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Abstract

Although the diffusion of information technologies has been widely considered in the Australian context, very few studies seem to have focus on the adoption and diffusion of information systems among individual accountants. This research investigates factors affecting the use of Accounting Information Systems (AIS) by Australian accounting practitioners. The Unified Theory of Acceptance and Use of Technology model by Venkatesh et al. (2003) is adopted to investigate this issue. The model is extended by integrating the national culture theory by Hall (1973), with an emphasis on culture and communication. Data were collected from 190 accountants in Australia. The data collected were analysed using Structural Equation Modeling in association with the Partial Least Squares technique. The results show that performance expectancy, effort expectancy, facilitating condition and low context communication characterising the Australian culture positively influence behavioral intention and utilisation of AIS.

Keywords

Australia, Accountants, Accounting, Information Systems, High and Low Context, Technology Adoption, Technology Utilisation, UTAUT

INTRODUCTION

Since the 1990s, firms worldwide have invested heavily on Accounting Information Systems (AIS) implementation. AIS technologies have been introduced to accountants, and gained its significance in the accounting discipline (Ho et al. 2008). For example, accountants use AIS applications such as QuickBooks and MYOB to aid in processing financial transactions in Small and Medium Enterprises (SMEs). In large organizations, the Enterprise Resource Planning (ERP) systems such as SAP have become a dominant business information systems application to assist accountants in improving real-time transaction processing and reporting systems for management decision making. Nevertheless, only a few pieces of research conducted to investigate the use of AIS among Australian accountants (Booth et al. 2000; Fink 1996; Ho et al. 2008). This study investigates factors affecting the use of AIS by accounting practitioners in Australia, encompassing the role of low context of communication characterising the Australian culture plays in AIS acceptance and utilisation.

The primary motivator for us is a theoretical gap in the AIS acceptance and utilisation research. While researchers have attempted to address the implications of AIS on accounting practice, the focuses on these research are on understanding factors influencing technology adoption decisions and technical aspects of technology implementation (Anderson and Lanen, 2002; Booth et al., 2000; Choe, 1996; Debreceny et al., 2005; Venkatesh and Zhang, 2010; Verdaasdonk and Wouters, 2001). However, implementing AIS technologies do not necessary imply that firms will have better efficiency and effectiveness in accounting operations (Booth et al. 2000). Currently, many firms have adopted AIS and they have entered the post-implementation stage. Consequently, issues on the use of AIS have become more crucial (Schwarz and Chin 2007). Nevertheless, relatively few studies conducted to investigate accountants' perceptions on the use of AIS (Sutton, 2005).

To address the above knowledge gap, we pose the following research question: *'What factors affect the use of Accounting Information Systems by Australian accounting practitioners?'* This research adopts the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003), which was first published in the Management Information Systems Quarterly journal. The UTAUT was introduced to assist in analysis on issues affecting IS acceptance and utilisation. In addition, we extend the model by integrating the national culture theory by Hall (1973), with an emphasis on culture and communication.

The remainder of this paper is structured as follow. The next section presents a review of the UTAUT model and addresses the need for incorporating the cultural related communication factor. The development of research model and hypotheses are proposed. Then, the results are presented and followed by the discussion, conclusion, limitation and suggestion for future research.

THE DEVELOPMENT OF RESEARCH MODEL AND HYPOTHESES

The Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh et al (2003) develops the model based on a review and consolidation of the earlier eight Information Technology (IT) adoption models including the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational model, the Theory of Planned Behaviour (TPB), a combined TOB and TAM, the model of Personal Computer utilisation, the Diffusion of Innovation Theory (DOI), and the Social Cognitive theory. The UTAUT aims to explain users' intention to use information systems and subsequent use behaviour. The results of ensuing validation of the UTAUT in a longitudinal study show that the model accounts for 70 percent of the variance in usage intention and it outperforms these eight IT adoption models (Venkatesh et al., 2003).

