ADOPTING STANDARD BUSINESS REPORTING IN AUSTRALIA: ARE CFOS PERSUADED BY TECHNOLOGY ATTRIBUTES?

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ABSTRACT

A new technology based on the XBRL protocol that digitally links accounting information systems and financial/compliance reporting of businesses to regulatory and other government agencies went 'live' in Australia on 1 July 2010. Known as the standard business reporting (SBR) facility, it was initiated by the Australian Treasury with heavy promotion of technological benefits to business. However, to date, voluntary adoption (of SBR) by businesses has been slow. Why have businesses been reluctant to adopt this technological innovation? This study provides the result of a survey on CFOs, working for top 500 listed Australian companies, concerning the intention of their companies to adopt SBR. Drawing on notable adoption theories, this study focuses on factors of technological compatibility, complexity and perceived relative advantage affecting SBR adoption. The study finds that the technology attributes of SBR do not have a significant influence on CFOs in shaping their intention to adopt SBR. Implications of the results for the successful take up of this important government-driven financial and compliance reporting innovation are discussed.

Keywords: *Adoption of innovation, technology compatibility, financial reporting, compliance, standard business reporting, XBRL*

Introduction

The claim was made seven years ago that the extensible business reporting language (XBRL) "promises to revolutionise aspects of the financial reporting industry in the next few years"; it only remained to complete the "enabling technology, simplification and acceptance" of business-to-government reporting (Richards and Tower, 2004). Since then, the Australian Federal Treasury has led a project to co-ordinate the development of this enabling technology. On 1 July 2010, its XBRL-based facility called Standard Business Reporting (SBR) 'went live' to businesses in Australia. A primary intention of the new SBR facility, according to the Australian Treasury's project office was to simplify business-to-government reporting. Following earlier initiatives of a similar nature in the Netherlands, the Australian government introduced SBR with the aim of reducing the cost burden of compliance reporting on businesses and enhancing efficiencies for regulatory bodies. Under the SBR facility, businesses are able to submit forms and interact on-line with the key regulators – Australian Securities and Investments Commission (ASIC), the Australian Taxation Office (ATO), State government Revenue Offices and the Australian Bureau of Statistics.

To encourage the voluntary take up, the Australian Treasury's SBR project office has promoted the SBR system amongst businesses, reporting professionals and software developers. The claimed benefits made by the SBR project office to prospective businesses have been mainly of a technology-oriented nature. However, the voluntary take up rate by businesses, including large listed companies, has been slow and limited (Productivity Commission, 2012). In a recent report, the Productivity Commission reports that only 0.05 percent of all businesses in Australia used SBR to lodge reports since the launch of SBR in 2010 contrary to Australian Treasury's assumption (used in SBR business case) of 12 percent take up by businesses (Productivity Commission, 2012, chapter 6). Though no definitive figure is given in the report for listed companies, the report paints a rather gloomy picture of SBR take up by Australian businesses overall of which listed companies are a part. An investigation into intention to adopt SBR would, in retrospect, provide an explanation of the take up of SBR in Australia. The motivation for this study originated from this research issue.

The objective of this study is to model and test factors driving the intentions of CFOs, within their top management team, to adopt SBR for financial and compliance reporting to government agencies. In particular the focus is on technological attributes of the SBR facility as drawn from innovation adoption theories. How influential on the CFOs are perceptions about the relative advantage of SBR over existing company systems, the compatibility of SBR to existing accounting/reporting systems and tasks in the company, and the degree of complexity of SBR to the company's preparers of financial reports? The issue of interest is the extent to which CFOs are persuaded by arguments about the technology attributes of SBR in the process of their company choosing to adopt SBR or not. If the technological perspective is found to not resonate with CFOs, then the Australian government's strategy of promoting the technological benefits of SBR will have been, and continue to be, misdirected.

SBR Initiative in Australia

Governments in modern democracies have complex regulatory and reporting requirements on businesses that are administered by various authorities and departments. The functioning of these regulatory bodies can be inefficient and wasteful when reporting obligations are unnecessary, inconsistent and complicated. In Australia, the federal government set up a taskforce to consider reducing regulatory burdens on business. It reported in 2006 under the title "Rethinking Regulation", which indicated that cost to business of government reporting requirements was in the order of 2.5 per cent of GDP per annum because it diverted time and resources from core business activities. Some submissions to the taskforce indicated that compliance activities could take up to 25 per cent of senior management's time. In response, the Australian Government approved the development of an SBR program through an SBR Steering Group with the Australian Treasury as the lead agency and participation from ASIC, the ATO, the ABS and State and Territory revenue offices. It closely considered the Dutch Taxonomy project that aimed to standardise the reporting of financial accounts, taxes and financial statistics (Madden, 2009). From July 2010, companies within Australia can voluntarily use the SBR platform to submit their statutory reports to the major participating government agencies.

