

THE INFLUENCE OF TRADITIONAL SERVICE  
QUALITY AND BANK SIZE ON TRUST IN E-BANKING

**David Wong<sup>1</sup>**  
**Claire Loh**  
**Kenneth Yap**  
**Randall Bak**

School of Marketing, Curtin Business School  
Curtin University of Technology

**2009002**

**Editor:**

**Associate Professor Ian Phau**  
**School of Marketing**

**MARKETING**  
**INSIGHTS**  
**Working Paper Series**  
**School of Marketing**

**ISSN 1448 – 9716**

**<sup>1</sup>Corresponding author:**

David Wong  
School of Marketing, Curtin Business School  
Curtin University of Technology  
GPO BOX U1987  
Perth, WA 6845  
Australia  
Tel (+61 8) 9266 3289  
Fax (+61 8) 9266 3937  
Email: [David.wong@cbs.curtin.edu.au](mailto:David.wong@cbs.curtin.edu.au)

## THE INFLUENCE OF TRADITIONAL SERVICE QUALITY AND BANK SIZE ON TRUST IN E-BANKING

### **ABSTRACT**

This paper examines the role of situational normality cues (online attributes of the e-banking website) and structural assurance cues (size and reputation of the bank, and quality of traditional service at the branch) in a consumer's evaluation of the trustworthiness of e-banking and subsequent adoption behaviour. Data were collected from a survey and a usable sample of 202 was obtained. Hierarchical moderated regression analysis was used to test the model. Traditional service quality builds customer trust in the e-banking service. The size and reputation of the bank were found to provide structural assurance to the customer but not in the absence of traditional service quality. Website features that give customers confidence are significant situational normality cues. Bank managers have to realise that good service at the branch is an opportunity to promote e-banking. They cannot rely on the bank's size and reputation to 'sell' e-banking. This is the first study that examines how traditional service quality and a bank's size and reputation influence trust in e-banking.

**Keywords** Trust, Service quality, Electronic commerce, Banking

## **INTRODUCTION**

Online banking, also commonly known as Internet banking or e-banking, has experienced phenomenal growth in recent years (Fox and Beier, 2006); nonetheless, the growth rate in e-banking has not kept pace with that of Internet usage. This gap can be attributable to the lack of trust among bank customers, particularly among Internet users aged 65 and older. News headlines about e-mail scams, identity theft, and ‘phishing’ that undeservedly distort consumer perceptions may be one of several reasons why such a lack of trust persists (Gerrard et al., 2006).

The authors of this study propose that this lack of trust can be overcome with a better understanding of factors that can boost customers’ trust for e-banking, such as traditional service quality, the size and reputation of the bank, and the e-banking website features. It is important for bank managers to understand that trust has to be developed with a combination of traditional and online measures as Wong et al. (2008) recommend they view traditional and online banking as complementary methods of banking.

Research findings by Patricio et al. (2003) suggest that satisfaction with the bank’s traditional service delivery may lend credence to new or alternative delivery channels such as e-banking. Findings from other studies prompt the authors of this study to also consider the role of the bank’s size and reputation in developing customer confidence in its e-banking service (Doney and Cannon, 1997; Jarvenpaa et al., 2000; Chen and Dhillon, 2008). Moreover, there is sufficient evidence for the authors of this study to propose that a customer’s impression of an e-banking website influences his/her trust towards it (Koufaris and Hampton-Sosa, 2004; Hampton-Sosa and Koufaris, 2005; Casalo et al., 2007; Vatanasombut et al., 2008). There is still a lack of knowledge on how these constructs interact in the development of trust for e-banking.

## **LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

### **Trust in e-banking**

The nature of online service delivery gives rise to a lack of trust in e-banking among some customers. In an online environment, there is no direct physical contact between

buyer and seller. This spatial distance means that customers cannot use the physical cues, such as observing the salespeople or the physical office/store space, to judge trustworthiness (Reichheld and Schefer, 2000). Trust plays a large role in determining consumers' initial and continued use of the e-banking service (Suh and Han, 2002; Rexha et al., 2003; Lichtenstein and Williamson, 2006).

Institutional trust, which is defined by McKnight and Chervany (2002) as “an individual's belief that favourable conditions are in place which are conducive to situational success” (p. 45), is of particular interest in this study. Institutional trust is, in turn, derived from two components: situational normality and structural assurance (McKnight et al., 1998; McKnight and Chervany, 2002; Balasubramanian et al., 2003). Situational normality refers to trustees' beliefs that “everything seems in proper order” (Lewis and Weingert, 1985, p. 974); while structural assurances refer to “trustees beliefs that protective structures in place are conducive to situational success” (McKnight and Chervany, 2002, p. 48).

Authors of the present study propose that these are two cues by which customers use to evaluate the trustworthiness of e-banking. Situational normality cues are sought from the online attributes of the e-banking website; while, structural assurances cues are sought from traditional attributes of the bank offering e-banking. Institutional trust is formed when both of these components are present.

