1.4
Urban/rural				
Urban	80.5	2.3	97.5	1.4
Rural	77.8	2.1	95.8	1.3
Financial role				
Not responsible	76.9	1.9	95.4	1.3
Responsible	81.7	2.4	98.3	1.4

1. Ownership represents the percentage of consumers who own at least one credit card and one debit card, respectively. Based on SQ responses (SQ weights used).

Table 6: Bank account features (%)

	Pays monthly fee	At least 20 free transactions
Overall	53.1	69.5
Region		
West	54.1	75.2
Ontario	44.5	73.0
Quebec	62.3	57.1
Atlantic	64.0	70.4
Age		
18–34	62.4	63.6
35–54	64.7	68.9
55–75	28.3	75.3
Income		
<30K	57.5	59.1
30K–60K	53.0	65.2
60K–100K	54.5	72.6
>100K	49.0	76.7
Gender		
Female	52.9	71.3
Male	53.3	67.7
Urban/rural		
Urban	52.5	69.2
Rural	55.5	71.3
Financial role		
Not responsible	53.1	70.2
Responsible	53.1	69.2

Note: Based on SQ responses (SQ weights used).

Table 7: Bank account balances (\$)

	Minimum balance		Maximum balance	
	Average ¹	Median ²	Average ¹	Median ²
Overall	1,770.9	<500	4,094.3	2,000 to 3,999
Region				
West	2,062.3	<500	4,613.4	2,000 to 3,999
Ontario	1,684.2	<500	4,058.6	2,000 to 3,999
Quebec	1,622.1	<500	3,580.2	2,000 to 3,999
Atlantic	1,483.3	<500	3,731.8	2,000 to 3,999
Age				
18–34	1,203.4	<500	3,156.9	1,000 to 1,999
35–54	1,707.1	<500	4,163.6	2,000 to 3,999
55–75	2,444.1	500 to 999	4,965.4	2,000 to 3,999
Income				
<30K	1,022.5	<500	2,226.3	1,000 to 1,999
30K–60K	1,578.2	<500	3,481.6	2,000 to 3,999
60K–100K	1,791.2	<500	4,278.0	2,000 to 3,999
>100K	2,413.7	500 to 999	5,679.7	4,000 to 5,999
Gender				
Female	1,660.8	<500	3,823.7	2,000 to 3,999
Male	1,886.3	<500	4,378.6	2,000 to 3,999
Urban/rural				
Urban	1,781.9	<500	4,090.3	2,000 to 3,999
Rural	1,756.9	<500	4,105.3	2,000 to 3,999
Financial role				
Not responsible	1,645.9	<500	3,740.1	2,000 to 3,999
Responsible	1,851.6	<500	4,321.6	2,000 to 3,999

1. Averages are calculated by using the midpoint of value ranges in the questionnaire.

2. Medians are the value range such that half of the respondents indicated a value range equal to it or lower. Based on SQ responses (SQ weights used).

Table 8: Credit card features, percentages overall and by strata (%)

	Annual fee	Rewards	Interest rate ≥ 15%	Pays in full ¹		
				always	sometimes	hardly ever
Overall	34.5	69.3	62.5	59.3	19.5	21.2
Region						
West	38.1	70.6	61.1	57.2	21.4	21.5
Ontario	28.5	71.5	66.8	62.6	18.0	19.4
Quebec	37.4	65.9	60.1	59.1	18.5	22.5
Atlantic	40.9	62.2	55	51.6	23.0	25.4
Age						
18–34	36.8	64.6	59.4	49.4	24.4	26.2
35–54	33.3	69.6	61.1	55.7	20.9	23.3
55–75	34.2	73.1	67.7	73.2	13.1	13.7
Income						
<30K	28.8	54.3	61.1	58.0	19.5	22.5
30K–60K	28.1	63.8	63.2	57.9	20.5	21.6
60K–100K	35.9	70.1	60.6	54.9	21.0	24.1
>100K	40.4	78.2	64.3	65.0	17.3	17.7
Gender						
Female	31.0	68.2	63.4	57.9	20.5	21.6
Male	38.1	70.4	61.7	60.8	18.5	20.7
Urban/rural						
Urban	34.9	70	62.5	59.5	20.3	20.2
Rural	31.4	65.7	64.5	59.3	15.1	25.6
Financial role						
Not responsible	32.8	67.6	62.1	61.8	18.9	19.3
Responsible	35.6	70.3	62.8	57.8	19.9	22.3

1. Number of credit card bills paid in full in the last six months previous to the survey. Respondents are considered to: “Always” pay in full if they paid their last six statements in full, “sometimes” if they paid two to five statements in full, and “hardly ever” if they paid less than two of their last six statements in full. Based on SQ responses (SQ weights used).