As shown in Figure 1, the model identifies three direct determinants of behavioral intention to use behaviour, namely performance expectancy, effort expectancy and social influence. In addition, two direct determinants of use behavior are behavior of intention and facilitating conditions. Four contingencies factors including gender, age, experience and voluntariness of use are posited to mediate the impact of these variables on behavioural intention and use behaviour.
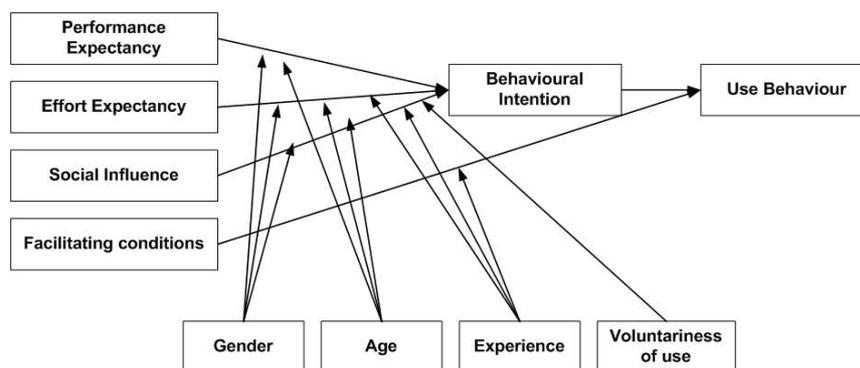

Figure 1: The Unified Theory of Acceptance and Use of Technology

The UTAUT has been further tested by IS researchers in various contexts (Anderson et al., 2004; Garfield, 2005; Li and Kishore, 2006; Louho et al., 2006; Rosen et al., 2004). It is worth noting that the empirical tests of the UTAUT have been

primarily conducted in the United States (US) context (Venkatesh and Zhang 2010), for example a study by Anderson and Schwager (2004) in the US SMEs and Anderson et al. (2006) in the US higher education. Although a few studies have conducted outside the US, but testing the UTAUT in cultural research is still very limited (Alawadhi and Morris 2008; Venkatesh and Zhang 2010). A study by Oshlyansky et al. (2007) is conducted in an attempt to validate the UTAUT over eleven culturally-diverse countries. These are Czech Republic, France, Greece, India, Malaysia, Netherlands, New Zealand, Saudi Arabia, South Africa, the United Kingdom, and the US. They found that the UTAUT model is robust when testing in different cultural contexts, outside its original country and language of origin.

In a more recent study, Venkatesh and Zhang (2010) attempt to compare the use of UTAUT model in the US and China. They conduct a comparative study on a single organisation operated in both countries and collect longitudinal data from over 300 employees. They address a need to incorporate national culture factor to the UTAUT model. Without incorporating the cultural factor, the UTAUT has limitation in further exploring cultural implications to IS acceptance and utilisation (Oshlyansky et al. 2007).

Extended the Research Model

Responding to the research question, this study adopts the UTAUT model to investigate the use of AIS by accounting professionals in Australia context. In addition, this study will further test the UTAUT model by incorporating a cultural factor on communication aspect to the model. This will help researchers to better understanding the factors affecting the use of AIS among Australian accountants as well as further test the robustness of the extended UTAUT model in cultural research, an area of growing interest and significance among IS researchers (Huang et al. 2010).

The importance of understanding the influence of national culture on communication can be addressed by consideration of the characteristics of AIS technology as a communication medium. The relationship between culture and communication has been emphasised in cross-cultural communication research (Hall 1973). Culture is "the structure through which communication is formulated and interpreted" (Chaney and Martin 2000, p.5). Triandis (2000) assert that western individualist cultures are mostly concerned with the content of communications, whereas eastern collectivist cultures are mostly concerned with the context of communication.