### **Online attributes of the e-banking website**

Balasubramanian et al. (2003) propose that the virtual attributes of the e-banking website create the situational normality which one uses to create trust in the online environment. They add that attributes such as a well-designed customer interface provide the cognitive cues for a sense of order. Past studies in this area have classified online attributes into four factors: perceived security, perceived privacy, perceived usefulness and perceived ease of use (Koufaris and Hampton-Sosa, 2004; Hampton-Sosa and Koufaris, 2005; Casalo et al., 2007; Vatanasombut et al., 2008). In the current study, the authors propose that these four factors influence trust for e-banking.

In order for a customer to trust e-banking, he/she must be made to believe that the transactional medium is secure and that any information provided to the website would not be intercepted or given to a third party (Suh and Han, 2003). Such perceptions reinforce the customer's views that actions being performed on the website are the norm and in doing so, build trust for the online environment (Jarvenpaa et al., 2000; Koufaris and Hampton-Sosa, 2004; Liu et al., 2005; Casalo et al., 2007; Chen and Barnes, 2007; Vatanasombut et al., 2008).

The 'usability' – or the effort required to use a computer system as defined by Casalo et al. (2007) – of the e-banking website can also influence a customer's confidence in it. It has been found that usability increases predictability of the website's behaviour. Other studies have also purported that the usefulness and ease of use of a website build trust in the online environment in the same way a salesperson's personal attributes build trust in the traditional retailing environment (Koufaris and Hampton-Sosa, 2004; Hampton-Sosa and Koufaris 2005). Hence, the authors of this study put forward the following hypotheses:

**H1a-d:** Attributes of the e-banking website – (a) perceived security, (b) perceived privacy, (c) perceived usefulness, and (d) perceived ease of use – have a positive effect on trust in e-banking.

### **Traditional attributes of the bank**

The size of an organisation is often regarded as a proxy for security and trustworthiness. Doney and Cannon (1997) and Jarvenpaa et al. (2000) purport that if a firm is large, it must have performed well in order to have grown to such a size. Chen and Dhillon (2003) argue the size of a firm behind the website is one of the ways in which a customer can rationalise their decision to trust the firm in an e-commerce setting because larger firms would have more to lose if they were to engage in untrustworthy behaviour. Moreover, a customer must be able to believe that the seller has the capacity to deliver the goods or services and firm size is a proxy indicator.

Several studies have established the relationship between firm size and trust for the firm (Doney and Cannon, 1997; Jarvenpaa et al., 2000; Koufaris and Hampton-Sosa, 2004); nonetheless, a literature review has not uncovered any study that has examined the relationship between the size of a bank and trust for its e-banking website. Literature on the size-trust link leads the authors of this study to propose that:

**H2a:** The perceived size of a bank has a positive effect on trust in e-banking.

A bank's reputation is also indicative of its trustworthiness. The bank's reputation is particularly relevant in the online context because structural assurance in e-banking can only be inferred from intangible cues (Reichheld and Schefer, 2000). Similar to the creation of interpersonal trust, a bank with a reputation of being trustworthy would have a greater incentive to institute measures to avoid losing such a reputation (Casalo et al., 2007). This implies that a bank with a trustworthy reputation would want to ensure that every facet of its online offering is designed to create and maintain customers' beliefs in the structural assurance of e-banking.

Past research in the area of e-banking has found that perceived reputation is indeed a factor in the creation of trust in e-banking (Casalo et al., 2007; Mukherjee and Nath, 2007); however, the relationship between perceived reputation and structural assurance has not been empirically tested so far. Similar to the hypothesised effect of size, the authors of this study propose that:

**H2b:** The perceived reputation of a bank has a positive effect on trust in e-banking.

### **Traditional service quality**

The perceived size and reputation of a bank may have an effect on trust in e-banking; however, the extent of its influence may vary with cues that emanate from encounters with the bank of a more personal nature. Parasuraman et al. (1988) provide a conceptualisation of service that is useful for this research study. Their conceptualisation outlines five dimensions by which service quality can be evaluated: reliability,

responsiveness, assurance, empathy, and tangibles. Service quality and SERVQUAL has been featured extensively in the financial services marketing literature; hence, the author of this study will omit any lengthy discussion of its historical and theoretical development.

Recent research into the area of service quality for electronic commerce and e-banking has largely revolved around how electronic service quality can be measured or managed (Azola and Robaina, 2005; Parasuraman et al., 2005; Ibrahim et al., 2006; Fassnacht and Kose, 2007; Shamdasani et al., 2008). Electronic service quality may be a useful concept in e-banking research; however, electronic service quality cannot be assessed if a customer has not yet adopted any e-banking services. Unfortunately, the relationship between trust and traditional and/or electronic service quality remains unexplored. Authors of the present study argue that trust for e-banking precedes its adoption and service quality has a role in influencing trust.

There is good reason to argue that traditional service quality has a role in influencing trust for e-banking. The quality of service delivered through traditional channels is what most bank customers are familiar with and accustomed to; hence, in-person service quality is effectively a *de facto* indication of the quality of other services, including e-banking. It could also be argued that service that exceeds customer expectations gives rise to a level of trust that can be harnessed to cross-sell other products (Fassnacht and Kose, 2007; Liu and Wu 2007).