At the heart of the SBR program is the underlying definitions and the properties of financial information. The collective set of reporting definitions for SBR is referred to as the SBR Taxonomy. This has been assembled using XBRL, or eXtensible Business Reporting Language, which has been developed by the accounting community for financial reporting. XBRL is a platform independent language based on Extensible mark up language (XML). XML provides a method to tag financial information to improve the automation of information location and retrieval (Debreceny & Gray, 2001). Financial information delivered via SBR, therefore, carries a XBRL tag (using SBR taxonomy) but these tagged outputs (also known as instance documents) are not in themselves user friendly. SBR enabled software (sourced from software vendors) is needed to make the documents user friendly. An interface is developed in SBR medium to ensure seamless exchange of information between company and regulators. That interface is called SBR core services. Australian treasury notes that the businesses will not see the SBR Core Services, and will not log onto SBR to report, as all of the reporting functions will be built into their software (Madden, 2009). Using SBR, businesses will no longer need to re-enter data into different systems or interpret terms for one agency that have a slightly different meaning for another. Therefore longer-term cost (estimated at $800 million per year) savings is one of the most compelling impacts that the business should experience from the adoption of SBR. (Please indicate in which currency eg AUD or USD or MYR for the 800 million)

To encourage the voluntary take up, the director of SBR and his office in Treasury (which is overseen by the government-appointed SBR Board and Business Advisory Forum) continues to manage and promote the SBR program in partnership with business, reporting professionals, software developers and participating Australians, state and territory government agencies. There is also said to be credible SBR operational support teams available to businesses within the ATO, and other agencies have supported processes to deal with incoming SBR reports (Madden, 2009). The use of XBRL in SBR taxonomy makes online reporting a real possibility as XBRL is commonly viewed as a means to web enable the business reporting process for report preparers and users (Bharosa et al, 2011). No wonder that Australian regulators are banking on the technological superiority of SBR in their promotional efforts to facilitate the change of company reporting from its current format to SBR medium. Despite the heavy promotion of

technological benefits to businesses and the efforts to make SBR user-friendly, only 25 business organisations registered to voluntarily adopt the SBR system in the first 3 months (Stafford, 2010). Whether these 25 organisations did ultimately use SBR to report their results is not known. But the fact that there is no such news on the SBR website as to how many organisations used SBR for the purpose of corporate reporting, it can be presumed that the adoption is not gaining momentum. Why have businesses been so hesitant to adopt this technological innovation? There is a need to model the adoption to find the answer.

Literature and Development of Hypotheses

Theories or models behind the adoption by users of new technology have been developed in the information system literature. A brief review of these principal theories/models and their empirical testing is undertaken in this section. Hypotheses concerning the factors that can explain, from a technological stance, the CFO's perspective on their business' intention to adopt SBR in Australia are then generated.

The Technology Adoption Model

Davis (1986) initially proposed TAM in an attempt to understand why people accept or reject a system. Basically "TAM is an adaptation of the theory of reasoned action (TRA) from psychology specifically tailored for modelling user acceptance of information technology" (Al-Gahtani, 2001). The theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen 1975) posits that behavioural intentions, which are the immediate antecedents to behaviour, are a function of salient information and/or beliefs about the likelihood that performing a particular behaviour will lead to specific outcomes (Madden, Ellen & Ajzen, 1992). Based on these fundamentals, Davis' (1986) TAM suggests the following sequence of factors in deciding to adopt new technology: (1) external variables, (e.g., system design characteristics), (2) attitudes (i.e., beliefs and evaluations of consequences of use), (3) intentions (i.e., decision making on whether to use, and (4) actual usage. A revision to the TAM model, proposed by Davis et al. (1989), explains user behaviour based on only three theoretical constructs – intentions, perceived usefulness and perceived ease of use. The

revised model dropped the attitude construct. They contended that attitudes towards objects do not cause behaviours. Rather, specific motives to act cause behaviours. People do not necessarily adopt technologies because of the features *per se*. The study by Szajna (1996) confirmed the abolition of the 'attitude' component from the original TAM model making it simpler to use. Lederer et al. (2000) used revised TAM to understand users' acceptance of the introduction of the World Wide Web. Their study predicted that perceived usefulness would have a stronger effect on "actual use" than perceived ease of use. The study found that the user's perception of the system benefits and its ease of use were directly related to user acceptance of new technology. Consistent with revised TAM's underlying assumption that individuals rationally process information about an object's attributes, it is reasonable to expect that perceptions about new technology will predict the usage behaviour.