This study introduces a cultural related communication factor by Hall's (1973) national cultural theory to the UTAUT. The anthropologist, Edward Hall (1973), points to the interrelationship between culture and communication. He distinguishes cultures on the basis of their ways of communicating, and distinguishes between high context communication (HC) and low context communication (LC). In HC societies such as Thailand, China and Japan, little has to be said or written because most of the information is either in the physical context or is internalised in the person. In contrast, in LC societies such as Australia, the US and the United Kingdom, the mass of information is vested in an explicit code. Although people in LC societies recoginise the non-verbal message, they tend to focus more on the verbal message. Thus, we seek to understand the impact of LC characterising Australian culture on the AIS acceptance and usage.
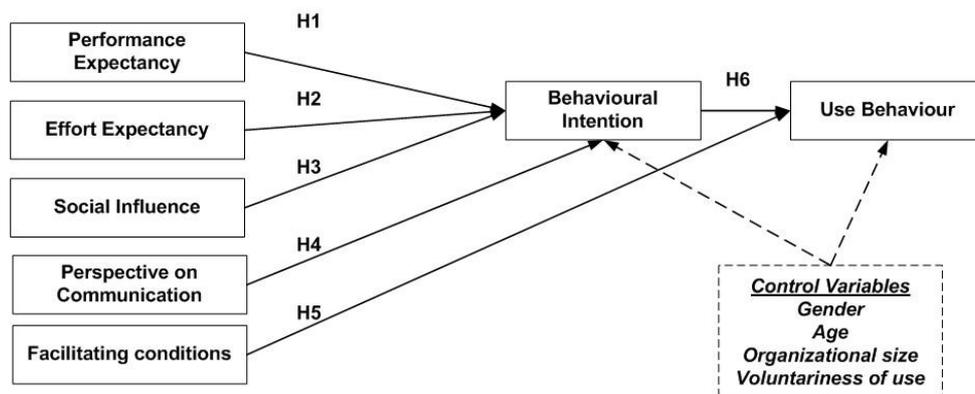

Figure 2: The research model

The proposed model is shown in Figure 2. The four contingency variables, namely gender, age, experience and voluntariness are included to the model as control variables in this study. In addition, due to the use of AIS in organizational environment, we introduce the organizational size factor as control variable in the model. The development of the research hypotheses are presented in the following sub-sections.

Performance expectancy

Performance expectancy is defined as the degree to which an individual believes that using the systems will help him or her to achieve in higher job performance (Venkatesh et al., 2003). The five items to measure performance expectancy are perceived usefulness (Davis, 1989), extrinsic motivation (Davis et al., 1992), job-fit (Thompson et al. 1991), relative advantage (Moore and Benbasat, 1991), and outcome expectations (Compeau and Higgins, 1995). Similar to the original UTAUT model, we hypothesise that:

H_1: There will be a positive relationship between performance expectancy of Australian accounting practitioners and their behavioural intentions to use AIS.

Effort expectancy

Effort expectancy is defined as the degree of ease associated with the use of the systems (Venkatesh et al., 2003). Several pieces of studies find that IS application perceived to be easier to use than others is more likely to be accepted by users (Davis, 1989). This construct is measured by perceived ease of use (Davis et al., 1992), complexity (Thompson et al. 1991), and ease of use (Moore and Benbasat, 1991). Consistent with prior research, effort expectancy is expected to have a positive influence on behavioural intention. It is hypothesised that:

H_2: There will be a positive relationship between effort expectancy of Australian accounting practitioners and their behavioural intentions to use AIS.

Social influence

Social influence is defined as the degree to which extend the influence by other individuals impacts on a person's decision whether to accept or reject the systems (Venkatesh et al., 2003). According to Fishbein and Azjen (1975), a person's subjective norm may be influenced by other individuals, for example when referents tell a person that they think he or she should use the system. The social influence is represented as subjective norm in the TRA (Davis et al., 1989) and the TPB (Ajzen, 1991), social factors in the model of personal computer utilisation (Thompson et al., 1991), and image in the DOI (Moore and Benbasat, 1991). In addition, previous studies in organisational settings have found subjective norm to be an important determinant factor to behavioral intention of IS acceptance (Hartwick and Barki 1994; Taylor and Todd 1995). Consequently, we hypothesise that:

H_3: There will be a positive relationship between social influence on Australian accounting practitioners and their behavioural intentions to use AIS.

Perspective on communication

This study proposes that Australian culture and its' orientation to communication may influence the use of AIS in Australia. According to Hall (1973), Australia is categorised as a LC culture. Individuals from LC cultures prefer more objective and 'fact-based' information and are more likely to consider the factual message as sufficient. In addition, Hofstede (1991) points out that Australian is an individualist culture which people prefer an explicit discourse in communication. He asserts that an individualist society is often associated with LC culture. The items to measure this construct are adapted from Aoun et al. (2009). This study hypothesises that:

H_4: There will be a positive relationship between LC of communication of Australian culture and behavioural intentions to use AIS.

