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Trust in transactions:
Australian Internet research

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Abstract

Past research on the uptake of e-commerce is mostly US based, atheoretical, and concerns Internet shopping, rather than encompassing the broader range of Internet financial transactions. 'Trust' has been implicated as an important predictor of consumer behaviour but its nature is unclear and data regarding its importance in comparison with other consumer, vendor, and website characteristics has been inconsistent. This investigation set out to assess the range of impediments to on-line transactions as perceived by end users in Australia, and the relative significance of the role of trust. The work was undertaken on behalf of a research consortium of public and private sector interests in Australia known as the Smart Internet Technology Cooperative Research Centre (SITCRC).

The research was conducted in two stages. The pilot qualitative research stage was undertaken in Melbourne in March 2002 with focus groups where end users identified a range of impediments to Internet based financial transactions. The second stage involved a quantitative study in Melbourne in November/December 2002 of 2000 randomly selected Australian Internet. A telephone survey was used to assess a range of potential predictors of trust in on-line transaction behaviour based on the factors which emerged from the qualitative pilot study. This second study explored the role of perceptions of likelihood and seriousness of negative outcomes in Internet financial transaction behaviour. Results indicated that trust was the strongest predictor of use of the Internet for financial transactions. Demographic variables such as education, age and gender had complex relationships with on-line transaction behaviours. There are some clear pointers to major behavioural factors which have to be understood and addressed before the Internet becomes the major communications transactional platform.
work for people. This requires a multi-disciplinary approach based on continuing interaction between the development of products and services emerging from the technology based programs and examination of their relevance and importance to particular segments of the user environment. This research is intended to lead to more effective user design for applications, and greater understanding of the complexities of human interaction with new communications technologies.

The primary focus of this project within the User Environment program research was to understand how consumers and providers perceive the risks associated with Internet transactions, and what factors inhibit on-line consumers. A distinction was made between financial transactions on the Internet that can be conceptualised as being at the bottom of this value chain (e.g., purchasing goods) from value-added activities that are at the top of this value chain (e.g., taking out an on-line bank loan). There is general perception that Internet users tend to be well educated, younger members of the community, however many other perceptual and attitudinal variables may also influence people’s decisions to use, or not use, the Internet. Certainly very few younger, well-educated people who have ready access to the Internet are using it for advanced financial transactions. The current study went beyond demographics to investigate psychological correlates of advanced Internet use, particularly focussing on trust and psychological variables such as the perceived likelihood, seriousness of negative outcomes of using the Internet, and confidence in solving problems that occur on the Internet. The investigation set out to focus more on the high value activities related to on-line transactions. Hence in the context of Internet banking the investigation explored patterns of behaviour related to on-line home loans and personal loans rather than behaviours associated with merely checked their bank balances or transferred money from one account to another on-line.
participants (two ‘white-collar’, one ‘blue collar’), one in which channel knowledge was low and one in which it was high. Two of the groups represented the ‘under 30s’ age group, two were 30-54, and one group was 55 years and above. Thus groups reflected different levels of channel knowledge, gender, age, education/socio-economic status and the rural/urban variable.

Questions were asked about reasons they used the Internet, major usage areas, experiences (both good and bad), of buying goods and services on the Internet, concerns and issues about credit card usage, experiences using the Internet for banking, buying shares or negotiating home loans, beliefs about the security and convenience of the Internet, relative importance of trust in comparison with other potential barriers/facilitators in Internet transactions, and how the Internet could work better. Discussions were audio-taped.

2.1 Findings from focus groups: trust comes in many guises

Trust emerged from the focus group work in Victoria as a highly significant factor in people’s attitudes to buying goods and services on the Internet. Trust came in many guises:

Can I trust the Internet to protect the security of my credit card? This includes illegal passing-on of credit card details, fraudulent use of credit card numbers and theft of credit card information by hacking.

For example:

*With the Internet it’s almost like a black hole. You can’t kind of put your hand in – it’s not tangible. It could be anywhere, anything could kind of disappear.*
If we're going to purchase over the Internet, go for a well-known company because you trust that a company that's large has adequate protection for what we're doing. They know the risks and they know what the obligations they are under and they can't really afford not to have what they need.

These concerns were compounded by widespread lack of knowledge about who is ultimately liable if a transaction goes wrong: is it the consumer, the merchant, the bank?

This pilot study unravelled a range of factors related to consumers' perceived lack of trust. In summary the main factors were fears of credit card fraud, hackers, and invasion of privacy (worries about security), concerns about the merchant's reliability, delivery of goods, after sales service and accountability if things went wrong. To a large extent, 'trust' was seen as a problem with the Internet as a vehicle for transactions, rather than conceptualised as a problem of merchant reputation (although this was referred to by some users).