Diffusion of Innovation Theory

Diffusion of innovation (DOI) theory is developed by Rogers (1983). The focus of DOI research, according to Chwelos et al. (2000), is the characteristics of the individual technology under study that either encourage or inhibit adoption. DOI posits that innovation, while entailing uncertainty, is supposed to bring at least some degree of benefit for its potential adopters. But innovation's advantage is not always clear-cut to the intended adopters. Uncertainty about the innovation attributes can be reduced if the intended users hold a positive perception towards attributes of the innovation. These attributes of innovation, as perceived by the users, are identified by Rogers (1995) as: (1) relative advantage (the degree to which an innovation is perceived as better than the idea it supersedes), (2) compatibility (the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and the needs of potential adopters), (3) complexity (the degree to which an innovation is perceived as difficult to understand and use), (4) trialability (the degree to which an innovation may be experimented with on a limited basis) and (5) observability (the degree to which the results of an innovation are visible to others). These five attributes make DOI more comprehensive than TAM in explaining technology adoption. Prior DOI-based research (e.g. Holland et al, 1994; Teo et al, 1995, Grover, 1993) indicates that three of these attributes (namely Relative advantage, Compatibility, Complexity) are the most important in explaining adoption.

The Technological-Organisational-Environmental Framework

This influential framework for the study of organisation's adoption of technology has been developed by Tornatzky and Fleischer (1990). Most of the prior literature focuses on the adoption decisions of individuals which, according to Tornatzky and Fleischer (1990), involves technologies that are "too big and complex" for them. A more comprehensive framework was sought that featured three perspectives of the influences on the process of technology diffusion in organisations. These are technological perspective, organisational perspective, and environmental perspective (Zhang et al., 2007). Such perceptions by potential adopters of the innovation may either encourage or inhibit adoption (Huang et al, 2008). First, the technological perspective in the TOE model includes the innovation attributes that Rogers (1983) believed had influence on the likelihood of adoption. Second, the organisational perspective of the model studies organisation's mechanism to influence diffusion of innovation within the organisation. Tornatzky and Fleisher (1990) posit that formal/informal intra-organisational mechanism, organisation resources and innovativeness play roles in the organisational adoption of new technology (Dedrick and West, 2003). Third, the environmental perspective is the arena in which a firm conducts its business — its industry, competitors, access to resources supplied by others, and dealings with government (Tornatzky and Fleischer 1990). Prior findings from the use of the TOE framework (Kuan et al, 2001; Huang et al, 2008; Dedrick and West, 2003) confirm that a consistent predictor for adoption from the TOE framework is the quality or perceived quality of technology attributes involved in the new technology. Moreover, Claycomb et al. (2005) argues that technology attributes are the leading consideration for organisations deciding to adopt innovations.

Hypotheses Developed for this Study

As SBR is a fairly recent phenomenon in the Australian context, there is a lack of knowledge about its likely success (if any) in the medium-term in relation to take up by Australian business entities. While actual adoption of SBR during the first year of its availability has been minimal, the prospect of this facility being taken up by entities in the medium-term can be gauged by evidence on intention to adopt SBR. The review of several adoption theories (as discussed in the preceding sections) confirms the existence

of one common construct that affects the intention to adopt- attributes of the technology under investigation (Kuan et al., 2001). Tornatzky and Klein (1982) conducted a meta analysis and found evidence that only three technology attributes (relative advantage, compatibility and complexity) of new system have a consistent association with adoption. Accordingly three variables are identified for this study. They are Relative advantage, Compatibility and Complexity.

Relative advantage (RA) is viewed as an advantage for an organisation over previous ways of performing the same task (Agarwal and Prasad, 1997). Relative advantage has been found to be one of the best predictors and positively related to an innovation's rate of adoption (Premkumar et al., 1994; Rogers, 1995; Tan and Teo, 2000; Lin, 2011). SBR provides several relative advantages when compared with other existing format(s) of financial reporting. SBR reduces time and effort in preparing financial reports; it reduces unnecessary duplication of data entry; it also saves cost as financial information will be extracted from existing software used by companies. Therefore relative advantage of SBR is hypothesised as having positive relationship with intent to adopt.

H1: There is a positive relationship between relative advantage and intent to adopt SBR.