Facilitating conditions

Facilitating conditions are defined as the degree to which an individual believes that an organisational and technical infrastructure exist to support the use of systems (Venkatesh et al., 2003). This construct consists of perceived behavioural control (Ajzen, 1991; Taylor and Todd, 1995), facilitating conditions (Thompson et al. 1991), and compatibility (Moore and

Benbasat, 1991). These items reflect aspects of the technological and organisational environment that are designed to remove barriers to the use of IS (Venkatesh et al., 2003). The empirical results of Venkatesh et al. (2003)'s study indicate that facilitating conditions have a direct influence on AIS usage. Therefore, it is hypothesised that:

H_5: There will be a positive relationship between facilitating conditions and the usage of AIS by Australian accounting practitioners.

Behavioural intention and Use behaviour

The role of intention as a predictor of behaviour is critical and has been well-established in IS research (Ajzen 1991; Taylor and Todd 1995). Consistent with the UTAUT, behavioral intention is expected to have a positive influence on AIS usage. While the constructs in the UTAUT are designed to measure users' attitudes toward AIS acceptance and use by using a seven-point Likert scale of 1.strongly disagree to 7.strongly agree, the use behaviour construct, in the UTAUT, is measured by self-reported frequency of technology usage such as an average number of hours per day. In order to improve the consistency of measure items, this study further develops questions to measure the frequency of usage by using the Likert scale. Examples of questions are I often use AIS to perform my job; I frequently use AIS; I use AIS on a regular basis; Most of my tasks involve in using AIS.

H_6: There will be a positive significant relationship between behaviour intention of Australian accounting practitioners and the usage of AIS.

METHODOLOGY

Quantitative empirical data were collected through survey questionnaire between August and September 2009. The paper-based surveys were sent to 600 accounting practitioners from 600 companies across Australia. The participants were randomly selected from the purchased database of Kompass Australia. In order to confirm participants' employment status in their companies and increase response rate, telephone calls were subsequently made to each of the companies selected. This provided the opportunity to confirm each participant's title and contact detail. The surveys were addressed to a combination of accountants, finance/accounting managers, and CFO/Finance Director/Financial controller. A seven-point Likert scale was used to measure their attitudes toward AIS acceptance and utilisation. A total of 208 questionnaires (34.7% response rate) were returned. Of these, 15 questionnaires were invalid and this resulted in 192 valid responses (32% response rate).

Data collected were analysed using Structural Equation Modeling (SEM) with Partial Least Squares (PLS) technique. The model was operationalised and analysed in the SmartPLS 2.0. The PLS approach was preferable for this study because it provides a better prediction capability and it is effective in the analysis of a high complexity model with small sample size compared to a large number of independent variables. In addition, it imposes no requirement of a normal distribution assumption which suits the nature of the data collected.

In term of demographic data of the respondents, 69.3% is male and 30.7% is female. 38.5% of the respondents has postgraduate degree, followed by undergraduate degree (32.8%), TAFE certificate (16.1%) and High school certificate (10.4%). About of the respondents (51%) hold senior managerial positions such as CFO/Financial controller/Finance director, while the rest are accountants and finance/accounting managers. 69.1% of the respondents are from organisations with 200 employees or less (Small 22.4%, Medium 46.9%), while 30.7% are from large organisations. The respondents have an average of 18 years experiences of using AIS with a minimum of 3 and a maximum of 25 years. The average of AIS usage per day is 4.41 hours. The next section presents the results of data analysis by the SmartPLS.

RESULTS

Evaluation of Measurement Model

To ensure the accuracy of the structural model analysis, the validity and reliability of the scale developed need to be tested. Table 1 presents the results obtained via the bootstrapping procedure including PLS loadings, T-statistics, Significance level, Composite Reliability and Average Variance Extracted (AVE). The results suggest that our measurement model demonstrates sufficient discriminant validity and internal consistency. Chin (1998) suggests that the loading should be greater than 0.707. All the reflective scales demonstrated acceptable performance above the minimum value of composite reliability,

which is greater than 0.7. Overall the condition of the loading scores was met in this study and the T-statistics revealed that all the items were at a significant level of 99 percent. Additionally, composite reliability calculated by PLS is suitable for assessing internal consistency (Chin 1998). All the reflective scales demonstrated acceptable performance above the minimum value of composite reliability, which is greater than 0.7. Additionally, the standard for reliability dictates that the AVE scales should exceed 0.5, indicating that "50 percent or more variance of the indicators should be accounted for" (Chin 1998, p.321). All the scales performed acceptably on this standard.