The authors of this research study argue that even though a large and reputable bank may be endowed with a greater propensity for its customers to trust its e-banking service, the level of trust is only as high as the quality of service it provides at the branch. Consider the following hypothetical scenario: a customer is more likely to trust the e-banking website if the bank offering it was large and reputable. A customer is also less likely to trust the e-banking website of a small bank with a lesser reputation. Ideally, the customer would have more confidence if the bank already provides good counter service; however, what if the large bank provided poor counter service?

The authors reason that the large size and favourable reputation of the bank lend structural assurance to the e-banking service; however, poor counter service would negate the impact of the bank's large size and reputation. Consequently, this inconsistency raises doubts about e-banking. Naturally, a large and reputable bank that provides good counter service can garner enough customer confidence for them to trust any of its alternative services. In this case, the structural assurance for e-banking that size and reputation provides is augmented by high service quality at the bank's branch. Findings by Fassnacht and Kose (2007) and Liu and Wu (2007) provide the rationale for this claim. Hence:

**H3a:** Service quality positively moderates the relationship between perceived size of a bank and trust in e-banking

**H3b:** Service quality positively moderates the relationship between perceived reputation of a bank and trust in e-banking

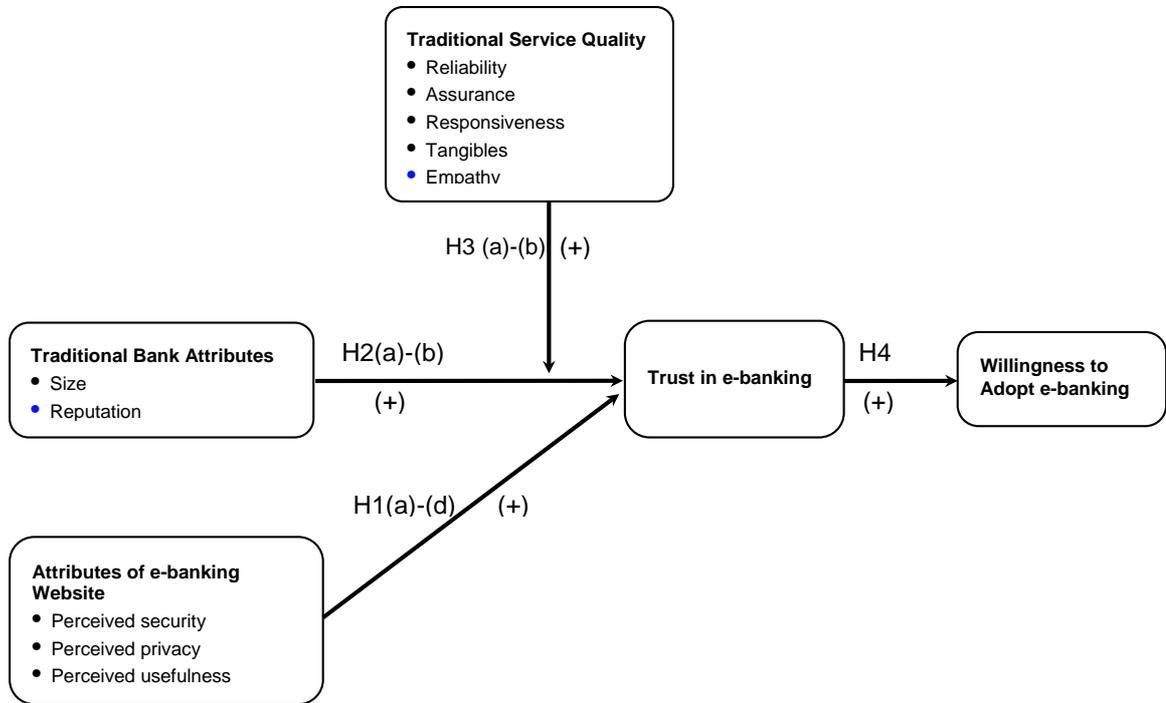
#### **Willingness to adopt e-banking**

Trust is essential in situations where risk, uncertainty and interdependence exist (Mayer et al., 1995) and the online environment certainly encapsulates those factors. Increased trust will mean that a customer's attitude towards adopting e-banking becomes positive and he/she will be more likely to do so. Jarvenpaa et al. (2000) demonstrated that trust leads to purchase intentions; while, Liu et al. (2005) found that to be also true in e-banking. Hence, the authors of this study purport that:

**H4:** Trust in e-banking has a positive effect on the willingness to adopt e-banking

The model tested in the study is thus summarised in Figure 1 below:

**Figure 1: Proposed model**



## METHODOLOGY

To test the conceptual model, a cross-sectional survey was administered using an instrument containing 89 items. The 89 items used were adapted from established scales from past studies measuring respondents' expectations, perceptions and attitudes regarding the service quality of their primary bank, perceptions of the size and reputation of their primary bank, perceptions of the bank's e-banking website attributes, their trust in their primary bank's e-banking website, and their willingness to adopt it. Each item is measured on a 7-point Likert scale with '0' denoting the low end and '6' the high end. The questionnaire was then pre-tested, refined, and reviewed for content validity.

## Measures

The traditional service quality measures are based on the 22-item SERVQUAL scale published in the Parasuraman et al. (1985) study. Respondents were asked about their service expectations of banks in general before they were asked to record their perceptions of service quality of their primary bank. The measures of perception of bank

size and reputation are adapted from Doney and Cannon's (1997) seminal work in the area of trust in buyer-seller relationships. However, additional items were added to this scale, using the work of Jarvenpaa et al. (2000) and Pavlou (2003), for the clarity and definition they gave to this dimension.

