Identification of the Factor Components Influencing the Continued Use of Internet Banking By Australian Consumers

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Abstract

The goal of this paper was to investigate the factor components that influence how consumers continue to use internet banking in Australia. The study sets out to develop a framework based on theoretical models and encompasses technology, channel, social and value for money factors as predictors in the identification of influential factor components for consumers continued use of internet banking. Data were collected using a cross-sectional mall intercept survey in the Western Sydney region, comprising a sample of 372 internet banking users. Exploratory factor analysis was performed on five key scales. The technology and channel factors that were identified consisted of perceived usability, perceived trialability, perceived safety and perceived specialty components. Whereas, social, value for money and continued use factors extracted a single component solution.

Keywords: Factor components, Internet banking, Continued use, Australian consumers

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Introduction

The introduction of new service delivery channels increases the productivity and efficiency of the service providers apart from offering access to customers; thereby better meeting customer demand and increasing satisfaction (Bitner *et al.* 2002). Internet banking facilitating electronic transactions is a key facilitator of communication in business activities and in consumers' day-to-day activities (McCole & Ramsay 2009). The decision to perform internet banking is at the consumer's discretion, indicating the importance of the consumer in electronic interactions. It is critical for business success to understand how consumers make decisions to use internet banking' and at the same time, how marketers try to understand consumers' values, beliefs and preferences (Lindgreen & Wynstra 2005). Existing customers represent a valuable asset to the service provider. From the bank's perspective, maintaining and retaining their existing customer base is always more profitable than trying to acquire new customers (Srinivasan *et al.* 2002). Therefore, banks continuously scan and attempt to persuade customers not to switch to competitors in order to maximise their sales and profits (Hammond & Ehrenberg 1995).

It is only recently that researchers have started to understand the importance of consumers' continued use of internet banking and its impact on the financial performance of the banking sector (Kasheir *et al.* 2009). Continued use of internet banking is often neglected in the marketing literature, as most studies focus on either consumer adoption or acceptance of internet banking (Eriksson & Nilsson 2007). However, in practice, continued use is related to a cost-effective marketing strategy aimed at retaining customers. With these considerations in mind, and the existing gaps in the knowledge surrounding consumers' continued use of internet banking, the present research focuses on exploring the antecedents to consumers' continued use of internet banking.

Literature Review

Existing literature depicts that four theories Theory of Reasoned Action, Theory of Planned Behaviour, Technology Acceptance Model and Diffusion of Innovations are widely used in explaining the perceptions that consumers have towards their use of internet banking. However, according to Bagozzi (2007) all the aforementioned seem to neglect group, social and cultural aspects of the consumer decision-making process and depend on a purely deterministic framework and often self-regulation processes are not taken into consideration. Kasheir *et al.* (2009) and many researchers believe that these theories are incomplete and that integrating aspects of these theories provides a better understanding and explanation of consumer evaluation of the post-purchase decision-making process.

Consumers' continued use of internet banking assessment may be more complex than current theories explain, due to the fact that consumers often need to abandon or minimise their current behaviour and usual concerns associated with technological advancements (Falk *et al.* 2005). Consequently, existing models, whilst indicative of internet usage behaviour, are not complete in terms of all of the factors consumers refer to in their decision-making. The role of technology at each stage of acquiring, processing and delivering information is crucial in the banking industry

sector, due to the fact that banking services are highly information sensitive (Acharya *et al.* 2008). Consumers' perceptions relating to the relative advantage, compatibility, complexity, trialability and result demonstrability of internet banking, and their comparison to other service delivery channels offered by the bank, may be critical in motivating consumers to perform internet banking on a continued basis (Kasheir *et al.* 2009).

Perceived self-efficacy, perceived risk, perceived trust and perceived personalisation have been identified as important channel-related factors that might predict consumers' continued use of internet banking. Tan & Teo (2000) state that subjective norms and normative beliefs are associated with social influence and can significantly influence consumers' intention to adopt internet banking. However, the role of social influence in the adoption of internet banking behaviour by consumers is somewhat unclear (Yousafzai *et al.* 2003). In the existing literature, the influence exerted by social groups on consumers' intention to adopt internet banking is equivocal as one stream of research reported positive influences (Ravi *et al.* 2007) and another stream of research report non-significant influences (Chan & Lu 2004).

