Adopting standard business reporting (SBR) in Australia: are CFOs persuaded by technology attributes?

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Abstract

The Australian Federal Treasury has taken steps to standardize the format and computations for business reporting to government agencies, known as the standard business reporting (SBR) initiative, with taxonomies based on XBRL protocol for electronic data exchange. This technological initiative went 'live' on 1 July 2010, but despite the heavy promotion of technological benefits to businesses, only 25 business organizations registered to voluntarily adopt the SBR system in the first 3 months. Why have businesses been hesitant to adoption this technological innovation? This study provides the result of a survey undertaken shortly before the date of SBR becoming effective. The survey amongst CFOs of the top 500 listed companies on the Australian Stock Exchange addressed the current intention of their company to adopt SBR and the likelihood of adoption of SBR within 18 months. Drawing on Tornatzky and Fleischer's (1990) technology-organization-environment (TOE) framework, this study focuses on factors driving SBR adoption from a technological perspective. Results reveal that perceived higher compatibility of SBR to existing company accounting systems and lower perceived complexity for company reporting are significantly related to the likelihood of adoption of SBR within 18 months, but perceived relative advantage of the technology is not. Alternatively, perceived relative advantage is the only technology factor affecting the strength of the intention to adopt SBR sometime in the future. Implications for the successful government roll out of this important financial and compliance reporting innovation are discussed.

1. Introduction

On 1 July 2010, the Australian Federal Treasury put into operation a system called Standard Business Reporting (SBR) with the intention of simplify business-to-government reporting. Following earlier initiatives of a similar nature in the US, UK, Singapore, the Netherlands and Spain, 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. This SBR facility is based on a version of an international computer language protocol called extensible business reporting language (XBRL). To take it up, a business organisation needs to adopt a version of XBRL as an interface with it's accounting and financial and compliance reporting systems.

To encourage the voluntary take up, the Australian government's SBR project office in Treasury has promote the SBR amongst business, 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 has been slow. The CFO and his or her department within each company would be affected by, and probably directly involved in, a company's decision to adopt or not adopt SBR.

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 diffusion of innovation (DOI) theory. How influential on the CFO 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.

2. Background on corporate reporting media and XBRL initiatives

2.1 Overview of information technology changes affecting financial reporting

For three decades, preparers of corporate financial and business reports have adopted changing technologies to streamline the accounting information flow within the financial reporting supply chain. Examples are the use of CD-ROM, PDF and HTML. Lymer et al. (1999) concluded that no new technology had gained preference over the current paper-based medium of annual reporting at the time of their study. Each of these technologies was found to contain some issues or did not provide any extra advantage over paper

based. The use of CD-ROM for corporate reporting seems to have disappeared as it still has to be distributed by physical means, making it clumsy and expensive. Companies use Adobe Acrobat files as an addition to paper-based but they do acknowledge that on-screen reading of electronic paper is normally an unsatisfying experience and the files are normally very large making it difficult to download (Lymer et al., 1999). HTML's shortcoming is that it generally provides information in formatted documents that a person must read through to locate desired pieces of information making the information transferred an indivisible whole (i.e. whole document) (PWC, 2002). There is also a navigation problem with HTML. It has been shown that readers are often confused about where they are with a hypertext document and unsure if they have seen all of the information (Nielson and Lyngbaek, 1989). Plug-ins and Multimedia carry security and other issues like downloading and installing. Continuous monitoring by management is needed for databases as users can potentially modify the information once they retrieve data from databases. These problems ultimately meant that paper format was still the preferred medium for financial reporting around the world up to the end of the last century (Lymer et al., 1999).

The growing importance of the internet prompted the accounting profession to gain an insight into its future position in an internet environment. It was predicted that internet reporting would quickly become more sophisticated and interactive, whereas hard copy reports would be only supplied on demand from users (Troshani & Doolin, 2005). Evidence about this prediction was published by the Assurance Working Group of XBRL (2006). They reported the rapid increase in financial reporting carried out on the internet through corporate websites and also through regulatory websites. They also revealed an expansion in the scope of financial reporting that goes well beyond the traditional financial statements to non-financial performance reporting and corporate governance disclosures.

Electronic forms of corporate reporting, however, had not effectively address the problem to preparers of being required to generate multiple reports with overlapping information drawn from the same database or different databases throughout an organization and inputted over and over again within the same information processing system. One technology that addresses the electronic data exchange issue is XBRL – a language based on XML (eXtensible Mark-up Language). It is a standard for the electronic exchange of financial and business data. It uses an identifying tag for each piece of electronic data. XBRL allows labelling in any language and the incorporation of different national and international accounting standards and subsidiary information. Data can be handled more efficiently by various accounting software applications regardless of the

data compilation, manipulation, and analyses requirements (Akanoh, 2006). The language takes the advantage of an open standard which is used for the preparation, exchange and publishing of financial information among disparate computer platforms, software applications and accounting standards (Hannon, 2003; Hasegawa et al., 2003; Jones & Willis, 2003). XBRL delivers corporate information along with identification tags that make the information self-describing to a computer. The receiving computer can allow the tagged data to flow automatically and seamlessly into its proper place. It has the advantage of tagging both financial and non-financial information in standardized, computer and human readable format. Through this exchange and extraction process, XBRL usage links "backend" accounting tasks to daily business operations in ways other current accounting systems cannot (Troshani & Doolin, 2005).