Items measuring the online attributes of the e-banking website were derived from several sources. Items relating to perceived security were adapted from the entire Perception of Authentication of Data and Data Integrity scale published by Suh and Han (2003). To measure perceived privacy, the authors of this study used two items from Suh and Han's (2003) Perception of Privacy Protection scale which were most relevant to the present study. Perceived usefulness and ease of use items were drawn from work by Pavlou (2003), Kim and Ahn (2006), and Pavlou and Fygenson (2006).

The set of questions used to measure trust in e-banking is a composite of items adapted from works of Doney and Cannon (1997), Jarvenpaa et al. (2000), and Suh and Han (2002). The final section of the survey measured the willingness to use e-banking by using items that measure attitudes and intentions towards using e-banking. Items in the scale were sourced from scales published by Pavlou (2003), Kim and Ahn (2006), and Verhagen et al. (2006). Demographic data were also collected for the purpose of classification and determining the generalisability of the results.

### **Sample and data collection**

A non-probability judgement sample of university faculty and administrative staff was selected. The survey was self-administered and data collection took place over two weeks. A mix of paper and online questionnaires were distributed across ten faculties in the university in two waves. The data collection process yielded a total of 218 returned questionnaires, of which 202 passed manipulation checks and were usable. The response rate was 34.8%.

## **RESULTS**

### **Factor analysis**

In order to validate the measures of each construct, exploratory factor analysis was conducted using principal components extraction with varimax rotation. The items in each factor were then tested for scale reliability using standard Cronbach alpha indices. The results of the exploratory factor analysis on service quality items yielded five factors, identical to the dimensions found in Parasuraman et al.'s (1991) analysis. Each dimension is also characterised by a high alpha score, the lowest of which is 0.625. A composite score was computed for each dimension by totalling scores for the items in a dimension and dividing it by the number of items.

Items measuring traditional attributes of the bank formed two factors as expected: perceived size (alpha = 0.894) and perceived reputation (alpha = 0.828). Four dimensions were extracted for online attributes of the e-banking website but the proposed classification of perceived security, perceived privacy, perceived usefulness, and perceived ease of use was not replicated. The four dimensions comprised of a variety of items, all of which had factor loadings of 0.500 and higher. Each dimension, in turn, had a coefficient alpha of 0.857 or higher. Based on the nature of items, the four dimensions were subsequently re-classified to represent Clarity, Control, Confidence, and Confidentiality. Trust for e-banking and willingness to adopt e-banking also proved to be single-factor constructs with alphas of 0.926 and 0.957, respectively. For all of the dimensions discussed above, a composite score was also generated by using the average of summed item scores.

### **Regression analysis**

To test H1, which is the relationship between attributes of the e-banking website and trust in e-banking, a simultaneous regression analysis was conducted. Only Confidence-related attributes of the e-banking website had a significant influence on trust for e-banking (Beta = 0.381,  $t = 3.524$ ). The Confidence factor is comprised of items that give the customer a sense of confidence in dealing with the e-banking website which include *"The transactions I send are transmitted to the real site which I want to transmit to"* and *"All communications with my bank's website are restricted to the website and me"*. The coefficients for all other factors were not significant; thus, H1 received only partial support.

To test the relationship between traditional bank attributes and trust in-banking (H2), as well as, the moderating effect of service quality (H3), hierarchical moderated regression was conducted. This method was proposed by Baron and Kenny (1986) to examine moderating effects. In conducting hierarchical moderated regression analysis, a series of regressions were performed: the dependent variable (DV) on the independent variable (IV); then the DV on the IV and the moderator; and finally the DV on the IV, the moderator, and a cross-product of the DV and the moderator. The results of the analysis are displayed in Tables 1 and 2 below:

**Table 1:** Bank size and service quality- Model summary change statistics  
Dependent variable: Trust in e-banking

	Empathy			Reliability			Tangibles			Assurance			Responsiveness		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
R <sup>2</sup>	.003	.029	.029	.002	.063	.086	.001	.031	.032	.006	.065	.071	.002	.025	.028
R <sup>2</sup> Change	.003	.026	.000	.002	.061	.024	.001	.030	.001	.006	.058	.007	.002	.024	.003
F Change	.530	5.061	.029	.321	12.387	4.906	.178	5.902	.176	1.133	11.382	1.286	.323	4.570	.542
Df	188	187	186	191	190	189	193	192	191	183	182	181	190	189	188
Sig.	.467	.026	.864	.572	.001	.028	.673	.016	.675	.288	.001	.258	.571	.034	.463

Model 1 = Bank size

Model 2 = Bank size + Service quality

Model 3 = Bank size + Service quality + (Bank size x Service quality)

**Table 2:** Selected model coefficients

	Empathy Model 2		Reliability Model 3			Tangibles Model 2		Assurance Model 2		Responsiveness Model 2	
	Size	Empathy	Size	Reliability	Size Reliability	Size	Tangibles	Size	Assurance	Size	Responsiveness
Sig.	.289	.026	.233	.004	.028	.695	.016	.276	.001	.527	.034
Beta	.078	.164	-.126	.982	-.775	.028	.173	.078	.242	.046	.154
t	1.064	2.250	-1.196	2.898	-2.215	.392	2.429	1.092	3.374	.634	2.138