Constructs and Items	PLS loadings	T-statistics	Significance level	Composite Reliability	AVE
Performance expectancy				0.9573	0.8819
PE1	0.9141	26.8227	0.01		
PE2	0.9557	51.3715	0.01		
PE3	0.9354	43.3312	0.01		
Effort Expectancy				0.9394	0.7951
EE1	0.8481	20.2323	0.01		
EE2	0.8902	23.9747	0.01		
EE3	0.9252	51.196	0.01		
EE4	0.8963	26.8707	0.01		
Perspective on communication				0.8884	0.7267
POC1	0.8165	13.654	0.01		
POC2	0.9116	35.3514	0.01		
POC3	0.8143	11.2386	0.01		
Social influence				0.8704	0.6274
SI1	0.7086	7.1187	0.01		
SI2	0.7818	8.859	0.01		
SI3	0.8074	15.9392	0.01		
SI4	0.8278	16.4199	0.01		
Facilitating conditions				0.8009	0.5798
FC1	0.8937	26.5113	0.01		
FC2	0.7699	7.0053	0.01		
FC3	0.5437	3.4477	0.01		
Behavioural intention				0.9593	0.8549
BI1	0.9343	27.6546	0.01		
BI2	0.9376	22.4395	0.01		
BI3	0.9540	24.752	0.01		
Use Behaviour				0.9330	0.7774
UAG1	0.9202	26.6772	0.01		
UAG2	0.8833	14.4797	0.01		
UAG3	0.9220	33.7307	0.01		
UAG4	0.7917	15.4692	0.01		

Table 1: Statistical outcomes for the measurement model

Furthermore, the discriminant validity can be evaluated by comparing the AVE of the latent variables and the correlations among the Latent Variables (LVs). While the correlations are not shown because of space limitations, the square roots of AVEs are all larger than their corresponding correlations. This confirms that indicators measuring a particular LV do not improperly overlap with other LVs' concepts and the discriminant validity has been met.

Structural Model Results

Figure 3 presents the results of the structural model. The predictiveness of the model can be assessed by the R^2 of the dependent constructs. The results show that R^2 of the use behaviour is 0.477, which indicates that behavioural intention and facilitating conditions accounted for 47.7 percent of the variance of the construct. Interestingly, behavioural intention and facilitating conditions contributes almost equally to the use behaviour of 0.389 and 0.394 of path coefficient respectively.

In addition, the R^2 of the behavioural intention is 0.415, which indicates that performance expectancy, effort expectancy, social influence and perspective on communication accounted for 41.5 percent of the variance of the construct. Among these factors performance expectancy contributes the highest score to the behaviour intention (0.299 of path coefficient), followed by perspective on communication (0.221) and effort expectancy (0.190).
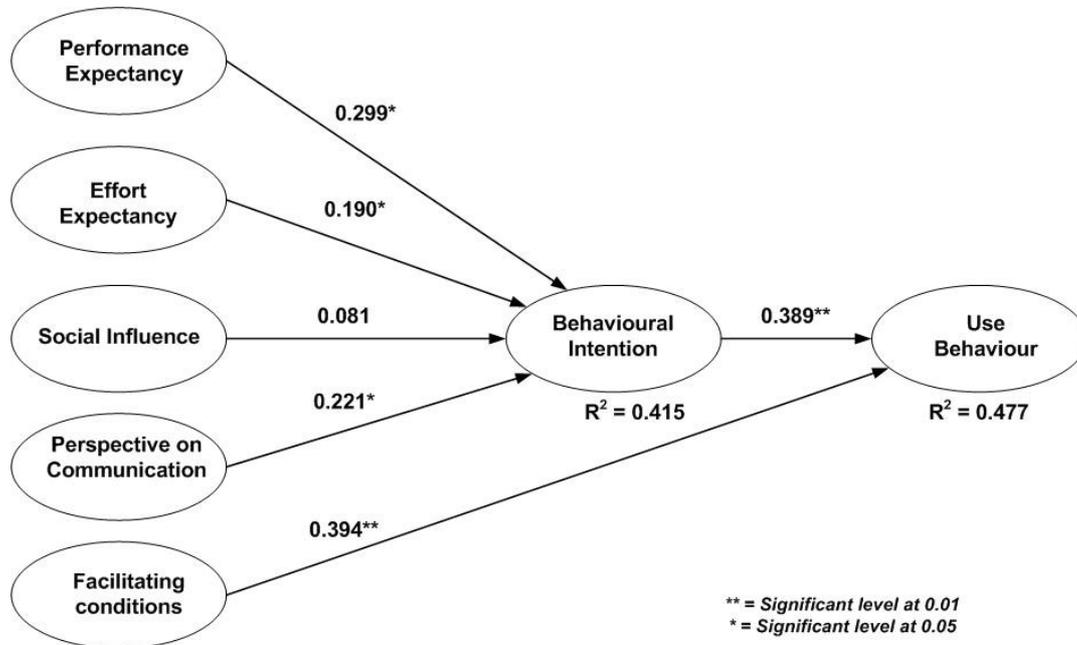