Compatibility (COMP) is operationalised as the extent to which SBR is perceived to be consistent with technological skills, IT infrastructure and overall IT strategy of the company. Innovation adoption decisions depend on both what is available and how well the available technology fits the organisation's existing technological base (DePietro et al. 1990). Grover (1993), therefore, reported that positive relationships have generally existed between perceived compatibility and the adoption decision. Similarly some other researchers (Khazanchi, 2005; Lippert & Forman, 2005) found that a technology fit is critical for new technology adoption. Wu et al (2005) found compatibility as the most important determinant of intent to adopt mobile commerce. SBR is purported to automate business reporting to government. Intuitively the reporting medium (SBR) must be compatible with existing IT structure & strategy of the company to induce adoption by companies. Otherwise companies would have to modify a lot in their existing systems to voluntarily adopt SBR which might deter the adoption

of SBR. Therefore higher levels of perceived technological compatibility of SBR will positively affect organisations' intent to adopt SBR.

H2: Compatibility of SBR is positively related with intent to adopt SBR.

Complexity (COMPLEX) is defined as the degree of difficulty users experience in understanding the innovation (Grover, 1993; Tornatzky & Klein, 1982). Complexity is assumed as having negative association with the adoption of technology (Tornatzky & Klein, 1982). Cooper & Zmud (1990) say that adoption of complex innovations requires organisational personnel to possess sufficient operational resources and technical competencies. These resources include adequate computer or IT infrastructure, technical skills among organisational personnel, and training systems which facilitate the installation and maintenance of the new technology (Chong, 2004; Scupola, 2001). Therefore, the less complex the technology is, the higher the incentive for the organisations to adopt the technology. Zhu et al (2006) tested complexity when they investigated firms' migration from EDI to an internet based inter-organisational system and found that complexity is a key determinant of adoption. XBRL, the technology enabler of SBR, was found to be complex, out of the interviews conducted by Doolin & Troshani (2007). This might negatively affect adoption of SBR in Australia. It is, therefore, hypothesised that perception of SBR as a complex technology would be negatively related to intent to adopt SBR.

H3: There is an inverse relationship between complexity of SBR and organisation's intent to adopt SBR.

Methods

The Survey

This study is based on a survey design in which a questionnaire is developed to gather multi-item measures of the relevant constructs. The population of this study is the ASX listed companies in Australia. Consistent with the purpose of this research project, the study limits its empirical analyses to listed companies in Australia. Australia has detailed reporting requirements for listed companies. In addition to periodic reporting to ASX and ASIC/

APRA, listed companies also need to meet the reporting requirements of ATO, state/territory offices (if required), ABS, RBA etc. Any reporting initiative which can streamline the reporting process for compliance with the requirements of multiple regulatory bodies would be expected to be attractive for the listed companies. The names of the listed companies were collected from "Connect 4" database which has a list of all the listed companies and their annual report information. The sample size selected is top 500 ASX listed companies. In deciding to use the ASX top 500 companies as the sample, several factors were considered. First due to the lack of a similar study in Australia, the researchers were unable to seek help from previous research. Troshani & Doolin (2005) investigated XBRL situation in Australia by sending open ended questions to and interviewing organisations who were members (27 in total) with XBRL Australia at that time. This study has sought a larger sample. Second, larger companies are chosen because the SBR medium is a new concept in Australia and it requires knowledge and investment by companies to implement SBR. The information systems literature suggests that larger companies are more interested in adopting IT innovations than smaller companies. Troshani & Lymer (2010) find that it is probably the big organisations that would be interested to invest in XBRL related reporting endeavours. Trosahi & Lymer (2010) further state that cost savings due to reporting via SBR is not quite obvious for small organisations. Therefore, the researchers decided the sample size for this project would be top 500 companies (based on market capitalisation at year end) listed in ASX.

The hypotheses stated in the previous section were applied at the organisational level. Respondents for this study, therefore, are required to be sufficiently informed about the policy position and current thoughts of senior management of the organisation. The researchers considered both the purpose and nature of SBR before making the decision as to who, within the senior management, the questionnaire would be addressed to. The initial scope of application of SBR is financial and other compliance reporting by business to government regulatory agencies. This makes organisation as the unit of analysis for this study. However, as explained by Henderson et al (2012), perceptions of senior executives strongly influence how organisation's policies are enacted; thus the SBR adoption decision is influenced by the perceptions of individual executives in the organisation. Following this logic, the survey should be addressed to potential decision

makers of an organisation. This reporting function by a listed company would come under the responsibility of the Chief Financial Officer (CFO). The decision, therefore, was taken to make CFOs the target respondent in the administration of the survey.