Creating value for consumers is central to marketing (Woo 1992, Petrick 2002). Existing research shows that consumers' overall assessment of a particular distribution channel is pivotal and is often associated with their value perceptions based on their relevant judgment of a service (Chen & Dubinsky 2003). Therefore, value-related factors are expected to play a significant role in predicting consumers' continued use of internet banking and will be included as a factor to measure in this research. Thus the objective of the present study in the first phase is to identify the factor components that influence consumers continued use of internet banking. In the second phase the predicted power of the relationships between the identified factor components and the dependent variable will be examined through hierarchical multiple regression analysis.

Methodology

A cross-sectional survey questionnaire was developed and distributed to intercepted respondents who agreed to participate in the study in the foyer of a busy shopping mall in Sydney, Australia. 1308 respondents were intercepted and 683 valid responses were obtained indicating 52.5% response rate. Data were obtained from 372 internet banking users and 311 internet banking non-users. For the purpose of this study, only data obtained from the internet banking users was subjected for further analysis. Technology (17 scale items with 5 sub-dimensions), channel (15 scale items with 4 sub-dimensions), social (6 scale items with 2 sub-dimensions), value for money (8 scale items with 2 sub-dimensions) and continued use factors are conceptualised based on Tan & Teo 2000; Black *et al.* 2002; Zhao *et al.* 2008; Venkatesh & Davis 2000; Petrick 2002; Chan & Lu 2004; Hernandez & Mazzon 2007 on a six point Likert scale. The frameworks developed for studying intention to adopt and adoption of internet banking by Black *et al.* (2002) and Yousafzai *et al.* (2005) are used as conceptual stimuli for developing the theoretical framework.

Logarithmic transformations were performed as the data indicated non-normal distribution. Exploratory factor analysis with principal component analysis was performed with promax rotation as it provides a class of techniques useful for condensing many variables into a smaller, manageable and more reliable subset of dimensions or factors (Fabrigar *et al.* 1999). Certain scale items were deleted from entering further analysis as they did not meet the essential criteria such as low factor loading values, less eigenvalues or low item-to-total correlations (Hair *et al.* 2006).

Principal Component Analysis Output for the Technology Factors

The KMO measure of sampling adequacy (0.819) was satisfied indicating that the present data were suitable for principal component analysis. The component correlation matrix indicates that the two components emerged from the technology factors to be moderately positively correlated (0.427).

Table 1.1: Summary of Principal Component Analysis for Technology Factors Measure (N = 372)

Scale items	Factors	
	1	2
LTD3 Internet banking allows me to manage my finances more efficiently	0.71	
LTD2 Internet banking gives me greater control over my finances	0.70	
LTD6 Internet banking is compatible with my lifestyle	0.70	
LTD7 Using internet banking fits well with the way I like to manage my finances	0.68	
LTD4 Internet banking is a convenient way to manage my finances	0.67	
LTD8 Using the internet to conduct banking transactions fits into my working style	0.65	
LTD10 Internet banking is useful for managing my financial resources	0.53	
LTD1 Internet banking makes it easier for me to conduct my banking transactions	0.51	
LTD16 I believe I could communicate to others the consequences of using internet banking	0.46	
LTD17 I would have no difficulty explaining to others why using internet banking may be beneficial	0.41	
LTD9 Internet banking does not require a lot of mental effort	0.45	
LTD12 Prior to the actual adoption, internet banking is available for me to use on a trial basis		0.84
LTD14 I have a great deal of opportunity to try internet banking before the actual adoption		0.79
LTD13 I am able to use internet banking to see what it can do for me prior to the actual adopti0on		0.76
Eigenvalues	3.932	2.069

Component 1: Perceived Usability

This component consists of items relating to the consumer's extent of ease and convenience with internet banking, compatibility with their personal and professional lifestyles and the extent to which they could communicate the benefits of internet banking usage to others.

Component 2: Perceived Trialability

This component relates to the extent to which customers can actually try internet banking or any add on features with regard to internet banking on a limited basis before they actually consume the service. Customers are often comfortable with the trialability nature of internet banking as it can remove any technology apprehensions that persist with the customers.

Principal Component Analysis Output for the Channel Factors

The results of the principal component analysis output for the channel factors are presented in Table 1.2. It is evident from the table that the KMO measure of sampling adequacy (0.773) and Bartlett's test of Spherecity ($p < 0.001$) were satisfied. The component correlation matrix reveals that the two emerged components of the channel-related factors to be moderately positively correlated (0.341).