Figure 3: Structural model results

Table 2 presents the statistical outcome obtained through the bootstrapping procedure (that is actual effect, path coefficient, T-statistics, and significance level). The results reveal that performance expectancy, effort expectancy and perspective on communication have significant positive influence on the behavioural intention of using AIS, with path coefficients 0.299, 0.190, and 0.221 respectively. Thus, hypotheses 1, 2, 4, 5, and 6 are supported. However, no significant relationship was found between social influence and behavioural intention, which leads to the rejection of hypothesis 3. In addition, the results supported hypotheses 5 and 6 that the behavioural intention and facilitating conditions have significant positive influence on AIS usage, with path coefficients 0.389 and 0.394 respectively.

Construct	Actual effect	Path coefficient	Observed T-statistics	Significance level
Utilisation **($R^2 = 0.447$)**				
Behavioural intention	+	0.389	3.244	0.01
Facilitating conditions	+	0.394	3.508	0.01
Behavioural intention **($R^2 = 0.415$)**				
Performance expectancy	+	0.299	1.978	0.01
Effort expectancy	+	0.190	1.680	0.05
Social influence	+	0.081	0.884	Not significant
Perspective on communication	+	0.221	1.754	0.05

Table 2: Summary of path coefficient test results

Additionally, the structural model with control variables reveals that all the control variables had no effect on behavioural intention and use behaviour. Therefore, including the control variables does not alter any of the significance levels of the path coefficient in the structural model.

DISCUSSION AND CONCULSION

This research adopts the UTAUT model to investigate the use of AIS by accounting practitioners in Australia. The research model extends the UTAUT model by integrating the perspective of communication factor, which is derived from the national cultural theory by Hall (1973). The results show that in the context of Australia, the use of AIS is affected by behavioural intention and facilitating conditions. This finding is consistent with prior studies of the UTAUT model (Garfield, 2005; Oshlyansky et al. 2007; Louho et al. 2006). In addition, we found that performance expectancy, effort expectancy and perspective on communication, with an exception of social influence, have significant impact behavioural intention.

To our knowledge, this is the first study that incorporates the cultural related communication factor to the UTAUT. This study has demonstrated empirically that the LC characterising Australian culture has positive relationship to the use of AIS. This implies that the LC cultures encourage the use of AIS in Australia. This result inlines with the findings from a study by Thatcher et al. (2004) on the adoption B2B e-commerce in Taiwan. They found that textile managers believe that B2B cannot support high context communication and relationship in their business culture. Van Everdingen and Waarts (2003) found that countries with LC cultures have significantly higher ERP adoption rates than countries with HC cultures. In HC cultures, message about innovations may be managed effectively through transformational communications e.g. testimonials, good practice examples and industry group meeting, while in LC cultures, informational communication via brochures, the Internet and company visit could be the best way of promoting innovation diffusion.

Performance expectancy is found to have the most significant impact to the use of AIS. The results indicate that the more Australian accounting practitioners perceive AIS as useful and easy to use, the more likely they are to use it. This finding is consistent with the results from previous studies of the UTAUT model (Venkatesh et al., 2003; Oshlyansky et al., 2007; Erin and Rajiv, 2006). In addition, the result of this study also indicates that the path coefficient of performance expectancy (0.299) to behavioural intention is higher than effort expectancy (0.190). This is consistent to several prior studies that perceived usefulness is more important than perceived ease of use in determining whether to use a technology (Venkatesh et al., 2003; Chau, 1996; Keil et al., 1995). Some researchers suggest that effort expectancy is expected to become less significant over periods of extended and sustained technology usage (Agarwal and Prasad, 1997; Thompson et al. 1991; Thompson et al. 1994). In this research, the respondents indicate that they already have experiences in using AIS at a minimum of 3 years.