A questionnaire was developed to collect data for this study. The questionnaire contains questions on the demographics of the respondent and his or her company, together with questions related to the independent variables (relative advantage, compatibility and complexity) and the dependent variables (intention to adopt SBR). Prior literature has been reviewed before developing the questions related to the independent and dependent variables. Where available, questions that demonstrated high reliability and validity from prior empirical work have been adapted. Where unavailable, questions have been constructed from key statements in the literature. Questions are anchored on a six point likert scale from strongly disagree (1) to strongly agree (6). Additionally, responses to another variable 'likelihood of adoption of SBR by 2011' were collected. This variable is added in the study to do some further analyses to categorise the sampled population on the basis of likelihood to adopt SBR. A single dichotomous question with the choice 'highly likely' or 'less likely' was asked to measure this additional variable. The questions have been adapted from questionnaires and definitions drawn from the following sources:

Relative Advantage: Grover (1993), O' Callaghan et al.(1992), Huang et al. (2008), Teo et al. (1995).

Compatibility: Grover (1993), Huang et al.(2008), Teo et al. (1995).

Complexity: Teo et al.(1995), Ramamurthy et al.(1999), Huang et al.(2008).

Intent to adopt: Nasco et al.(2008), Teo et al.(1995), Kuan et al.(2001)

The content validity of the questionnaire was done via reviews by two academics and a pilot survey. Based on the feedback, minor modifications were made before administration to the full sample of 500. Data collection was carried out between February and May 2010. At the end of the first round of data collection 44 useable responses were received. To pick up the response rate, a reminder was sent to the respondents during mid April.

Finally data collection was stopped at the end of May, 2010. The reminder resulted in 10 more useable responses. Therefore, 54 responses, in total, were received after the administration of the survey. The researcher acknowledges that the number of responses is low for this type of study. As SBR was a new project yet to be launched at the time of data collection and there had not been a significant story in newspapers/media concerning a case of XBRL adoption in Australia, it was probable that many recipients of the questionnaire felt they had insufficient knowledge about the technology to make an attempt at completing the questionnaire. However, the results of factor analyses and sampling adequacy tests presented later in the paper, will reveal that this dataset is sufficient for the construct validity tests and multiple regression analysis that will be applied.

As the reminder resulted in 10 additional responses, a time response bias test is carried out, which reveals no significant differences between the two batches of responses. Given that late respondents are deemed to be representative of non-respondents, response bias test results suggest there is not a systematic non-response bias due to the low response rate. According to Van der Stede et al (2005), the results are still generalisable even when the response rate is low if there is a low non response bias in the sample. This comment by Van der Stede et al (2005) seems to suggest that data analyses on the sample data can be carried out to test the hypotheses as no non-response bias has been found in the sample of this study.

Demographics of Respondents

Most of the respondents are male (more than 80%). More than 75% of the respondents fall into the age group of over 40. On a scale, the average SBR (or XBRL) familiarity is close to being 'somewhat familiar' on average. Less than 25% of the respondents represented companies with less than 100 employees, around 50% represented companies with 100 to 1000 employees and the rest of the respondents represented companies with more that 1000 employees. Almost all of the respondents reported that they currently use 'pdf' as the main electronic medium of reporting financial results to government agencies. In addition, 33% of the respondents reported that they are likely to adopt SBR by 2011 while the rest 67% reported less likely to adopt SBR by 2011.

Validity and Reliability Tests of the Variables

Due to the low number of responses received, it was necessary to observe the communalities of the items to ensure good recovery of factors. MacCallum et al (1999) states that when communalities are consistently high (probably all greater that 0.6), then sample size has little effect on good recovery of factors and the factors can be achieved with a small sample (even when the number of responses is well below 100). Same conclusion is made by Hogarty et al (2005) who says that "……when communalities are high, sample size tended to have less influence on factor solutions" (p. 224). The communalities of the items in the variables/factors were all found to be higher than 0.7. This goes to show that good recovery of factors is possible in this study following the guidelines of MacCallum et al (1999) and Hogarty et al (2005). Accordingly factor analysis is carried out. Table 1 presents the results of principal components factor analysis (including KMO and Bartlett's Test of Sphericity) as tests of construct validity of the multi-item variables. The factor analysis is a convergent validity test of each construct. Table 1 also presents in the last column the Cronbach's Alpha reliability test.

Table 1: Construct Validity and Reliability Tests for the Variables

Latent Variable and Items	KMO Measure of Sampling Adequacy	Bartlett's Sphericity Test Chi-sq. Sig.		Factor Analysis % Variance Explained	Loadings on Component 1	Cronbach's Alpha
Relative Advantage	.865	210.92	.0001	70.477		.916
Quick processing of statutory reports					.821	
Makes less burdensome reporting process					.839	
Could facilitate more effective decision making					.880	
Could give greater personal control					.806	
Could save processing cost					.824	

Cont...