Table 9: Credit card spending and debt

	Limit	Monthly charges		Average
	≥ \$10,000 (%)	average (\$)¹	≥ \$500 (%)	debt² (\$)
Overall	41.7	1,298.1	54.5	2,965.8
Region				
West	48.4	1,515.5	57.5	3,047.1
Ontario	45.4	1,259.8	53.4	3,186.3
Quebec	25.9	1,065.4	54.1	2,324.6
Atlantic	47.8	1,315.2	48.0	3,510.8
Age				
18–34	21.0	1,098.0	50.5	2,276.1
35–54	46.7	1,395.7	55.1	3,308.5
55–75	54.2	1,345.9	57.2	3,435.8
Income				
<30K	26.9	582.8	30.0	2,517.4
30K–60K	28.8	798.1	38.0	2,553.3
60K–100K	41.4	1,229.7	55.9	3,284.6
>100K	57.8	2,025.5	75.6	3,217.1
Gender				
Female	37.9	1,186.8	50.6	2,692.6
Male	45.6	1,413.9	58.5	3,263.3
Urban/rural				
Urban	43.2	1,331.6	56.4	2,975.5
Rural	38.4	1,164.5	47.7	2,993.5
Financial role				
Not responsible	35.9	1,179.2	50.1	2,803.5
Responsible	45.3	1,371.8	57.2	3,061.9

1. Monthly charges are calculated using midpoints of ranges supplied in the SQ.

2. Debt average for respondents who did not pay in full on the last due date. Based on SQ responses (SQ weights used).

Table 10: Percentage of participants who use MOP at least once a week (%)

	Cash	Credit card	Debit card	Personal cheque
Overall	86.0	47.4	67.8	11.3
Region				
West	85.1	49.3	67.0	14.1
Ontario	88.1	48.1	67.8	10.5
Quebec	83.7	45.6	66.6	9.7
Atlantic	86.2	41.7	74.4	9.2
Age				
18–34	83.7	45.3	74.5	7.7
35–54	85.1	48.1	72.4	9.5
55- 75	89.4	48.5	54.4	17.4
Income				
<30K	85.9	20.3	63.7	10.2
30K–60K	86.2	35.9	69.2	9.7
60K–100K	87.5	51.9	68.7	11.5
>100K	84.1	69.2	67.8	13.5
Gender				
Female	85.9	43.6	71.6	10.4
Male	86.0	51.5	63.7	12.3
Urban/rural				
Urban	86.3	49.8	68.4	11.1
Rural	86.2	40.5	67.4	12.9
Financial role				
Not responsible	85.6	43.7	66.9	6.7
Responsible	86.2	49.8	68.4	14.4

Note: Percentages represent share of respondents who use a certain MOP more than four times a month. Based on SQ responses (SQ weights used).

Table 11: SD Value and volume shares by MOP (%)

	Value share	Volume share
Cash	22.7	53.7
Credit card	40.8	19.3
Debit card	31.6	24.7
Personal cheque	3.9	0.8
Stored-value card	1.0	1.4

Note: Percentages represent the proportion of the total values and volumes of transactions, adding up across diaries, paid with a certain MOP (SD weights used).

Table 12: Percentage of SD transactions by transaction value range

	<\$15	\$15–\$25	\$25–\$50	≥\$50
Cash	76.4	49.2	34.2	19.0
Credit card	7.0	20.2	28.6	40.7
Debit card	14.4	29.3	35.3	36.8
Personal cheque	0.1	0.4	1.2	2.3
Stored-value card	2.0	0.9	0.7	1.2

Note: Percentages represent shares of transaction made with a certain MOP, conditional on the transaction range. The entries in every column add up to 100 per cent (SD weights used).