2.2 Government responses to the emergence of XBRL

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. Less costly and more consistent business-to-government reporting that provides government with a more integrated database, therefore, has been an issue in many jurisdictions (Madden, 2009). The advent of XBRL has provided a solution in the US, and other countries have followed.

Examples of countries that have adopted XBRL-based business-to-government reporting facilities include the US, Canada, the UK, Singapore, the Netherlands and Spain. In the US, initially the take up by companies of the XBRL initiative by the US government was slow when the EDGAR (the Electronic Data-Gathering, Analysis, and Retrieval) system was implemented as a voluntary form of filing of financial reports to the US's Securities and Exchange Commission (SEC)**.** Companies were phased into EDGAR filing over a three-year period, ending 1996. Since then, all public domestic companies (with some exemptions) have been required to submit their SEC filings via EDGAR. From 2002, the SEC required all foreign companies to file their documents via EDGAR. Prior to that time, electronic filing by foreign companies also was voluntary. While actual annual reports to shareholders need not be submitted on EDGAR, the annual report on Form 10-K or Form 10-KSB, which contains much of the same information, is required to be filed on EDGAR. In Canada, a document filing and retrieval system called SEDAR is operated by the Canadian Securities Administrators. It became the mandatory in 1997 as the form for Canadian public companies to file documents such as prospectuses, financial statements

and material change reports. In the UK, Her Majesty's Revenue and Customs (HMRC) activated an XBRL-based electronic reporting standard of receiving company tax filings using the new XBRL electronic reporting standard from October, 2006.The UK Government announced that the use of XBRL will be mandatory for all company tax returns due after March 2011. Company tax returns comprise both full financial statements and corporation tax computations. In Singapore, incorporated companies have been required to file their financial statements in XBRL since November 2007, unless they are exempt by the Accounting and Corporate Regulatory Authority (ACRA). In the Netherlands, the government introduced a single XBRL-based Standard Business Report (SBR) in 2004, covering all filings that companies are required to send to the government. Its aim has been to reduce the administrative cost of compliance by 25 percent. The Australian government has modelled its SBR initiative on the Netherlands system. Recently, the government Treasury in the Netherlands introduced a project in co-operation with ABN-AMRO and Rabobank to evaluate credit risk of small business borrowers using XBRL data. In Spain, financial institutions are required to file XBRL-based reports and the interactive data is used, among other things, to identify possible money laundering activities. In each country, preparers of companies' accounts can prepare and manage their financial reports in XBRL using free on-line software.

2.3 Origins of the SBR initiative in Australia

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" (the Banks Report, 2006). This report 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 and move to XBRL reporting for all these areas (Madden, 2009). There has been extensive consultation and collaboration with stakeholder groups, including business and business intermediaries such as commercial accounting and business software developers. These 'business intermediaries' are a large group that includes accountants, tax agents, financial advisors, payroll specialists and bookkeepers, as well as business and industry associations (Madden, 2009). Together a

single set of reporting definitions was developed that makes it possible to map government reporting terms directly to the appropriate information in a business's financial/accounting or payroll system. From July 2010, companies within Australia can voluntarily use the SBR platform to submit their statutory reports to the major participating government agencies. In the few weeks leading up to 1 July 2010, over 51,000 'AUSkeys' were issued to over 36,000 Australian businesses to give them access to government on-line SBR-enabled to be able to pre-fill and complete government forms directly from their own accounting system and lodge electronically to participating government agencies using the single secure sign-on (Australian Treasury, 2010).

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 Australian, 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 support processes to deal with incoming SBR reports (Madden, 2009). Prior to and after the SBR facility went live in July 2010, the claimed benefits made on the Australian Treasury website to prospective businesses have been mainly of a technology-oriented nature as follows:

- removing unnecessary or duplicated information from government forms
- using business software to automatically pre-fill forms
- adopting a common reporting language (SBR Taxonomy), based on international standards and best practice
- making financial reporting a by-product of natural business processes
- providing an electronic interface to agencies directly from accounting software, which will also provide validation and confirm receipt of reports
- providing a single secure sign-on for users to all agencies involved.
  (Australian Treasury, 2010)

Despite the heavy promotion of technological benefits to businesses and the efforts to make SBR use user-friendly, only 25 business organizations registered to voluntarily adopt the SBR system in the first 3 months (Stafford, 2010). Why have businesses been so hesitant to adoption this technological innovation? The benefits and costs claimed for XBRL can only be empirically determined by a business in Australia if it takes up and operates SBR. But the voluntary adoption of XBRL in Australia (in the form of take up of

the SBR initiative) has been slow. The reasons for this slow take-up are unlikely to be due to lack of promotion of the technological advantages of the SBR facility, the lack of on-line accessibility to the SBR facility or deficiencies in the functioning of the system. The question of interest is why managers of businesses, particularly CFOs, have not been persuaded by the technological arguments in support of this medium of compliance reporting.