Could increase productivity					.865	
Compatibility	.720	157.87	.0001	75.166		.887
Compatible with infrastructure					.935	
Compatible with organisations computerised data resources					.838	
Compatible with trans-action processing tasks					.878	
Compatible with financial report preparation practices					.618	
Complexity	.500	33.62	.0001	84.619		.818
Would not be complex to maintain					.920	
Would make reporting to government simple					.920	
Intention to Adopt SBR	.736	98.59	.0001	83.291		.899
Has a strong intention to adopt					.885	
Asked for preparation of proposed plans					.919	
Have a very positive view					.933	

The above table confirms the construct's convergent validity for each of the four separate constructs; the Cronbach Alpha coefficient is found to be greater than .8 for each construct, indicating a sound degree of reliability of each variable's measurement.

Results and Discussion

The descriptives of the variables are presented in Table 2, which shows that the mean score of "Intent to adopt SBR" is very low among listed companies in Australia.

Table 2: Descriptive Statistics of Variables

	Mean	Std. Deviation
Intent to adopt SBR	2.3951	1.02193
Relative Advantage	3.2994	1.10762
Compatibility	3.0926	1.01207
Complexity	3.5000	1.05955

The result of Pearsons correlation coefficients (Table 3) shows each individual variable is significantly correlated with intent to adopt SBR (INTENT).

Table 3: Pearsons Correlation Coefficients

	INTENT	RA	COMP	COMPLEX
INTENT	1			
RA	.337*			
COMP	.256 *	.618		
COMPLEX	.241 *	.323	.523	

Table 4 presents results of hierarchical regression – model 1 has the three test variables and model 2 has the test variables and two control variables. Hierarchical regression is used to first understand the contribution of the three test variables to prediction of the dependent variable (INTENT) and then assess the use of the control variables in terms of what they add to prediction of the dependent variable. Control variables (Dholakia & Kshetri, 2004; Huizing and Brand, 2009; Askarany & Smith 2008) are included in the model to determine whether control variables significantly change the predictive power of the model used in this study. The control variables deemed to be relevant are the respondent's familiarity with SBR (or XBRL) and the size of the respondent's company. Both models fail to show significant overall explanatory power (Adj.R Square = .081 and .050).

Table 4: Regression - Technology Factors and of Intention to Adopt SBR

Model 1					Model 2			
	R^2	β	t value	VIF		R^2	β	t value
Intent	0.133				Intent	0.140		
RA		.290	1.73(n/s)	1.62	RA		.275	1.541(n/s)
COMP		.000	-0.003(n/s)	1.99	COMP		.01	-0.06(n/s)
COMPLEX		-0.148	.956(n/s)	1.38	COMPLEX		-0.150	0.94(n/s)
					SBR familiarity		-0.06	-0.38(n/s)
					Size		.046	.305(n/s)

The only variable that has weak significance in its relationship to degree of intention to adopt SBR is the variable relative advantage. However, this variable becomes insignificant when the control variables are included. Therefore, hypotheses 1, 2 and 3 are rejected. More discussion on the hypotheses follows, but at this point it can be argued that the technological benefits of SBR do not provide an explanation of the CFO's perception of the firm's degree of intention to adopt SBR sometime in the future. The inference is that the CFO is not persuaded by technology arguments about the gains SBR brings over the existing financial and compliance reporting systems of the company. For the CFO, the intention to adopt SBR appears to be driven by factors other than technological ones. A similar conclusion was made by Doolin and Troshani (2007) in their investigation of adoption of XBRL in Australia. They further state that the absence of readily available tools contributes to such a result (Doolin & Troshani, 2007). Some researchers say that the primary reason for entities to adopt XBRL was to gain a deeper understanding of how the technology benefits the organisation (Bonson et al, 2009). These comments suggest that the benefits are not well established in the eyes of the potential adopters. The discussion on each variable in this study might reveal if this is the case with roll out of SBR.

