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Trust on the Internet

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Abstract
The growing popularity of the internet has provided an opportunity for organisations to deliver services effectively and efficiently via remote channels, necessitating a fresh perspective in order to understand how to extract the best outcome in terms of customer satisfaction and profitability. We found that the factors influencing trust levels in the real world may not do so in the internet banking environment. Trust levels were high overall, but the expectation that trust levels would increase over time through use and/or benevolent activity by the Bank was not supported. The key driver for using internet banking was found to be convenience.

Key Words
Internet banking; Trust; New Zealand

INTRODUCTION
Ba and Pavlou (2002) note that “many researchers have argues that an understanding of trust is essential for understanding interpersonal behaviour in economic exchanges” (P. 244). As the internet continues to develop, gaining and maintaining trust of users will play an important part in its success in generating e-commerce. Keat et al. (2004) go so far as to claim “the secret to the success of any electronic commerce venture can be summed up in one word: trust” (p. 1).

The concept of trust is crucial because it encompasses a number of factors essential to online transactions, including security and privacy (Cheskin Research et al., 1999). Without trust, the development of e-commerce will be challenged in meeting its true potential. With no reputation for or commitment to being trustworthy an organisation may struggle to survive, and have great difficulty maintaining its competitive position. The impersonal nature of the on-line environment suggests trust is more important there than in traditional exchanges, according to Ba and Pavlou (2002).

At a corporate level, many organisations have built their reputation on trust by combining ethical behaviour, strong corporate governance and knowledgeable staff. At an operational level, successful organisations have proactively pursued relationship-building strategies in order to sustain satisfactory customer retention and acquisition. These strategies are closely aligned to current understanding of creating ongoing profitable relationships that are fundamentally based on trust and that result in strong levels of customer satisfaction.

Engendering trust that facilitates enduring customer satisfaction, retention and therefore medium to long-term profitability via remote channels is the new challenge facing organisations today. Customers continue to demand a high level of service and value from their supplier as they always have. However, an evolving landscape in terms of service delivery and technology has created new challenges for organisations in their endeavours to meet customer and shareholder expectations.

In the conventional context the trusting process begins when an individual perceives behaviours such as manners, professionalism and sensitivity. As a result of numerous interactions over time those initial behaviours then engender such traits as dependability, reliability and honesty and form the basis of an ongoing trusting relationship. The question is how in a remote environment an organisation can build a trusting relationship with a customer whose hand has never been shaken, with whom eye contact has not been made, and with whom no nicety has been exchanged. Can it be achieved in a “virtual” environment in the absence of the traditional sales or service employee?
This study sought to examine trust in the “virtual” world. Much has been written in academia on trust within the traditional, face to face, buyer/seller environment; however its applicability to the internet environment, particularly in the banking arena, has not been tested. By taking a measure of customer trust before and after a significant transaction or activity, organisations can better understand and manage the levels of trust experienced by customers. This study recognises that not only is trust multi-dimensional, but that in fact it also holds transient qualities that will affect how customers view their service providers during their relationship lifecycle.

The following section considers some of the prior research in this area, and is followed by a brief outline of the methodology used. The following section discusses the results of the study, and the final section concludes.

PREVIOUS RESEARCH

Cheskin Research et al. (1999) found that the “four top reasons people purchase online are convenience, ease of use, good process and a wide product selection. Any one of these reasons may be of more importance to a purchase decision than trustworthiness of a site” (p. 28). The study found, however, that enhancing the perceived trustworthiness of a site significantly enhanced the ability of a site to compete. Supporting the pretext that risk is a pre-condition for trust, Cheskin Research et al. found that only 10% of the respondents perceived little or no risk when purchasing on the web. For the remaining 90%, issues of trust, particularly about security of personal information, abuse of privacy and hackers were recorded as important concerns. Nevertheless, many respondents did have some confidence with supplying personal information on the web.

Trust has been viewed to date, in most research, as a static phenomenon (Hagen & Choe in Rousseau et al., 1998). Bhattacharya et al. (1998), however, suggests that levels of trust can change dependent on the variables applying at the time. Such variables will include actions, understanding of actions, understanding of outcomes, re-understanding past actions and outcomes, alterations in our understanding of participant’s behaviour and the lifting or imposing of social or organisational constraints. Diller et al. (2003) agree that trust is a dynamic process, and suggest that it deepens or retreats based on experience. They describe trust as the most important mechanism “for persons to let down their security systems and open themselves to the world” (p. 1216). They identify perceived risk as a major barrier to e-commerce.