The analysis yielded results quite different to what was hypothesised. The model in which bank size is the only independent variable was tested and results show that the

coefficient for bank size was not significant. This model was then tested for explanatory power against five models, each of which had bank size and a service quality dimension as the independent variables. Result of these comparisons showed that the models with bank size and service quality had significantly improved R-squared values from the model with bank size alone. For all five models, none the coefficients for bank size were significant and all of the coefficients for service quality were. The results of hierarchical moderated regression suggest that it is not bank size that has a positive influence on trust in e-banking, but rather traditional service quality.

The five models with bank size and service quality as independent variables were re-tested for its explanatory power by including the cross-product of both variables to each model. A significant increase in the R-squared value would indicate that a moderating effect exists. Results in Table 1 show that only the model containing the Reliability dimension of service quality had the presence of a moderating effect. The coefficient of the cross-product (between bank size and reliability) is significant and is -0.775, as listed in Table 2. This result suggests that service reliability has a direct effect on trust in e-banking, while bank size has a significant negative moderating effect.

The hierarchical moderated regression analysis was repeated for the effect of bank reputation on trust in e-banking and the results were mixed. Results summarised in Table 3 below indicate that bank reputation has a direct positive influence on trust in e-banking. When tested against Model 2 (bank reputation and service quality as independent variables), only models with reliability, tangibles and assurance dimensions of service quality had a significantly higher R-squared value. Explanatory power of these models did not improve with the inclusion of the cross-product. The coefficients for independent variables are displayed in Table 4 below. Results indicate that the influence of traditional service quality and trust in e-banking vary with the service quality dimension.

**Table 3: Bank reputation and service quality- Model summary change statistics**  
Dependent variable: Trust in e-banking

	Empathy			Reliability			Tangibles			Assurance			Responsiveness		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
R2	.068	.071	.089	.061	.081	.090	.064	.084	.085	.051	.077	.077	.075	.079	.091
R2 Change	.068	.003	.018	.061	.021	.009	.064	.021	.000	.051	.026	.000	.075	.004	.012
F Change	13.312	.562	3.541	12.002	4.200	1.725	12.689	4.251	.018	9.632	4.923	.022	14.865	.752	2.477
Df	183	182	181	186	185	184	187	186	185	178	177	176	184	183	182
Sig.	.000	.454	.061*	.001	.042	.191	.000	.041	.893	.002	.028	.881	.000	.387	.117

Model 1 = Bank reputation

Model 2 = Bank reputation + Service quality

Model 3 = Bank reputation + Service quality + (Bank reputation x Service quality)

**Table 4: Selected model coefficients**

	Empathy Model 1	Reliability Model 2		Tangibles Model 2		Assurance Model 2		Responsiveness Model 1
	Reputation	Reputation	Reliability	Reputation	Tangibles	Reputation	Assurance	Reputation
Sig.	.000	.059	.042	.002	.041	.107	.028	.000
Beta	.260	.157	.170	.224	.147	.135	.185	.273
T	3.649	1.901	2.049	3.136	2.062	1.621	2.219	3.855

A regression analysis was conducted to test the relationship between trust in e-banking and willingness to adopt it (H4). The R-squared for the model is 0.385 and the regression coefficient of 0.741 is significant. This result supports the hypothesis that trust in e-banking has a positive influence on the willingness to adopt e-banking.

## DISCUSSION AND IMPLICATIONS

The results of this study suggest that traditional service quality plays a more important role in influencing trust in e-banking than does the size of the bank. This finding adds some depth to the e-banking literature because past studies examining attitudes and behaviours towards online banking have confined their investigation to antecedents and cues emanating from the same medium of service delivery (Azola and Robaina, 2005).

The association between traditional service quality and attitudes and behaviours towards traditional counter service banking has been well established (Zeithaml et al., 1996; Fassnacht and Kose, 2007; Yap and Sweeney 2007); nonetheless, the customer experience goes beyond traditional counter service and now encompasses alternative media of service delivery.

While the proposition of e-banking is to provide banking services at the convenience of the customer's desktop; e-banking is not independent of traditional service. For customers who are new to e-banking, they often rely on bank counter staff to explain the features of e-banking, help set up the e-banking account and password, resolve problems with the e-banking website, and provide clarification, follow-up, or supplementary services to e-banking transactions. Such services provided at the counter become more salient if a customer lacks the level of knowledge or trust required to adopt e-banking. The finding that traditional service quality has a direct influence on trust in e-banking is consistent with such anecdotal examples. Moreover, this finding is parallel to the work of Semijin et al. (2005), which found that in e-commerce, offline fulfilment was just as important as online service quality.

The lack of a significant relationship between bank size and trust in e-banking is a result that whilst not expected does not directly contradict the literature. Past findings regarding size and trust have been with the view of interpersonal trust (Doney and Cannon, 1997) and not the institutional trust that is defined in this study. The authors of this study aptly propose that the confidence that customers derive from receiving good service at the bank's branch will outweigh any potential structural assurance that customers infer from dealing with a large bank.