Interestingly, in this study, social influence does not have significant impact on the use of AIS in Australia. This may be explained by the characteristic of Australian culture. Australians place greater importance on individualism and independence (Patel, 2003). The ties between individuals are loose in the individualist society of Australia. Unlike the collectivist society, members of the society are concerned with a group interest rather than individual interest. In addition, the Australian society is categorised as a low power distance culture (Hofstede, 1991). In a low power distance society, there is less hierarchical structure in family as well as workplace. In contrast to a high power distance society, the hierarchical relations are also a feature of the workplace where bosses or superiors have absolute power. There is a big gap between bosses and subordinates, where subordinates are afraid to propose new ideas if they are likely to be different from what their boss is thinking (Hofstede 1991). Thus, the individualistic and low powder distance of the Australian culture may imply the non-significant impact of social influence on the use of AIS.

In summary, this study serves as a preliminary step toward the investigation of the factors affecting the use of AIS in Australia. In this research, the results are largely consistent with the results in Venkatesh et al. (2003) that all factors were found to be significant except social influence. In addition, the perspective on communication was incorporated into the research model in order to gain a better understanding of AIS utilisation by Australian accounting practitioners. The results show that the characteristic of LC communication in Australian culture encourages the use of AIS.

LIMITATIONS AND FUTURE RESEARCH

This study is limited by concentrating only on the use of AIS by the Australian accounting professionals. In doing so, this study may restrict its findings to this particular industry context. Caution, therefore, should be taken when generalising the robustness of the UTAUT in Australia. Hence, future research may extend this study by using a larger sample size and a

variety of industrial and national contexts. In addition, given that cross-sectional data were collected, representing a snapshot in time, researchers may consider conducting a longitudinal analysis, which may incorporate qualitative method, to further explore the findings of this study.

REFERENCES

Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences,* (28:3), pp 557-582.

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes,* (50:2), pp179-211.

Alawadhi, S., & Morris, A. (2008). *The use of the UTAUT model in the adoption of e-government services in Kuwait.* Paper presented at the 41st Annual Hawaii International Conference on System Sciences, Hawaii, U.S.

Anderson, J. E., & Schwager, P. H. (2004). *SME adoption of wireless LAN technology: applying the UTAUT model.* Paper presented at the 7th Annual Conference of the Southern Association for Information Systems.

Anderson, J. E., Schwager, P. H., & Kerns, R. L. (2006). The drivers for acceptance of tablet PCs by faculty in a college of business. *Journal of Information Systems Education,* (17:4), pp 429.

Anderson, S. W., & Lanen, W. N. (2002). Using Electronic Data Interchange (EDI) to improve the efficiency of accounting transactions. *Accounting Review,* (77:4), pp 703-729.

Aoun, C., Vatanasakdakul, S. & Chen, Y. (2009), *Made in China: ERP Post-Implementation Performance in the Chinese Manufacturing Industry*, the proceedings of The 15th Americas Conference on Information Systems, 6-9 August, San Francisco

Booth, P., Matolcsy, Z., & Wieder, B. (2000). The impacts of Enterprise Resource Planning (ERP) systems on accounting practice: the Australian experience. *Australian Accounting Review,* (10:22), pp 4-18.

Chaney, L. H., & Martin, J. S. (2000). *Intercultural business communication* (2nd ed.). USA: Prentice Hall.

Chau, P. Y. K. (1996). An empirical assessment of a modified Technology Acceptance Model. *Journal of Management Information Systems*, (13:2), pp 185-204.

Chin, W. (1998). Issues and opinion on Structural Equation Modelling. *MIS Quarterly,* March

Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: development of a measure and initial test. *MIS Quarterly,* (19:2), pp 189-211.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly,* (13:3), pp 319-340.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science,* (35:8), pp 982-1003.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology,* (22:14), pp 1111-1132.

Debreceny, R. S., Gray, G. L., Ng, J. J., Lee, S. P., & Yau, W. F. (2005). Embedded audit modules in Enterprise Resource Planning systems: Implementation and functionality. *Journal of Information Systems,* (19:2), pp 7-27.

Erin, C.-A., & Rajiv, K. (2006). *An extension of the UTAUT model with e-quality, trust, and satisfaction constructs.* Paper presented at the 2006 ACM SIGMIS CPR conference on computer personnel research, Claremont, California, USA.

