Attitudes and Preferences in Relation to Internet Banking in The Caribbean

Prepared By:

Dr. Justin Robinson

Dr. Winston Moore
Background to Study

- The financial services industry is important to overall economic activity within the Caribbean.
- Internet Banking Services has been a major development over the last 5 years.
- The crucial role of productivity in economic development and the utilization of modern productivity tools in the Caribbean.
The Importance of Financial Services

- Financial services are key to development within countries both globally and regionally.
The Importance of Financial Services

- Economic Growth
- National Savings and Investment
- Financial Industry Information
The Importance of Financial Services

• Given the importance of the financial services sector, monitoring and assessment of new developments within the industry is of some importance.
Internet Banking

- Internet banking refers to a system that enables bank customers to obtain general information about the bank’s products and services, access their accounts, and perform a number of different banking transactions using the internet.
Benefits of Internet Banking

- The benefits can be separated by groups:
  - Commercial Banks
  - Customers
Benefits to Banks

- Competitive Advantage
- Improved Efficiency
- Operating Costs Reduction
Benefits to Banks

- Craigwell et al. (2005) find large efficiency gains from financial innovation among Barbadian commercial banks. The study estimates that the introduction of automatic teller machines would have increased efficiency among Barbadian banks by about 3.5 percent.
Benefits for Customers

Convenience → Customer → Increased Efficiency
Internet Banking In the Caribbean

- Since the late 1990s, banks have made significant investments in online infrastructure.

- Customer use and perceptions in relation to internet banking is still under-researched.

- Basic information on individuals and internet banking use is not readily available in the region.
Internet Banking In the Caribbean

• The closest study to ours conducted in the Caribbean is that by Fraser and Henry (2007), which looked at online purchasing within Barbados.

• Online shopping was related to three factors, gender, age and ethnicity.
Previous Literature

• Literature focuses on:
  ▫ Economics of Internet Banking.
  ▫ Why do individuals use Internet Banking services?
Economics of Internet Banking

- Reduced Communication costs
- New Technologies
- Reduction in Time
- Costs Savings
Economics of Internet Banking

- Benefits can be derived in two areas:
  - Markets
  - Hierarchies
Economics of Internet Banking

- Main benefit to markets:
  - Electronic Brokerage Effect

- Main benefit to hierarchies
  - Electronic Integration Effect
Why do individuals use Internet Banking services?
Why do individuals use Internet Banking services?

- Demographic and Socioeconomic variables?
  - Includes: age, gender, marital status, education, income, etc.
  - Age, income and education have been studied predominantly
  - These characteristics have a significant impact on customers attitudes towards IBS.
Why do individuals use Internet Banking services?

- Delone (1988) & Hasan (2003), suggests that:
  - Prior experiences with IT impact on consumer’s and belief attitudes towards computer related systems.
  - Igbaria and Iivari (1995) argue that prior experience increases the ability of individuals to use computers competently.
Why do individuals use Internet Banking services?

• Internet banking provides consumers with a more convenient way to conduct business transactions (Lockett and Litter, 1997).

• Mols et al (1999) found that convenience was an important consideration affecting a consumer’s decision to use IBS.
Why do individuals use Internet Banking services?

- For example, Howcroft et al. (2002) found that lower fees and the higher quality of service were the major factors contributing to the use of home-based banking services in the United Kingdom.
Why do individuals use Internet Banking services?

- However, bank customers in Turkey identified instant feedback, faster transactions, easy access and cost savings as some of the positive attributes pertaining to internet banking (Polatoglu and Ekin, 2001).
Why do individuals use Internet Banking services?

- Liao and Cheung (2002) and Gerrard and Cunningham (2003) all found that the speed of response associated with electronic banking and the rapid access to services were important attributes for individuals who used internet banking.
Why do individuals use Internet Banking services?

- Mols et al. (1999), Moutinho and Smith (2000) and Kolodinsky et al. (2004) found that convenience was an important consideration affecting a consumer’s decision to use internet banking.

- Younger consumers, in particular, value the convenience of online banking and also regarded the lack of face to face contact as less important than older persons (Howcroft et al., 2002).
Why do individuals use Internet Banking services?

- Daniel (1999), Sathye (1999); point to the level of complexity as an important factor when looking at IBS.
  - Sathye (1999), stated that consumers in Australia did not use IBS, because of its complexity - even though they were aware of its existence.
Why do individuals use Internet Banking services?

COST SAVINGS

ATTRACTION TO IBS

CONVENIENCE

SPEED
Why do individuals use Internet Banking services?

• Consumers are concerned with:

  - Level of Risk associated with IBS
  - General security of IBS
  - Likelihood of Fraud
Survey Design & Methodology

- The primary research tool for this study was a multi-sample project conducted between December and January 2008/2009. The survey targeted 4,000 individuals across ten (10) Caribbean countries. The sample sizes for each country were based on population sizes.
Survey Design & Methodology

The study sought to investigate:

• the extent to which persons in the Caribbean utilized internet banking services;
• the frequency with which such services were used;
• the factors that influenced the extent and frequency with which internet banking services were used.
## Utilization of IBS