Trust grows as two parties share a number of experiences together, thereby making the ability to predict behaviour easier and more certain over time. Taking this one step further, another party’s ability to actually deliver on its promise is a facet of the capability process. Credibility is borne from, amongst other things, capability. This is an important component of trust. For example, if a buyer does not believe that a salesperson can actually deliver under their obligations then the buyer will not believe (or trust) that person’s intentions.

A common finding throughout the prior research has been that trust in a relationship is built up over time. This implies that one is unable to have a trusting relationship from the outset and by inference; distrust must be present from the start, arguably the most important period in any relationship (McKnight et al., 1998). In contrast, recent research has found early levels of trust to be high in experiments and surveys undertaken.

The general theme in research over the last decade has pointed towards a belief that trust is not a static variable that can be easily understood and managed in isolation. Instead trust is increasingly purported to be multi-dimensional, particularly due to the acceptance that relationships evolve and exist in any number of ways.

Irrespective of the academic discipline to which it is applied, researchers do appear to agree on some fundamental issues regarding trust. Firstly, there must be some degree of risk, or vulnerability on the part of participants in order for trust to be engendered. Secondly, trust is perceived amongst the various disciplines to be a psychological state, unlike actions such as cooperation (a behaviour) or a choice (eg taking a risk) but that it is an underlying psychological condition that can cause or result from such actions. For example Rousseau et al. (1998) describe trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another.” (p. 395). Ba and Pavlou (2002) suggest that trust has two important attributes: confident expectation of a beneficial outcome and an uncertain environment.

We define trust as the perceived integrity and expertise of the organisation to meet that customer’s financial requirements on an ongoing basis.

THE STUDY

The objectives of the study reported in this paper are to:
(a) Establish key drivers for the internet as the preferred channel
(b) Assess whether perceived benevolent activity on the part of the service provider affects the level of trust experienced by the customer over a given period of time
(c) Determine if trust levels are affected by the amount of exposure to and/or use of the service.

The link between these objectives and the prior literature are shown in Table 1.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Reference</th>
<th>This survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulnerability</td>
<td>Bhattacharya et al</td>
<td>Bank understands customer’s needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bank meets customer’s needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bank will meet customer’s future needs</td>
</tr>
<tr>
<td>Risk</td>
<td>Cheskin et al</td>
<td>Personal safety</td>
</tr>
<tr>
<td>Security</td>
<td>Cheskin et al</td>
<td>Transaction security</td>
</tr>
<tr>
<td>Experience</td>
<td>Diller et al</td>
<td>Frequency of use</td>
</tr>
<tr>
<td>Time</td>
<td>McKnight et al</td>
<td>Length of internet banking use</td>
</tr>
</tbody>
</table>

Table 1: The key concepts of trust

Methodology

Data was collected from a survey of internet banking customers of a large New Zealand bank, with the sample selected randomly. An invitation to complete the survey was presented when the customer initially logged into internet banking, but actual completion of the survey occurred when they had completed their banking activity and were in the process of logging out of the session.

The survey was undertaken in two parts. The first survey was activated on Friday March 14th 2003 at 9 am, and within two hours 446 completed surveys had been received and the survey was deactivated. Approximately two weeks later, on Wednesday March 26th, a new service was launched within internet banking, which added functionality to an existing service such that the customer could now do for themselves what had previously required the assistance of a customer services representative. The second survey followed on Friday April 11th. The survey was activated at 11am and deactivated at 3.30pm with 392 completed surveys having been received.

The response rate for the second survey was 28.96% - this data was not collected for the first survey, but is expected to be similar.

RESULTS AND DISCUSSION

We begin with a review of respondents’ use of and attitude towards internet banking.

The Bank has been offering an internet banking service since late 1999. It was important to understand how long each respondent had been using the service as a high number of long time users could potentially skew the result towards higher levels of trust. This assumption is on the basis, borne out of previous research, that trust levels increase over time. In fact, length of relationship was well spread, with around 15% of respondents having been internet banking users for less than six months, around 30% for more than two years, and the remainder evenly split between six months to one year and one to two years.