Hypothesis 1: Relative advantage and intent to adopt SBR

The first hypothesis explores the relationship between relative advantage and intent to adopt SBR. As discussed earlier, relative advantage is commonly found as having positive relationship with adoption intention in studies of IT innovation. There was a similar argument for XBRL (the technology enabler of SBR) adoption. The relative advantages with XBRL reporting is the reduction of information asymmetry and facilitating continuous disclosure. When investigating these two factors in Korean stock market, Yoon et al (2011) found XBRL adoption positively relates with reduction of information asymmetry. Six dimensions were used in this study to measure the relative advantage of SBR in Australia. It was found that relative advantage is significantly correlated with intent to adopt SBR (coefficient : 0.337; sig: .006). But the multiple regressions paint a different picture. Relative advantage is found to be weakly related to intent to adopt SBR (t= 1.730 ; p=0.090) in the absence of control variables. That weak relationship disappears when the control variables are added. Hypothesis 1, therefore, is not supported in this study. Relative advantage loses the ability to explain variation in intent to adopt SBR in the presence of other variables in the model, though relative advantage is (individually) significantly correlated with intent to adopt SBR. The absence of a significant relationship between relative advantage and intent to adopt is difficult to explain. It might be a case where the advantages of SBR are not proven as yet. The regulators previously pushed XBRL in Australia with no apparent successful adoption in Australia (Doolin & Troshani, 2007). As the benefits are largely unproven, the relative advantage of SBR probably does not show any relationship to intent to adopt SBR in this study. Even though no relationship is found between relative advantage and intent to adopt SBR, independent samples T test offers some insights into the two categories likely adopters (Less likely vs Highly likely). Table 5 gives the results of T test.

Table 5: Relative Advantage and the Stated Likelihood of SBR Adoption by 2011

Items and their latent concept	likely to adopt by 2011	Mean	Std Dev	t-test for difference between means	
				t	sig.
Quick processing of statutory reports	Low	3.22	1.149	-3.222	.002
	High	4.33	1.283		
Makes less burdensome reporting process	Low	3.36	1.199	-3.130	.003
	High	4.44	1.199		
Could facilitate more effective decision making	Low	2.33	1.095	-3.404	.001
	High	3.56	1.504		
Could give greater personal control	Low	2.67	1.171	-2.166	.035
	High	3.44	1.381		
Could save processing cost	Low	3.08	1.296	-2.966	.005
	High	4.17	1.200		
Could increase productivity	Low	2.89	1.036	-4.390	.000
	High	4.33	1.328		
Relative advantage	Low	2.92	.872	-3.960	.000
	High	4.05	1.171		

The inference from the above Table is that the 33% of CFO respondents who indicate a 'Highly likely' adoption of SBR in the near future have significantly better perception of relative advantage of SBR than the remaining 67% of CFO respondents who are less likely to adopt SBR in the near future. The result is consistent across all the six dimensions of the construct "Relative advantage". Therefore, Likely adopters of SBR believe that SBR provides their businesses the ability to leverage XBRL metadata, including business rules, allowing better reuse of financial information (Bonson et al., 2009). The responses to the open ended question in the survey reveal that respondents have concerns about cost-benefit implications of SBR rollout. The comments gathered from the questionnaire related to relative advantage are reproduced below:

> *"Reporting to government is well managed and does not take a great deal of time. The cost/benefit of changing the existing process is not considered worthwhile"*

> *"….All this (SBR roll out) will do is save the government money at the expense of business"*

> *"There seems little advantage for company to do it (adopt SBR)- it is the users of this information who will benefit."*

> *"As a company, with relatively simple financial reporting, I am not convinced of the benefits."*

These comments complement the regression analysis findings on relative advantage. Many preparers are not yet convinced that SBR would provide significant benefit to them; some even believe that the advantages would primarily accrue to users and regulators. The comments also indicate that existing systems within the entities are perceived as having as much functionality in terms of electronic data exchange with respect to internal reporting. Their belief is that the XBRL platform would not provide any extra advantage to the organisation. These comments support the claim by Cordery et al. (2011) who says that unless the current legacy system is in crisis, XBRL reporting would not take off.

Hypothesis 2: Compatibility and Intent to Adopt SBR

The SBR taxonomy has been developed using XBRL (Madden, 2009) which makes the facility highly compatible with existing IT infrastructure. Yoon et al (2011) found that XBRL information is highly compatible among different information systems. The results in this study suggest that (with a correlation coefficient of .256 & p value of 0.031) compatibility is significantly correlated with intent to adopt SBR. But again multiple regressions tell a different story. Across the two blocks of regression analyses, 't' tests fail to show significant relationship of compatibility with intent to adopt SBR. Therefore, compatibility also loses the individual predictive ability in the presence of other factors in the model. Hypothesis 2 is also not supported. Though H2 is not supported, the 't' test (see Table 6) reveals that the likely adopters of SBR consider SBR as more compatible than the less likely adopters.

Table 6: Compatibility and the Stated Likelihood of SBR Adoption by 2011

Items and their latent concept	Likely to adopt by 2011	Mean	Std Dev	t-test for difference between means	
				t	sig.
Compatible with organisation's IT infrastructure	Low	3.00	.956	-2.153	.036
	High	3.61	1.037		
Compatible with organisations computerised data resources	Low	3.00	1.042	-1.703	.095
	High	3.56	1.294		
Compatible with transaction processing tasks	Low	2.61	1.076	-3.446	.001
	High	3.67	1.029		
Compatible with financial report preparation practices	Low	2.42	1.131	-5.734	.000
	High	4.22	1.003		
Compatibility	Low	2.76	.901	-3.876	.000
	High	3.76	.897		

Therefore, it might be claimed that compatibility is having an influence on the likely adopters on their decision to adopt SBR in the near future and perception of compatibility can be used for categorising likely adopters and less likely adopters of SBR.