Fink, D. (1996). Information systems success in small and medium enterprises: An evaluation by Australian public accountants. *Australasian Journal of Information Systems* (4:1), pp 32-42.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, Mass: Addison-Wesley.

Garfield, M. J. (2005). Acceptance of ubiquitous computing *Information Systems Management,* (22:4), pp 24-31.

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly,* (27:1), pp 51-90.

Greenstein, M., & McKee, T. E. (2004). Assurance practitioners' and educators' self-perceived IT knowledge level: an empirical assessment. *International Journal of Accounting Information Systems,* (5:2),pp 213-243.

Hall, E. T. (1973). *The Silent Language*. USA: Anchor.

Hartwick, J., & Barki, H. (1994). Explaining the role of user participation in information system use. *Management Science,* (40:4), pp 440-465.

Ho, S. Y., Pan, G., & Ferguson, C. (2008). The information systems-accounting nexus: Lessons from an Australian institution. *Communications of AIS,* (22:11), pp 197-210.

Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. USA: McGraw-Hill.

Huang, K.Y., Choi, N. & Chengalur-Smith, I. (2010) *Cultural Dimensions as Moderators of the UTAUT Model: a Research Proposal in a Healthcare Context.* Paper presented at the 16ᵗʰ Americas Conference of Information Systems, Lima, Peru

Keil, M., Beranek, P. M., & Konsynski, B. R. (1995). Usefulness and ease of use: Field study evidence regarding task considerations. *Decision Support Systems,* (13:1), pp 75-91.

Li, J. P., & Kishore, R. (2006). *How robust is the UTAUT instrument? A multigroup invariance analysis in the context of acceptance and use of online community web blog systems.* Paper presented at the 2006 ACM SIGMIS CPR conference on computer personnel research, Claremont, California, USA.

Louho, R., Kallioja, M., & Oittinen, P. (2006). Factors affecting the use of hybrid media applications. *Graphic Arts in Finland,* (35:3), pp 11-21.

Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research,* (2:3), pp 192-222.

Oshlyansky, L., Cairns, P., & Thimbleby, H. (2007). *Validating the Unified Theory of Acceptance and Use of Technology (UTAUT) tool cross-culturally.* Paper presented at the 21st BCS HCI Group Conference.

Rosen, P. A., Tulsa, R., & Hall, N. (2004). *The effect of personal innovativeness in the domain of information technology on the acceptance and use of technology.* Paper presented at the 35th annual meeting of the decision sciences institute.

Schwarz, A., & Chin, W. (2007). Looking forward: Toward an understanding of the nature and definition of IT acceptance. *Journal of the Association for Information Systems,* (8:4), pp 232-243.

Sutton, S. G. (2005). The role of AIS research in guiding practice. *International Journal of Accounting Information Systems,* (6:1), pp 1-4.

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research,* (6:4), pp 144-176.

Thatcher, S. M. B., Foster, W., & Zhu, L. (2004). B2B e-commerce adoption decisions in Taiwan: The interaction of cultural and other institutional factors. *Electronic Commerce Research and Applications,* (5:2), pp 92-104.

Thompson, R. L., Higgins, C. A., & Howell, J. M. (1991). Personal computing: Toward a conceptual model of utilisation. *MIS Quarterly,* (15:1), pp 125-143.

Thompson, R. L., Higgins, C. A., & Howell, J. M. (1994). Influence of experience on personal computer utilisation: Testing a conceptual model. *Journal of Management Information Systems,* (11:1), pp 167-187.

Triandis, H. C. (2000). Culture and conflict. *International Journal of Psychology, 35*(2), pp 145-152.

Van Everdingen, Y. M., & Waarts, E. (2003). The Effect of National Culture on the Adoption of Innovations. *Marketing Letters,* (14:3), pp217-232.

Venkatesh, V. (2000). Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research,* (11:4), pp 342-365.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly,* (27:3), pp 425-478.

Venkatesh, V., & Zhang, X. (2010). Unified Theory of Acceptance and Use of Technology: U.S. vs China. *Journal of Global Information Technology Management,* (13:1).

Verdaasdonk, P., & Wouters, M. (2001). A generic accounting model to support operations management decisions. *Production Planning & Control,* (12:6), pp 605-620.

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