<table>
<thead>
<tr>
<th></th>
<th>Never/Rarely</th>
<th>1-9 Times</th>
<th>10-19 Times</th>
<th>20+ times</th>
</tr>
</thead>
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<tr>
<td>Internet Banking</td>
<td>1%</td>
<td>35%</td>
<td>32%</td>
<td>32%</td>
</tr>
<tr>
<td>ATM</td>
<td>30%</td>
<td>58%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Telephone Banking</td>
<td>70%</td>
<td>28%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Branch</td>
<td>52%</td>
<td>40%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Table 2: Frequency of channel use (Number of times per month)

Respondents were asked the frequency with which they interacted with the bank using different channels, with the results shown in Table 2. Internet banking customers report high usage levels compared to other channels, but high usage levels were expected given the study specifically sampled internet banking users. Of interest is the proportion of customers (64%) using the service that do so ten times or more a month. Another point of
interest is the fact that 70% of respondents only rarely use phone banking, if at all, confirming the perception that the two channels are close substitutes, and customers switch from using one to the other.

The length of time a customer had been using the service had no bearing on the number of times they used it. New users of the service are just as likely to be high users as those who had been using the service for some time.

Automatic Teller Machines (ATMs) feature as a regularly used channel followed, surprisingly, by the branch and then telephone banking. With convenience often rated as the number one reason for using a particular channel (see for example Marr and Prendergast, 1993), along with an overall reduction in branch numbers over recent years, the expectation was that branches would rate very low on the scale for internet banking customers. However, it appears the two are not mutually exclusive. This is supported by other research which found that despite the convenience offered by an ATM or telephone banking (internet banking did not feature in the survey) the branch was dominant in its use for deposit taking and “high-value/risk” transactions such as insurance and loans (BAI et al., 1993). This still applies today as customers remain limited in their options for depositing cheques and continue to prefer personal contact when undertaking high value/risk financial transactions.

<table>
<thead>
<tr>
<th>Reason for Use</th>
<th>First Survey</th>
<th>Second Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience</td>
<td>95.1%</td>
<td>96.7%</td>
</tr>
<tr>
<td>Ease of Use</td>
<td>22.4%</td>
<td>24.67%</td>
</tr>
<tr>
<td>Cost Effectiveness</td>
<td>16.98%</td>
<td>17.08%</td>
</tr>
</tbody>
</table>

Table 3: Reasons for using the most frequently used channel

Respondents were asked the reasons that they used their most frequently used banking channel, with more than one response able to be selected, with the results given in Table 3. Overwhelmingly convenience was rated as the main reason for the respondents using their most frequently used channel. This fits the profile of an internet user who expects to be able to use services anywhere and anytime. Interestingly, ease of use, followed by cost effectiveness, rated much lower in importance. This is consistent with the findings of Cheskin Research et al. (1999) discussed earlier.

Figure 1: Bank’s ability to meet current needs

Credibility is an important component of trust, and the respondents’ perception of the Bank’s ability to meet their needs is therefore a measure of their trust in the Bank. Respondents were asked to rate how well the Bank’s internet banking met their banking needs, on a scale of “Poor” to “Excellent”. In terms of engendering feelings of trust it is widely accepted, as evidenced within the earlier research section of this paper, that meeting needs is an indicator of trust levels. Meeting needs consistently could qualify as benevolent activity and therefore supports the overall thrust of this research in measuring changes in perception over time.

There was a strong response towards the upper range for this question indicating that respondents felt that internet banking met their needs. Therefore we would expect that trust levels towards the Bank would be at the higher end of the scale. Of interest is the fact that there is very little difference in responses between the two surveys, although a small improvement in the second survey is apparent. A significant increase was expected, given the launch of a service offering improved functionality and customer convenience before the second
survey. However, it may be that insufficient time was allowed between the introduction of the new service and the second survey being activated, which limited respondents’ opportunity to use the new service and therefore experience a change in perception of trust towards the Bank.

![Figure 2: Bank’s ability to meet future needs](image1)

Respondents were then asked to rate how confident they were that their future banking needs would be met by the Bank’s internet banking. A customer’s belief that a supplier is able to meet their future needs is another key qualifier in terms of generating high levels of trust. With respondents believing, on the whole, that the Bank is able to meet their future needs we would expect to see this translate into high trust levels. In contrast to the previous result, one has to wonder whether customers showed greater confidence levels, due to the improved internet banking service, or whether this response could reflect the substantial changes to the overall service that had occurred twelve months prior, through redesign and replacement of the entire Internet Banking Platform.

![Figure 3: How well does the bank understand my banking needs?](image2)

Finally, respondents were asked to rate how well the bank understands their day-to-day banking needs and is working to meet them. Understanding needs is a strong indicator of trust in most of the literature. By understanding needs a customer builds up levels of trust as their needs are met time after time on each interaction. The expectation that needs are understood and will be met can be described as competence, predictability and dependability on the part of the supplier.