Table 1.2: Summary of Principal Component Analysis for Channel Factors Measure (N = 372)

Scale items	Factors	
	1	2
LCD10 Internet banking is trustworthy	0.70	

Table 1.2: Summary of Principal Component Analysis for Channel Factors Measure (N = 372)

Scale items	Factors	
	1	**2**
LCD11 I trust in the ability of internet banking to protect my privacy	0.66	
LCD12 Using internet banking is financially secure	0.62	
LCD1 I am confident of using internet banking even if there is no one around to show me how to use it	0.62	
LCD3 I am confident of using internet banking even if I have only the online instructions for reference	0.58	
LCD9 Internet banking transactions does not lead to an inefficient use of my time	0.55	
LCD6 I am confident that internet banking in Australia is secure	0.53	
LCD7 Information concerning my internet banking transactions cannot be accessed by others	0.43	
LCD5 I am confident of using internet banking if I could call someone for help if I got stuck		0.74
LCD4 I am confident of using internet banking if I see someone else using it before I try it myself		0.67
LCD14 Internet banking websites provide information that is tailor-made for me		0.54
LCD2 I am confident of using internet banking if I have the built-in online "help" function for assistance		0.49
LCD13 Performing internet banking makes me feel that I am a unique customer		0.44
LCD15 The promotional offers that I receive through internet banking transactions are attractive to me		0.40
Eigenvalues	3.425	1.698

Component 1: Perceived Safety

This component relates to the safety of internet banking with regard to the risk, security and trust associated by the consumers with internet banking as a service delivery channel. Moreover, the component included items related to the internal component of self-efficacy, indicating that internet banking users were confident that they can perform their transactions without any help.

Component 2: Perceived Specialty

This component is related to the personalisation component perceived by the consumers as unique and special customers due to internet banking. Also the component consists of the external component of self-efficacy, indicating less confidence associated with the internet banking consumers without the presence of a role model or online help functions.

Principal Component Analysis Output for the Social, Value for money and Continued Use Factors

The results obtained from the principal component analysis for the social, value for money and continued use factors are presented in Table 1.3. The table shows that the minimum standard was attained before the data were subjected to the actual principal component analysis by satisfying the KMO measure of sampling adequacy (0.898), (0.824), and (0.617) with a variance of 64.725 percent for the social factors, 38.193 percent for the value for money factors and 57.397 percent for the continued use factors.

Table 1.3: Summary of Principal Component Analysis for Social, Value for money and Continued use Factors Measure (N = 372)

Scale items	Factor
Social factors	
LSD1 My decision to use internet banking is influenced by my friends	0.72
LSD2 My decision to use internet banking is influenced by my family	0.63

LSD3 My decision to perform internet banking is influenced by my colleagues		0.70
LSD4 I frequently gather information from friends about internet banking before I actually perform any transactions		0.73
LSD5 I often check with others to make sure that I am properly using internet banking		0.67
LSD6 I often observe how others conduct their banking transactions before I actually perform any transactions		0.41
Eigenvalues		3.883
Value for money factor		
LCPV1 Internet banking is very reliable	0.46	
LCPV2 Internet banking is of outstanding quality	0.43	
LCPV3 Internet banking provides easy access to information	0.48	
LCPV4 I am happy with the price charges for performing internet banking	0.42	
LCPV5 Internet banking has a good reputation in Australia	0.58	
LCPV6 Internet banking transactions can be performed with very little effort	0.59	
LCPV7 Performing internet banking transactions is the right decision when price and other expenses are considered	0.47	
LCPV8 Internet banking transactions are economical	0.69	
Eigenvalues	3.055	
Continued use factor		
LUD1 Internet banking usage is a positive experience for me		0.61
LUD2 I intend to use internet banking regularly to perform my banking transactions		0.66
LUD3 I intend to increase my use of internet banking transactions in future		0.45
Eigenvalues		1.722

The reliability statistics for the scales identified through principal components analysis exceeded at least 0.60 (Graham 2006).

Thus the factor components of the technology and channel factors identified in the present study relate to perceived usability, perceived trialability, perceived safety and perceived security. Whereas, social, value and continued use factors resulted in the extraction of single factor components. The present research stems from the need to provide better information and understanding of consumers to the bank management, marketers and decision-makers in the financial services sector, especially those involved in the retail banking industry. The present research extends several theories that are of high relevance and importance in the context of internet banking research. Investigating antecedents to consumers' continued and frequent use of internet banking has relevance for financial sector managers, marketers and administrators, retail banking managers, marketers and decision-makers, academics and practitioners in the services marketing area.

As mentioned earlier, researchers concentrating on internet banking have expressed the need for integrating different theories and/or for evaluating related theories in the same investigation. Integration of theories when studying internet banking continued and frequent use and its consequences has been proposed to overcome the pitfalls of basing any internet banking research on just a single theoretical approach (Kashier *et al.* 2009).

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