Table 13: SD mean and median transaction amounts by MOP (\$)

	Mean	Median
Cash	16.9	8.0
Credit card	84.5	40.0
Debit card	51.2	29.0
Personal cheque	195.6	60.0
Stored-value card	26.8	4.8

Note: SD weights used.

Table 14: Percentage of SD transactions by type of good

	Cash	Credit card	Debit card	Personal cheque	Stored-value card	Good share
Groceries/drugs	49.4	16.8	32.5	0.2	1.1	32.9
Gasoline	36.4	33.8	28.0	0.0	1.8	7.6
Personal attire	35.8	33.7	28.9	0.4	1.1	5.4
Health care	37.9	32.8	27.7	1.5	0.0	1.9
Hobby/ sporting goods	46.3	22.5	27.4	2.6	1.1	3.6
Professional/ personal services	42.1	24.1	28.1	5.3	0.3	2.3
Travel/parking	74.5	21.1	3.9	0.0	0.5	3.1
Entertainment/ meals	68.6	11.4	17.2	0.2	2.6	22.0
Durable goods	35.3	37.3	26.0	0.9	0.5	5.7
Other	64.4	14.1	17.7	2.3	1.4	15.6

Note: In every row, the entries corresponding to MOP (columns 1 through 5) add up to 100 per cent (SD weights used).

Table 15: Percentage of SD total spending by type of good

	Cash	Credit card	Debit card	Personal cheque	Stored-value card	Value share of good
Groceries/drugs	27.1	27.5	43.4	0.5	1.1	27.0
Gasoline	29.1	40.5	27.7	0.2	2.3	6.8
Personal attire	16.2	50.5	31.8	0.2	1.0	7.7
Health care	9.4	73.2	14.4	2.7	0.0	3.8
Hobby/ sporting goods	17.8	38.1	33.2	5.7	3.8	3.6
Professional/ personal services	12.1	40.9	25.2	21.8	0.0	5.8
Travel/parking	36.2	52.9	10.7	0.0	0.2	1.4
Entertainment/ meals	45.0	28.1	25.5	0.4	0.8	8.8
Durable goods	9.5	61.2	26.5	0.7	0.7	17.6
Other	23.2	34.7	28.9	11.6	0.5	16.4

Note: In every row, the entries corresponding to MOP (columns 1 through 5) add up to 100 per cent (SD weights used).

Table 16: Percentage of SD transactions by channel

	Cash	Credit card	Debit card	Personal cheque	Stored-value card	Volume share of channel
By mail	12.1	25.7	3.7	57.6	0.9	0.3
At a store	50.9	19.9	27.4	0.1	1.6	84.5
By phone	28.6	45.5	15.5	10.4	0.0	0.5
Online	10.5	63.8	22.1	1.2	2.5	1.0
To a person, not at a store	80.6	6.9	6.5	5.7	0.4	6.0
Other	71.2	15.1	11.5	1.6	0.6	7.7

Note: In every row, the entries corresponding to MOP (columns 1 through 5) add up to 100 per cent (SD weights used).

Table 17: Percentage of SD spending by channel

	Cash	Credit card	Debit card	Personal cheque	Stored-value card	Value share of channel
By mail	3.0	43.0	1.3	52.1	0.0	1.9
At a store	21.2	41.8	34.1	0.4	1.2	78.8
By phone	6.6	71.7	13.6	8.1	0.0	1.5
Online	6.1	71.8	18.3	0.6	0.5	2.1
To a person, not at a store	47.1	14.4	19.9	17.8	0.0	7.0
Other	23.9	34.2	27.0	14.0	0.3	8.4

Note: In every row, the entries corresponding to MOP (columns 1 through 5) add up to 100 per cent (SD weights used).

Table 18: Percentage of SD transactions by MOP and strata (%)