The focus groups suggested that trust in the Internet is strongly negatively affected by knowledge of breaches of personal data security that has occurred to individuals when they have used the Internet. Such knowledge appeared to be widespread and to generate considerable mistrust. For example, focus group members said:

...you hear stories of people obtaining credit card numbers and buying other goods, and you get lumped with the bill. ", and
...you're giving over your details and anybody could get hold of them.

The focus groups also indicated that people appear reluctant to go into Internet banking without first thoroughly educating themselves in the procedures and the safeguards, and they put this off as likely to be time-consuming. Trust in the security
3.1 National telephone survey methodology

In November/December 2002, two thousand Internet users were surveyed in an Australia-wide random telephone survey of persons 18 years and over. The survey was conducted through a call centre in Melbourne. To reach this number of users required telephone sampling of 3753 persons. The survey included screening items, demographic items, scales used to assess frequency and type of Internet transactions, likelihood of engaging in these transactions in the next year, perceived barriers to Internet transactions, perceived difficulty of Internet transactions, perceived likelihood of negative outcomes of Internet transactions, knowledge of ‘victims’ of negative Internet transaction outcomes, perceived seriousness of the range of possible negative outcomes of Internet transactions, perceived trust in the Internet, and knowledge of and evaluation of bank websites. Most questions in the survey involved the respondent choosing from a range of options in response to a statement about the Internet (closed answer questions) and there were also some open-ended questions about reasons for non-use.

3.2 The Internet end users surveyed

Of the 3753 people surveyed, 69% (N = 2600) had access to a computer for personal use. Of these, 89% (N = 2241) had Internet access. Most used the Internet for purposes other than just email (89% or 2000 individuals). These 2000 comprise our Personal Internet Users, or ‘users group’ – the group to whom most of the survey was addressed. Of this group, 42% were assessed as ‘high channel knowledge (use the Internet nearly every day for purposes other than just email) 28% medium channel knowledge (use the Internet at least three times/week for purposes other than email) and 30% low channel knowledge (use the Internet for purposes other than email less than three times/week).
Figures 1-4 below show a summary of results

![Bar chart showing financial transactions on the Internet](image)

**Figure 1: Percent of users undertaking financial transactions on the Internet**

Figure 2 below compares the education levels of the 446 respondents at the bottom of the value chain with the 379 in the highest value chain group and shows the strong connection between higher education and value added activities.

![Bar chart showing education levels](image)

**Figure 2: Percentage of low and high value chain respondents in each education group.**

Figure 3 below shows the demographic location of respondents in the high value added group.

![Bar chart showing geographic location](image)

**Figure 3. Geographic location and value chain group**
3.4 Experiencing problems on the Internet

In order to ascertain what sort of experiences had led people to draw conclusions about problems and barriers to transacting on the Internet, respondents were asked whether they, or someone they knew, had experienced any of the risks, or whether they had heard about it happening to someone. Table 1 shows the percentage of people at various levels of ‘exposure’ to the risks. Interestingly, violation of privacy is the only risk to that a significant number of individuals had close-hand experience. But many have heard stories of hacking, credit card fraud and privacy violation. Table 1 also shows how seriously people rate these perceived risks of Internet transacting. Most people rate most of them as serious, with time taken for the transaction, and poor service as less serious than the others. These two risks were also the ones to which there was less exposure. The mix of exposure to stories about credit card fraud and privacy violations with the perceived seriousness of these events has the potential to act as a potent barrier to Internet financial transactions.
3.6 Trust in the Internet

An important area of investigation in this study was people's trust in the Internet as a medium for financial transactions. We asked about levels of trust in using the Internet for buying things, paying bills, doing banking, taking out a loan, buying
3.7 What users would like to see changed

Against the backdrop of relatively low trust, it is perhaps not surprising that when asked if there was one way they could change the Internet, people mostly opted for changes along the lines of increased security, privacy protection and confidentiality. This is shown in Table 3 below, which lists all categories of response to this item mentioned by 1 or more percent of the sample. Users wanted an increased sense of security and confidence when they use the net. They needed to know or feel that their privacy would not be violated, and their credit card details protected. If this confidence and security can be offered and accepted, usage may be expected to grow substantially. Gender and education differences were minimal on this item. Those with medium to low channel knowledge were somewhat more concerned about privacy and security than the high channel knowledge users.

<table>
<thead>
<tr>
<th>Improvement suggested</th>
<th>N= 1574</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased security/confidentiality/privacy</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>Faster online responses</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Quicker delivery of goods</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Wider options of payment/alternatives to credit card payments</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Better navigation arrangements</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Better design of sites</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Better description/more information about goods</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>More user-friendly/easier to understand</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Wider range of goods</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>More personal contact</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Confirmation of orders/receipt numbers</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Customer service/help desk availability</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lower prices</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Reimbursement/ compensation if problems</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Information on suppliers</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Easier ordering instructions</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Less downtime of sites</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Governing body needed to oversee sites</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Don’t know/Not est.</td>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>