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Country</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antigua</td>
<td>39</td>
<td>61</td>
<td>Montserrat</td>
<td>18</td>
<td>82</td>
</tr>
<tr>
<td>Barbados</td>
<td>31</td>
<td>69</td>
<td>St. Kitts &amp; Nevis</td>
<td>35</td>
<td>65</td>
</tr>
<tr>
<td>Dominica</td>
<td>26</td>
<td>74</td>
<td>St. Vincent &amp; Grenadines</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Grenada</td>
<td>15</td>
<td>85</td>
<td>Trinidad &amp; Tobago</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>Jamaica</td>
<td>35</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>To inquire about a balance</td>
<td>To pay bills</td>
<td>To transfer money between accounts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------</td>
<td>--------------</td>
<td>-----------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>44.8</td>
<td>37.7</td>
<td>17.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antigua and Barbuda</td>
<td>73.1</td>
<td>11.5</td>
<td>15.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barbados</td>
<td>42.9</td>
<td>40.9</td>
<td>16.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dominica</td>
<td>70.4</td>
<td>7.4</td>
<td>18.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grenada</td>
<td>22.2</td>
<td>22.2</td>
<td>55.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jamaica</td>
<td>38.2</td>
<td>50.3</td>
<td>11.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montserrat</td>
<td>57.1</td>
<td>14.3</td>
<td>28.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Kitts and Nevis</td>
<td>48.9</td>
<td>19.1</td>
<td>31.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Lucia</td>
<td>13.3</td>
<td>58.3</td>
<td>28.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Vincent and the Grenadines</td>
<td>31.0</td>
<td>41.4</td>
<td>27.6</td>
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<tr>
<td>Trinidad and Tobago</td>
<td>54.6</td>
<td>27.3</td>
<td>17.7</td>
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</tr>
</tbody>
</table>
Awareness of IBS

• A proportion of surveyed individuals were unaware of the existence of IBS.
Factors enhancing the probability of internet banking

Educational level

- Post Graduate Degree
- Bachelor's Degree
- Community College
- Secondary School
- Primary School
- Other
Factors enhancing the probability of internet banking

- Income
Factors enhancing the probability of internet banking

- Age
Empirical

- **Econometric Model:**
  - Uses a discrete choice model is developed to empirically model internet banking use.
  - Assumes that the consumer gains marginal utility from internet banking.
  - Reduced form expression in consumer and demographic characteristics.
Empirical Approach (cont’d)
Econometric Results

- The number of banking transactions undertaken and the use of debit cards had the largest impact on the usage of internet banking.

Factors enhancing the probability of internet banking

- Computer use for work and personal business
- Use of the internet
- Marital status
Econometric Results (cont’d)

- The frequency of ATM use were inversely related to internet banking.
Econometric Results (cont’d)

<table>
<thead>
<tr>
<th></th>
<th>Linear Probability Models</th>
<th>Probit Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Bank Transactions</td>
<td>0.099</td>
<td>0.091</td>
</tr>
<tr>
<td></td>
<td>(8.101)**</td>
<td>(7.589)**</td>
</tr>
<tr>
<td>Use of Debit Cards</td>
<td>0.169</td>
<td>0.206</td>
</tr>
<tr>
<td></td>
<td>(6.613)**</td>
<td>(7.089)**</td>
</tr>
<tr>
<td>Personal Computer Use (Hours per week)</td>
<td>0.02</td>
<td>0.018</td>
</tr>
<tr>
<td></td>
<td>(2.481)**</td>
<td>(2.294)**</td>
</tr>
<tr>
<td>Work-related Computer Use (Hours per week)</td>
<td>0.018</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>(2.490)**</td>
<td>(2.712)**</td>
</tr>
<tr>
<td>Internet Use (Hours per Week)</td>
<td>0.042</td>
<td>0.047</td>
</tr>
<tr>
<td></td>
<td>(3.833)**</td>
<td>(4.091)**</td>
</tr>
<tr>
<td>Education</td>
<td>0.038</td>
<td>0.037</td>
</tr>
<tr>
<td></td>
<td>(4.120)**</td>
<td>(4.155)**</td>
</tr>
<tr>
<td>Income</td>
<td>0.066</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>(5.351)**</td>
<td>(4.984)**</td>
</tr>
<tr>
<td>Married</td>
<td>0.047</td>
<td>0.047</td>
</tr>
<tr>
<td></td>
<td>(3.323)**</td>
<td>(3.419)**</td>
</tr>
</tbody>
</table>
## Econometric Results (cont’d)

<table>
<thead>
<tr>
<th></th>
<th>Linear Probability Models</th>
<th>Probit Models</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency of ATM Use</strong></td>
<td>-0.052</td>
<td>-0.049</td>
</tr>
<tr>
<td></td>
<td>(-4.214)**</td>
<td>(-4.050)**</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>-0.049</td>
<td>-0.052</td>
</tr>
<tr>
<td></td>
<td>(-3.923)**</td>
<td>(-4.023)**</td>
</tr>
<tr>
<td><strong>Use of ATMS</strong></td>
<td>-0.312</td>
<td>-0.358</td>
</tr>
<tr>
<td></td>
<td>(-1.217)</td>
<td>(-1.156)</td>
</tr>
<tr>
<td><strong>Frequency of Branch</strong></td>
<td>-0.01</td>
<td>-0.008</td>
</tr>
<tr>
<td><strong>Transactions</strong></td>
<td>(-0.864)</td>
<td>(-0.718)</td>
</tr>
</tbody>
</table>
Conclusion

- It is important to monitor and assess new developments in the financial industry.

- Debit cards had the largest absolute impact on the decision to adopt IBS.

- Customers that conducted a large number of transactions were more likely to adopt IBS.
Conclusion

- Other significant positive factors in adopting IBS were:
  - Computer use for both work and personal activities
  - Use of the internet
  - Educational level
  - Income
  - Marital status
Conclusion

- Potential inverse determinants of IBS include:
  - Frequency of ATM use
  - Age