

The Bank of Canada Experience with Payment Surveys

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Outline

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Motivation for Survey Data

- Demand for bank notes relative to other payment methods
 - ▶ Innovations and adoption
 - ▶ Payment method attributes (costs, convenience and risks)
 - ▶ Consumer heterogeneity
- Confidence in bank notes
- Retail payment system efficiency and security
 - ▶ Competition among payment platforms
 - ▶ Direct vs indirect pricing
 - ▶ Payment rules and regulations
 - ▶ Consumer and merchant adoption decisions
 - ▶ Resilience against fraud, ID theft, operational risk

2004 Survey of the Public

Objectives

- Measure confidence in bank notes
 - ▶ Confidence and acceptance of bank notes
 - ▶ Counterfeiting experience and perceptions
- Assess bank note holdings and payment method usage
 - ▶ Cash balances and cash handling habits
 - ▶ Frequency of payment method usage (categories from daily to never)
 - ▶ Perceptions of convenience and risk

2004 Survey of the Public

Methodology

- Telephone interviews (15 minutes)
- 2022 adult Canadians (representative)
- 2.2% margin of error, 19 times out of 20
- 10% response rate (somewhat low)
- Survey cost \$106k

2004 Survey of the Public

Lessons Learned

- Modeling cash usage requires detailed data on alternative payment methods (e.g. fees, rewards, risks, acceptance)
 - ▶ Convenience and risk broad categories
 - ▶ Consumer shopping patterns essential
- More socio-economic characteristics useful for econometric modeling
- Interpretation of questions important
- Pre-testing with focus groups + pilot essential
- Sensitive nature of questions could affect responses and response rates

2006 Survey of Retailers

Objectives

- Payment method acceptance and shares in annual sales
- Payment method preferences and perceptions of costs, reliability and risk
- Payment method costs
- Processing arrangements with acquirer/financial institution
- Cash holdings

2006 Survey of Retailers

Methodology

- Telephone interviews with 504 senior financial decision-makers (20 minutes)
- Disproportionate sampling across company size, sub-sector, and region
- Data was weighted back to known parameters (number of employees and region)
- +/-4.4% margin of error, 19 times out of 20
- 46% response rate (standard for business research)
- Survey cost \$86k

2006 Survey of Retailers

Lessons learned

- Merchants lack awareness of cash handling costs
- Contracts with payment service providers difficult to disentangle
- Merchants know transaction value but not volume (especially for cash)
- Difficult to assess fixed costs

CFM

Methodology

- Syndicated study with financial institutions
- Household balance sheet information
- Access panel sampling on monthly basis
- 12,000 mail-in questionnaires submitted annually
- Omnibus approach for retail payments
- Survey cost for our questions: \$30k per year

CFM

Objectives of the Payment Section

- Time series on payment method usage
 - ▶ Monitor payment trends and innovations
 - ▶ Change in cash handling practices
 - ▶ Change in cash holding balances

2009 Diary Based Survey

Similar Initiatives as:

- VISA Payment Panel Study
- Telecom PARIS diary survey
- Australian, German and Austrian Central Banks' diary surveys
- Debit Card module of the Michigan Surveys of Consumers
- Payment studies at the Netherlands and Finland Central Banks
- Payment study by the American Bankers Association and Dove Consulting
- Federal Reserve Bank of Boston (Boston FED) payment surveys

2009 Diary Based Survey

Collaboration with the Federal Reserve Bank of Boston

- Benefit from the Boston Fed's experience with surveys
- Pursue survey instruments comparable between US and Canada
- Sharing of survey instruments and data
- Research collaboration

2009 Diary Based Survey

Objectives

- Understand why, how often, where, and how cash is used in day-to-day transactions
 - ▶ What factors determine payment method adoption and usage?
 - ▶ How do experience and habits affect payment choices?
 - ▶ What role do fees and incentives play in payment choices?

2009 Diary Based Survey

Econometric Modeling

- Two layers of decisions: adoption and usage
- Payment method demand as a system
- Determinants:
 - ▶ Payment method attributes
 - ▶ Transaction characteristics
 - ▶ Consumer socio-economic characteristics

2009 Diary Based Survey

Methodology

- Telephone interview + 7-day diary
- Three phases: focus groups, pilot, and roll-out
- Random digital dialing (RDD) sample
- Quota targeting by age, gender, income, region, urban/rural
- 2.2% margin of error, 19 times out of 20
- Expected diary attrition rate 40%
- Monetary incentives

2009 Diary Based Survey

The Telephone Interview

- Payment method adoption and frequency of use on average
- Payment method attributes as perceived by consumers
- Payment method factual attributes (e.g. fees, rewards, security, contactless)
- Payment method experiences and habits
- Socio-economic characteristics

2009 Diary Based Survey

The Diary

- Type of transaction (e.g. @POS, Internet, P2P)
- Transaction characteristics (e.g. value, good/service, time, new location)
- Payment method used and accepted
- Cash balances start/end of the day

2009 Diary Based Survey

Advantages

- A comprehensive view of consumer payment choices
- Actual consumer actions rather than memory
- Accurate measure of bank note usage
- Accurate measure of payment method acceptance

2009 Diary Based Survey

Challenges and Limitations

- Heavy burden on consumers
- Payment method attributes: perceptions vs reality
- Limited dynamic behavior (adoption, credit and liquidity issues)
- Survey instrument clarity and ease of use
- Cost
- Attrition/fatigue bias and weighting

Conclusion

- Surveys have helped the Bank to understand:
 - ▶ The public's confidence and use of bank notes
 - ▶ The costs of accepting payment methods
 - ▶ The need for a two-sided approach to payment usage
 - ▶ That different research questions need different data approaches

BoC Payment Studies Based on Surveys

- <http://www.bankofcanada.ca/en/review/spring06/taylor.pdf>
- <http://www.bankofcanada.ca/en/res/dp/2008/dp08-12.pdf>
- http://www.bankofcanada.ca/en/review/winter08-09/arango_taylor.pdf