The expectation was that responses to this question would see a significant change towards the top end of the scale following the introduction of what was a customer initiated service. Again, perhaps there was not enough time between questionnaires and therefore not enough respondents had actually used the new service. Whatever the reason, although there was a small movement upwards, it was not statistically significant.

Strength of relationship is a critical measure for any organisation if only because it gives some indication of the propensity for a customer to shop around and look at competitors and alternatives. Respondents were asked how important they felt trust was in determining the strength of their relationship with the Bank. The purpose of this question was to gain some understanding of the relationship between trust and strength.
Figure 4: Importance of trust

Figure 4 clearly shows that trust has a strong influence on respondents’ overall sense of the strength of their relationship with the Bank. Combined with responses received to the later question regarding the respondents’ relationship with the bank this gives us a measure of any change in trust levels over the period of the survey.

Colgate (1999) found that price, relationships and value are all areas that customers consider important, and relationship closeness was rated second from a range of five factors. On further analysis Colgate found that the biggest opportunity available for banks, at that time, was strengthening the overall relationship with clients in order to drive greater customer satisfaction.

The results from this survey show that trust forms a significant component of the strength of relationship, and may provide a signal to banks that engendering trust with customers can benefit overall levels of customer satisfaction.

Examining the importance of trust across the income groups gave a fairly consistent result, with around 80% responding with Very Important or the next lower ranking. It is clear that across all income levels trust is considered a key component of the overall strength of relationship.

<table>
<thead>
<tr>
<th></th>
<th>&lt;20</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60 +</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Not Important)</td>
<td>0.00%</td>
<td>2.00%</td>
<td>2.40%</td>
<td>1.47%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>2</td>
<td>0.00%</td>
<td>7.00%</td>
<td>3.20%</td>
<td>2.94%</td>
<td>1.54%</td>
<td>4.17%</td>
</tr>
<tr>
<td>3</td>
<td>0.00%</td>
<td>17.00%</td>
<td>13.60%</td>
<td>7.35%</td>
<td>4.62%</td>
<td>4.17%</td>
</tr>
<tr>
<td>4</td>
<td>50.00%</td>
<td>27.00%</td>
<td>36.00%</td>
<td>26.47%</td>
<td>30.77%</td>
<td>33.33%</td>
</tr>
<tr>
<td>5 (Very Important)</td>
<td>50.00%</td>
<td>47.00%</td>
<td>43.20%</td>
<td>60.29%</td>
<td>63.08%</td>
<td>58.33%</td>
</tr>
</tbody>
</table>

Table 4: The importance of trust for different age groups

In contrast age shows a quite different relationship. As Table 4 shows, older respondents placed greater emphasis on trust when evaluating the overall strength of the relationship. This is important for a Bank with an aging customer base as perceptions of trust will be a key factor in maintaining strong and therefore lasting relationships with its customer base.
Respondents were asked to rate the overall strength of their relationship with the Bank. This was a critical question in terms of looking for a change over the course of the two surveys and as Figure 5 clearly shows, there was no significant change.

The response to this question across all income ranges was fairly consistent. Rating overall was particularly strong in the $100,000+ income bracket where relationship strength was somewhat above all the other income groups. This would be pleasing for the Bank as this income group obviously represent a portion of the customer base that they would like to see highly satisfied. Interestingly, a significant number of customers chose the middle rating (ranging from 25-51% for different income groups), particularly at the higher income end in assessing the overall strength of their relationship with the Bank. This represents an opportunity for the Bank to target these customers to improve their ratings.

Table 5: Strength of relationship for different age groups

As Table 5 shows, the 50-59 age group rate the bank more strongly than the other age groups. The Bank may need to look at its strategies for the 20-39 age groups in order to increase trust levels and the perception of relationship strength if it is to retain these customers.

In considering their personal safety using the four banking channels, the majority of respondents were at the more comfortable end of the scale for all channels, with only the ATM causing some concern. Figure 6 shows that customers feel the greatest personal safety when using internet banking over and above all other channels contained in the survey. Many users would use the service in their own environment, such as their office or home, so this result is hardly surprising.
Within the literature reviewed personal safety is not referred to or considered as a factor that influences trust levels and therefore might not be considered as particularly relevant in the terms of this research. Anecdotally however, a basic “hygiene” factor for any organisation trying to develop a strong, trusting relationship is to ensure that users feel safe when using services. Furthermore, Keat et al. (2004) identify perceived risk as an antecedent of trust.