Results also show that bank size only comes into play when customers assess the reliability of the service before trusting the e-banking website. A negative moderating effect on the reliability-trust relationship implies that a larger bank has to work harder to provide a reliable service in order to build sufficient trust in e-banking. It also implies that for smaller banks, service reliability takes on an even greater importance in building customer trust for its e-banking service. The authors of this study propose that if service

at the branch is poor, the size of bank cannot be relied upon to build trust. It is plausible that customers have even higher service reliability expectations of a larger bank and if it fails to deliver, customers will tend not to trust its e-banking service. This finding reiterates the notion that size does not matter.

Findings on the influence of a bank's reputation are mixed and suggest that there is some hierarchy to which service quality dimensions have a greater influence on trust in e-banking. Wong et al. (2008) reported the expectations ranking of service quality dimensions in the following order: Reliability (highest expectations), Assurance, Responsiveness, Tangibles, and Empathy (lowest expectations). The result of this study point to the possibility that lower-order traditional service quality dimensions such as Empathy and Responsiveness are not applicable in building trust. In these circumstances, bank reputation has a direct influence on trust. Higher-order service quality dimensions such as Reliability and Assurance then become more salient than the bank's reputation in building trust. It is plausible that customers look for service reliability and assurance cues in particular to provide the structural assurance required to trust e-banking. After all, the customer would like to know that the bank can at least consistently deliver on its promises and can do so dependably.

Reliability and assurance cues of service at the branch are most pertinent to e-banking because it is the necessary requirement of an effective e-banking service. As customers migrate to e-banking, the bank can no longer provide the kind of empathetic, responsive, and tangible service that staff at a branch can provide. The remaining reliability and assurance cues then become so important in forming structural assurance that the reputation of a bank becomes no longer relevant. The extent to which a bank's reputation provides structural assurance only goes so far as certain expectations of service quality are fulfilled. This finding is consistent with the proposition that traditional service quality is critical in building trust in e-banking, particularly in areas of service reliability and assurance.

The examination of the influence of e-banking website attributes on trust revealed that only the attributes that give customers a sense of confidence are salient. This finding is

consistent with the findings relating to service quality. Customers want to be given a sense of security or reliability before trusting this technology, which is a notion supported by Suh and Han (2003). Given that the items which coalesced into the Confidence dimension primarily relate to a consumer's confidence in communicating with the website, the results imply that banks should ensure that users are given clear indications of what the website is doing at all times. In order to ensure customer confidence with the e-banking website, banks should also highlight its security features.

Finally, the positive relationship between trust in e-banking and willingness to adopt it is not surprising as it concurs with findings by Liu et al. (2005). Customers who are willing to trust e-banking can then adopt it with less apprehension about reliability and security concerns that may relate to the website. Researchers and managers should view trust as a predisposition to behaviour or behavioural intentions towards e-banking and perhaps other technological service offerings.

## **MANAGERIAL IMPLICATIONS**

It is important for bank managers to understand that trust in e-banking is earned by providing high traditional service quality at the retail branch level. They should not rely on the size and reputation of the bank to lend credence to e-banking because customers are more likely to make inferences about e-banking from the level of service they currently receive at the branch, rather than factors that bank managers think might give them the capacity or legitimacy to offer e-banking. Bank managers need to recognise that the customer experience with the bank's service is integrated and seamless; moreover, good service at the branch may give rise to a halo effect. Customers probably reason that good service they receive at the counter is indicative of good service they are about to receive online (Patricio et al., 2003).

Bank managers have to pay more attention to how and when e-banking might be promoted to the customer. Delightful service encounters at the branch represent cross-selling opportunities for other products. A satisfied customer repays the service provider by trusting it and giving it other opportunities to provide a service. This opportunity can

be used to promote features of the e-banking website that give customers the perception of confidence.

Managers of smaller banks should not feel that a small bank does not have the legitimacy to offer a reliable and secure e-banking website. Conversely, managers of larger banks should not presume that the size and reputation of their bank are *de facto* indicators of trustworthiness. The bank that excels in providing a reliable service is the one that will be most successful in earning the trust of its customers to try e-banking. It appears that good counter service outweighs the potential structural assurance that a large bank can provide. Larger banks have to earn their keep and not rely on its size as a cue for structural assurance, particularly if service at the branch is poor. For managers of smaller banks, a focus on providing a highly reliable counter service will pay dividends even in the online environment.

Advertising and personal promotion of e-banking should emphasise the trustworthiness of the website in its message. It should highlight the security features of the e-banking website that will allow customers to use it with confidence. The promotional message should also assure customers that if they are happy with the service at the branch, they can then expect the same level of high quality service from e-banking. Bank managers should also consider e-banking customer testimonials as a promotional tool. Customer testimonials that convey a message of trust for e-banking will be particularly effective in generating trial and adoption among other customers.

#### LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The results of this research should be taken in light of the limitations discussed below. Firstly, there are a number of factors that are beyond the scope of this study – constructs such as a customer's level of awareness of e-banking benefits, its cost, existing consumer habits, and perceived risk of the Internet in general – which may also influence the willingness to adopt e-banking. Specifically, trust in the Internet has been shown to reduce perceptions of risk in particular facets of the Internet, such as perceptions of risk in e-commerce (Pavlou 2003). There is still a lack of empirical research in this area;

thus, future studies should incorporate these variables to make the model of e-banking adoption more comprehensive.