Hypothesis 3: Complexity and Intent to Adopt SBR

This study hopes to find inverse relationship between complexity and intent to adopt SBR. The questionnaire asked the respondents to rank SBR on the basis of their perception that 'SBR is not complex'. The correlation analysis shows that complexity is significantly negatively correlated with intent to adopt SBR (coefficient : 0.241 and p = 0.040). Turning to the regression analysis, complexity fails to show significant relationship with intent to adopt SBR. Therefore H3 is also rejected. Dunne et al (2009) says that the major obstacle for XBRL adoption appears to be the time and effort needed to learn and apply XBRL. They further note the availability of software tools to make the process less complex but these developments have not been deemed as adequate encouragement to take up XBRL (Dunne et al, 2009). The findings on Hypothesis 3 seem to follow the same conclusion. 't' test using complexity construct is presented in the Table 7.

Table 7: Complexity and the Stated Likelihood of SBR Adoption by 2011

Items and their latent concept	Likely to adopt by 2011	Mean	Std Dev	t-test for difference between means	
				t	sig.
Not complex to maintain	Low	4.06	.725	-3.494	.001
	High	3.00	1.171		
Would make reporting to government simple	Low	3.33	1.219	-3.056	.004
	High	4.28	.669		
Complexity	Low	3.167	1.076	-3.624	.001
	High	4.167	.6417		

The table shows that likely adopters of SBR view the facility as less complex compared to the less likely adopters. The majority of the respondents view the facility as complex and that complexity made it difficult for decision makers to adopt SBR in the near future.

To summarise the results, technology attributes of SBR are found to explain some variation in the level of intent to adopt SBR but not a single variable is significantly related. This suggests that technological attributes (superiority) of SBR might not be enough to induce adoption of SBR among Australian entities. However variables in the technology perspective are found to be useful in categorising adopters into those stating to be likely adopters versus unlikely adopters.

Conclusions

This study draws on concepts from notable IT adoption theories to address the research question about the extent to which technological attributes of SBR drive the adoption of SBR in Australia. From a survey of company CFOs, this study finds that the degree of intention to adopt SBR sometime in the future is not explained by taking a technological perspective (the model in Table 4 provides a very low adjusted R-squared). The assessment by companies of technology attributes of SBR in terms of the relative advantage, compatibility and complexity of SBR compared to current company accounting and reporting systems does not have a significant influence on CFOs in shaping their intention to adopt SBR.

The implications of the findings for the SBR project office in the Australian Treasury are that focusing (only) on generic technological benefits of SBR to promote SBR has limited impact. To overcome the majority of CFOs negative intentions towards the adoption of SBR sometime in the future, the Australian SBR project office, and participating government agencies and software providers need to specifically target CFOs' concerns about the potential complexity of maintaining XBRL after their companies' adoption, and achieving worthwhile reduction in the complexity of their reporting process compared to their current practices. They also need to mitigate CFOs' concern about the compatibility of SBR with their companies' existing IT infrastructure, as well as their current transaction processing and financial reporting tasks. Perceptions by CFOs about the increased complexity caused by SBR, and lack of compatibility of SBR with the company's existing accounting information systems and financial/compliance reporting practices, remain a major barrier to the acceptance of SBR. Those CFOs indicating they were likely to go ahead to implement SBR in the first available year were persuaded that complexity and compatibility of the technology would not be a problem for their company.

A further implication of the findings is that arguments by proponents of SBR/XBRL about the relative advantages to businesses (that can be obtained from SBR), in terms of a reduced compliance processing burden, improved cost-efficiency for accounting staff and better internal financial reports for management, are not having a significant influence on CFOs decision to report via SBR. Therefore, non-technology factors may need to be invoked more strongly by the SBR office, participating government agencies and software advisors. Otherwise, the take-up rate by businesses is not likely to increase. These findings are subject to limitations. The survey instrument was self-administered and based largely on questions about perceptions of the respondent. This can cause bias in the data due to respondent acquiescence error or the halo effect. The suggestion for further research is to replicate this study using constructs from the organisational and environmental perspectives of TOE to obtain a more comprehensive set of influences that can explain what encourage or inhibit CFOs from getting their company to voluntary take-up of SBR in Australia.

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