Respondents were also asked about the security of their transactions via the different channels. Overall customers feel comfortable with the level of security that surrounds the transactional component of their banking relationship. Interestingly, even internet banking customers still rate the branch as the most secure place for undertaking transactions followed by internet banking, telephone banking and then ATMs. This was somewhat surprising, given that unlike the other channels, internet banking puts the control of transaction security in the hands of the user. It is possible that the sustained media coverage of internet threats that affect people and organisations worldwide would influence even the most savvy internet user.

One of the outcomes of this research was to determine if a number of factors might result in a higher customer rating in terms of strength of relationship. A number of factors were analysed and correlations examined to determine if any impact was apparent. First of all the amount of transactional activity was looked at to see if those people who were high volume transactors believed they had a stronger relationship (i.e. trust levels) with the Bank. The results showed that usage was not correlated to trust levels at all. Similarly, the length of time that a customer had been using internet banking had no significant bearing on trust levels.

CONCLUSION

We can now consider these results in terms of the objectives of the study.
Establish key drivers for the internet as a preferred channel

As expected convenience was the most important driver for the use of the internet banking service, followed by ease of use. This is similar to other findings regarding the provision of services via the internet. The driver behind the success of internet as a channel globally for a myriad of purposes has been on account of the ubiquitous access to information and services it provides.

Assess whether perceived benevolent activity on the part of the service provider affects the level of trust experienced by the customer over a given period of time

The results between the two surveys showed little significant variation over time, despite the Bank providing a new service. The new service had been designed and developed to meet customer requests for a specific functionality and had featured in various feedback channels. It was also a service being offered by the Bank’s competitors in the New Zealand market and therefore was also required to meet market expectations.

The research findings indicate that the provision of additional services (a benevolent activity) does not necessarily translate into higher levels of trust. In fact, right across the spectrum of areas that were surveyed, there was little change in customer responses. This anomaly with other research findings may be associated with the period of time between the two surveys and different results may have been found had the time between the two been longer. Another factor not considered within this research is general customer attitudes towards banks, whereby not all activity undertaken by a bank is considered “benevolent”, and is considered instead a “business as usual” activity.

Determine if trust levels are affected by the amount of exposure to and/or use of the service

One would expect that frequent use of any product or service, irrespective of type or channel, would translate into higher levels of trust with the supplier. It makes intuitive sense in that one would use the service regularly because it meets a need and hence one’s trust in the service, and therefore the provider, would increase. Not only does it make common sense, but it is also borne out in previous research. However, this is not supported in this study. In part this can be attributed to finding that irrespective of how long someone has been using internet banking, they display the same frequency of use characteristics.

Another possible explanation is that bank customers do not consider a transactional service a key influencer of trust. Instead they consider internet banking similarly to the way in which the cheque book was considered 20 years ago or debit cards today – a necessary requirement of having a bank account that is now considered a commodity and therefore not a consideration in determining or influencing overall trust levels to the service provider.

It would appear that existing research on trust, and the factors that influence trust may not apply in the internet banking environment. Although trust was considered to be an important aspect of overall relationship strength, it was not influenced by the provision of new services, frequency of use or length of time using the service. However, as discussed above, this may simply indicate that the provision of transactional banking services, irrespective of channel, does not influence customer trust, rather it is an expected service offering.

As technology opens new doors and opportunities in terms of capability, delivery and efficiency there will be a continued striving by banks to maximise opportunities so that true customer value can be delivered. Technology can certainly deliver convenience and efficiency to organisations and consumers alike, but without an underlying valued relationship between two parties then ongoing valuable interaction is unlikely to occur. Determining what value trust contributes towards this is difficult, but it is explored in this study.

Convenience is the catch cry of the new generation of bank customers who expect banking services to be delivered to them via whatever channel is at hand. Internet banking customers show their satisfaction by using their favoured channel almost to the total exclusion of other traditional channels. These users are inclined to “reward” their provider by using internet banking more regularly and are generally happy with their overall relationship with their bank.

Customer perceptions of trust and relationships should not be expected to improve overnight as a result of delivery of these convenient services. Although earlier research findings show that certain activities can engender higher levels of trust over time, the results of this research indicate that, in the short term anyway, little or no benefit can be expected from delivery of new services in the web environment.
Future Research

Future areas of research that relate to this work would be to extend the response period over a longer period following introduction of a new product. This might bring another variable into consideration, which might include levels of trust as they relate to customer experience and familiarity with a product or service. Further analysis of the data might identify other significant attributes that affect trust in the online banking environment. For instance the determination of factors such as age or household income on trust outcomes could be of interest.

1 A number of cross-tabulations were undertaken, but these are only reported where the results are significant and/or of interest.

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