Secondly, the scope of this study is limited to Australia, where the Internet is a mature technology (Lichtenstein and Williamson, 2006), and as such, these results may not be entirely generalisable to other contexts where technological maturity of the Internet has not been reached. Replications of this study in underdeveloped countries or with mature or elderly consumers are opportunities for further research. Studies in different countries with varying levels of technological development are recommended, as different expectations of service quality and requirements for trust may result.

Thirdly, the factor analysis for e-banking website attributes failed to replicate the structure in past studies from which items were sourced (Pavlou 2003, Suh and Han, 2003; Kim and Ahn, 2006; Pavlou and Fygenson, 2006). Research in this area will benefit from a consolidation of scales measuring attributes of the website. Finally, this study conceptualised trust as institutional trust. Given the importance of traditional service quality as cues of structural assurance and situational normality, future studies will benefit to consider interpersonal trust as a potential mediating factor.

This study has highlighted the importance of traditional or offline factors in influencing attitudes and behaviours relating to online services. The examination of traditional service quality in this study yielded significant results; however, further investigation may be required to fully identify a host of brick-and-mortar factors that play a role in the adoption of e-banking. This study, along with that of Patricio et al. (2003) and Flavian et al. (2006), are a good point of departure for further research in this area.

## REFERENCES

- Alzola, L.M. and Robaina V. P., 2005. SERVQUAL: its applicability in electronic commerce B2C. *The Quality Management Journal*, 12 (4), pp. 46-56.
- Balasubramanian, S., Konana, P. and Menon, N.M., 2003. Consumer satisfaction in virtual environments: a study of online investing. *Management Science*, 49 (4), pp. 871-889.
- Baron, R.M. and Kenny, D.A., 1986. The moderator-mediator variable distinction in social psychology research: conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51 (6), pp. 1173-1182.
- Casalo, L.V., Flavian, C. and Guinaliu, M., 2007. The role of security, privacy, usability and reputation in the development of online banking. *Online Information Review*, 31 (5), pp. 583-603.
- Chen, S.C. and Dhillon, G.S., 2003. Interpreting dimensions of consumer trust in e-commerce. *Information Technology and Management*, 4 (2-3), pp. 303-318.
- Chen, Y.H. and Barnes, S., 2007. Initial trust and online behaviour. *Industrial Management and Data Systems*, 107 (1), pp. 21-36.
- Doney, P.M. and Cannon, J.P., 1997. An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61 (2), pp. 35-51.
- Fassnacht, M. and Kose, I., 2007. Consequences of web-based service quality: uncovering a multi-faceted chain of effects. *Journal of Interactive Marketing*, 21 (3), pp. 35-54.
- Flavian, C., Guinaliu, M. and Torres, E., 2006. How bricks-and-mortar attributes affect online banking adoption. *International Journal of Bank Marketing*, 24 (6), pp. 406-423.
- Fox, S. and Beier, J., 2006. Online banking 2006: surfing to the bank. Pew Internet & American Life Project, [internet]. June.  
Available at: <http://www.pewinternet.org/Reports/2006/Online-Banking-2006.aspx>  
[Accessed 17 March 2009].

- Gan, C., Clemes, M., Limsombunchai, V. and Weng, A., 2006. A logit analysis of electronic banking in New Zealand. *International Journal of Bank Marketing*, 24 (6), pp. 360-383.
- Gerrard, P., Cunningham, J.B. and Devlin, J.F., 2006. Why consumers are not using internet banking: a qualitative study. *Journal of Services Marketing*, 20 (3), pp. 160-168.
- Grabner-Krauter, S., 2002. The role of consumers' trust in online-shopping. *Journal of Business Ethics*, 39 (1-2), pp. 43-50.
- Hampton-Sosa, W. and Koufaris, M., 2005. The effect of web site perceptions on initial trust in the owner company. *International Journal of Electronic Commerce*, 10 (1), pp. 55-81.
- Hoffman, D.L., Novak, T.P. and Peralta, M.A., 1999. Information privacy in the marketspace: implications for the commercial uses of anonymity on the web. *Information Society*, 15 (2), pp. 129-139.
- Ibrahim, E.E., Joseph, M. and Ibeh, K.I.N., 2006. Customers' perception of electronic service delivery in the UK retail banking sector. *International Journal of Bank Marketing*, 24 (7), pp. 475-493.
- Jarvenpaa, S.L., Tractinsky, N. and Vitale, M., 2000. Consumer trust in an Internet store. *Information Technology and Management*, 1 (1-2), pp. 45-71.
- Kassim, N.M. and Abdulla, A.K.M.A., 2006. The influence of attraction on internet banking: an extension to the trust-relationship commitment model. *International Journal of Bank Marketing*, 24 (6), pp. 424-442.
- Kim, M. and Ahn, J., 2006. Comparison of trust sources of an online market-maker in the e-marketplace: buyer's and seller's perspectives. *The Journal of Computer Information Systems*, 47 (1), pp. 84-94.
- Koufaris, M. and Hampton-Sosa, W., 2004. The development of initial trust in an online company by new customers. *Information & Management*, 41 (3), pp. 377-397.
- Lewis, J.D. and Weigert, A.J., 1985. Trust as a social reality. *Social Forces*, 63 (4), pp. 967-985.
- Lichtenstein, S. and Williamson, K., 2006. Understanding consumer adoption of Internet banking: an interpretive study in the Australian banking context. *Journal of Electronic Commerce Research*, 7 (2), pp. 50-66.