	Cash	Credit card	Debit card	Personal cheque	Stored-value card
Overall	53.7	19.3	24.7	0.8	1.4
Region					
West	50.5	20.9	26.7	1.0	1.8
Ontario	56.4	18.9	22.5	0.6	1.7
Quebec	54.1	19.7	25.5	0.7	0.9
Atlantic	57.4	16.3	24.8	1.5	0.6
Age					
18–34	48.9	18.6	31.2	0.5	1.8
35–54	53.8	18.1	25.8	0.8	1.8
55–75	59.0	21.9	17.7	1.0	0.7
Income					
<30K	65.2	6.9	26.3	1.1	0.6
30K–60K	56.5	15.4	26.6	0.7	1.1
60K–100K	52.8	20.0	26.0	0.7	1.2
>100K	47.3	29.7	20.4	0.7	2.5
Gender					
Female	54.1	18.1	26.2	0.7	1.3
Male	54.3	20.7	23.1	0.8	1.5
Urban/rural					
Urban	53.9	20.3	23.9	0.8	1.6
Rural	55.2	15.4	28.1	0.9	0.9
Financial role					
Not responsible	53.6	17.4	27.7	1.0	0.9
Responsible	54.6	20.6	23.0	0.7	1.7

Note: Percentages represent share of number of transactions conducted by a certain MOP and rows sum up to 100 per cent (SD weights used).

Table 19: Percentage of total SD spending by MOP and strata (%)

	Cash	Credit card	Debit card	Personal cheque	Stored-value card
Overall	22.7	40.8	31.6	3.9	1.0
Region					
West	20.9	37.2	37.3	3.6	1.1
Ontario	22.4	46.7	26.3	4.1	0.5
Quebec	24.2	41.0	30.9	2.1	1.8
Atlantic	24.8	28.7	37.5	8.5	0.4
Age					
18–34	22.7	40.5	34.0	1.5	1.3
35–54	22.5	38.8	33.5	3.8	1.3
55–75	22.8	43.7	27.5	5.8	0.3
Income					
<30K	32.8	11.9	43.2	11.8	0.3
30K–60K	27.7	31.7	36.5	3.3	0.7
60K–100K	21.9	41.7	32.9	2.4	1.1
>100K	15.8	57.9	22.5	2.6	1.3
Gender					
Female	23.1	40.6	33.9	1.7	0.6
Male	22.3	41.1	29.7	5.7	1.3
Urban/rural					
Urban	21.8	43.0	30.8	3.5	0.9
Rural	25.8	32.2	35.1	5.5	1.4
Financial role					
Not responsible	22.8	36.8	35.0	4.5	0.9
Responsible	22.6	42.9	29.9	3.6	1.0

Note: Percentages represent share of the total transaction value conducted by a certain MOP and rows sum up to 100 per cent (SD weights used).

Table 20: Attitude toward MOP attributes

	Top ratings ¹ (%)	Average rating ²
Security	73.3	8.9
Ease/speed	72.6	8.9
Costs	66.3	8.5
Acceptance	64.7	8.6
Record keeping	51.8	8.0
Timing/delay	49.5	7.7
Anonymity	48.3	7.5
Control spending	44.2	7.3
Rewards	38.0	7.1

1. Percentages represent the share of participants rating the attribute in the top range, on a scale from 1 to 10, in terms of how important it is to them.

2. Average represents the average importance rating for a certain attribute. Based on SQ responses (SQ weights used).

Table 21: Perceptions about MOP attributes (%)

	Cash	Credit card		Debit card		Stored-value card
		in Canada	travelling	in Canada	travelling	
Ease/speed	79.0	75.6	57.1	72.4	30.7	45.0
Risk fraud/loss	39.5	22.6	–	24.1	–	48.4
Significance of fraud/loss	17.3	12.2	12.0	10.5	11.7	31.3
Acceptance	83.1	54.1	38.2	45.1	17.6	16.8
Costs	71.8	28.9	15.6	32.1	13.3	45.8
Record keeping	26.8	53.6	–	50.5	–	18.6

Note: Proportions of participants with “most favourable ratings” on a scale from 1 to 5. Based on SQ responses (SQ weights used).

Table 22: Reasons for choice of MOP (%)

	Ease	Security	Costs	Rewards	Timing/delay	Cashback
All MOP	83.2	17.3	16.9	15.6	4.2	2.3
Cash	96.9	23.4	24.8	2.4	1.0	1.1
Credit card	81.3	5.8	6.4	68.6	19.0	3.3
Debit card	96.6	20.3	16.9	11.5	1.2	5.2
Personal cheque	83.0	37.6	9.2	1.9	25.4	0.2
Stored-value card	95.9	30.4	13.0	13.7	4.5	4.8

Note: Respondents were allowed to provide two reasons for their choice of MOP. Percentages represent those who gave a certain reason for their MOP choice, conditional on using a particular MOP (SD weights used).