- Liu, C., Marchewka, J.T., Lu, J. and Yu, C.S., 2005. Beyond concern--a privacy-trust-behavioral intention model of electronic commerce. *Information & Management*, 42 (2), pp. 289-304.
- Liu, C. and Wu, L.W., 2007. Customer retention and cross-buying in the banking industry: an integration of service attributes, satisfaction and trust. *Journal of Financial Services Marketing*, 12 (2), pp. 132-145.
- Mayer, R.C., Schoorman, F.D. and Davis, J.H., 1995. An integrative model of organizational trust. *Academy of Management Review*, 20 (3), pp. 709-734.
- McKnight, H.D. and Chervany, N.L., 2002. What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, 6 (2), pp. 35-59.
- McKnight, H.D., Cummings, L.L. and Chervany, N.L., 1998. Initial trust formation in new organizational relationships. *Academy of Management Review*, 23 (3), pp. 473-490.
- Morgan, R.M. and Hunt, S.D., 1994. The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58 (3), pp. 20-38.
- Mukherjee, A. and Nath, P., 2003. A model of trust in online relationship banking. *International Journal of Bank Marketing*, 21 (2), pp. 5-15.
- Parasuraman, A., Berry, L.L. and Zeithaml, V.A., 1991. Refinement and reassessment of the SERVQUAL scale. *Journal of Retailing*, 67 (4), pp. 41-50.
- Parasuraman, A., Zeithaml, V. A. and Berry, L.L., 1985. A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49 (3), pp. 41-50.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L., 1988. SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64 (1), pp. 12-40.
- Parasuraman, A., Zeithaml, V.A. and Malhotra, A., 2005. E-S-QUAL: a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7 (3), pp. 213-33.
- Patricio, L., Fisk, R.P. and Cunha, J.F.e., 2003. Improving satisfaction with bank service offerings: measuring the contribution of each delivery channel. *Managing Service Quality*, 13 (6), pp. 471-482.

- Pavlou, P.A., 2003. Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7 (3), pp. 101-134.
- Pavlou, P.A. and Fygenon, M., 2006. Understanding and prediction electronic commerce adoption: an extension of the theory of planned behaviour. *MIS Quarterly*, 30 (1), pp. 115-143.
- Reichheld, F.F. and Scheffer, P., 2000. E-loyalty: your secret weapon on the web. *Harvard Business Review*, 78 (4), pp. 105-113.
- Rexha, N., Kingshott, R.P.J. and Aw, A.S.S., 2003. The impact of the relational plan on adoption of electronic banking. *Journal of Services Marketing*, 17 (1), pp. 53-65.
- Sarel, D. and Mamorstein, H., 2003. Marketing online banking services: the voice of the customer. *Journal of Financial Services Marketing*, 8 (2), pp. 106-118.
- Semeijn, J., van Riel, A.C.R., van Birgelen, M.J.H. and Streukens, S., 2005. E-services and offline fulfilment: how e-loyalty is created. *Managing Service Quality*, 15 (5), pp. 182-194.
- Shamdasani, P., Mukherjee, A. and Malhotra, N., 2008. Antecedents and consequences of service quality in consumer evaluation of self-service internet technologies. *The Service Industries Journal*, 28 (1), p. 117-138.
- Suh, B. and Han, I., 2002. Effect of trust on consumer acceptance of Internet banking. *Electronic Commerce Research and Applications*, 1 (3), pp. 247-263.
- Suh, B. and Han, I., 2003. The impact of customer trust and perception of security control on the acceptance of electronic commerce. *International Journal of Electronic Commerce*, 7 (3), pp. 135-161.
- Vatanasombut, B., Igarria, M., Stylianou, A.C. and Rodgers, W., 2008. Information systems continuance intention of web-based applications customers: the case of online banking. *Information & Management*, 45 (7), pp. 419-428.
- Verhagen, T., Meents, S. and Tan, Y.H., 2006. Perceived risk and trust associated with purchasing at electronic marketplaces. *European Journal of Information Systems*, 15 (6), pp. 542-555.
- Wong, D., Rexha, N. and Phau, I., 2008. Re-examining traditional service quality in an e-banking era. *International Journal of Bank Marketing*, 26 (7), pp. 526-545.

- Yap, K.B. and Sweeney, J.C., 2007. Zone-of-tolerance moderates the service quality-outcome relationship. *Journal of Services Marketing*, 21 (2), pp. 137-148.
- Yoon, S.J., 2002. The antecedents and consequences of trust in online-purchase decisions. *Journal of Interactive Marketing*, 16 (2), pp. 47-63.
- Zeithaml, V.A., Berry, L.L. and Parasuraman, A., 1996. The behavioral consequences of service quality. *Journal of Marketing*, 60 (2), pp. 31-4.