3. 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.

3.1 The Technology Adoption Model

The rise of information and communication technology from the 1980s has spawned a large body of research on the adoption of, or intention to adopt, new technologies. Instrumentalist theories in the context of both individuals and organizations have been developed to gain an understanding of the extent of adoption of technological innovations. A widely used instrumentalist theory that was developed early in this field of research is Davis' (1986) technology acceptance model (TAM). 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. It has two versions – pre-implementation and post-implementation.

This revised model shows direct effects of perceived usefulness and ease of use during pre- implementation stage, but only the usefulness criteria has a direct effect on intentions during post-implementation. Ease of use has a direct relationship with perceived usefulness during the post-implementation stage, due to experience with the system which largely reduces the effect of ease of use on behaviour during post-implementation. Davis et al.'s (1989) 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*. They do so more for the benefits to which the technologies lead. However, a study by Szajna (1996) provided little support for the revised TAM model and lead to the suggestion of the original single model rather than two models, pre-implementation and post-implementation. 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. However, a major weakness of the revised TAM model is its lack of focus on other non-technical variables that are present in an organization. But predictive power of technology variables has made the revised TAM very useful in the adoption literature.

3.3 Diffusion of Innovation Theory

A theory that extended from TAM is the diffusion of innovation (DOI) theory developed by Rogers (1995). 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 is more comprehensive than TAM in explaining technology adoption.

Prior DOI-based research indicates that three of these attributes are the most important in explaining adoption. First, Holland et al. (1994) investigates the use of EDI in cash management and finds a positive association between relative advantage and adoption decisions. Likewise, O'Callaghan et al. (1992) find a positive association between relative advantage and intention to adopt in their study of EDI in marketing channels. Second, the findings on the relationship between adoption or intention to adopt and compatibility are mixed. Ettlie et al. (1984) and Grover (1993) find compatibility to be positively related to adoption behaviour. But Teo et al. (1995) do not find a significant relationship between compatibility and intention to adopt. Faced with these mixed findings on compatibility Kishore et al (2007) reconceptualised compatibility as organizational alignment (OA), defined as the extent to which organizational components support the philosophy and technology of interest in IT innovation. Kishore et al (2007) find from a field survey that the OA construct is a significant predictor the OA construct. Third, Teo et al. (1995) find complexity to be a strong predictor of intention to adopt financial EDI in Singapore. Finally, in spite of their theoretical support, several studies found no significant relationship between observability and adoption behaviour (e.g. Bouchard 1993), and only a weak relationship between trialability and intention to adopt new technology (Teo et al., 1995).

3.4 The Technological-Organizational-Environmental Framework

Yet another theoretical model used to study adoption of innovative technology in an organizational context is known as the technology-organization-environment (TOE) framework. This influential framework for the study of organization'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), involve 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 organizations. These are a technological perspective, organizational 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 organizational perspective of the model studies organization's mechanism to influence diffusion of innovation within the organization. Tornatzky and Fleisher (1990) posit that formal/informal intra-organizational mechanism, organization resources and innovativeness play roles in the organizational 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 include Kuan et al.'s (2001) study EDI adoption using TOE framework. They were able to characterize the adopter and non-adopter firms based on the TOE framework. Likewise Huang et al. (2008), Dedrick and West (2003) and Grover (1993) have utilized TOE when analysing organizational level adoption of new technology. The findings confirm a consistent predictor from the TOE framework is the quality or perceived quality of technology attributes involved in the new technology. Moreover, Claycomb et al. (2005) argue that technology attributes are the leading consideration for organizations deciding to adopt innovations.

In the current study, the focus is given to the technology perspective in the TOE framework as the main predictor of intention to adopt SBR. Under the DOI theory, as outlined in the previous section, three influential types of technological attributes are identified – relative advantage, compatibility and complexity. Tornatzky and Klein (1982) conducted a meta analysis and found only three attributes (relative advantage, compatibility and complexity) have consistent association with adoption. Tornatzsky & Klein (1982) reported that compatibility with existing technologies and relative advantage over current technologies are positively related to adoption, while technological complexity is negatively related to adoption. Dedrick and West (2003) find from a survey of IS departments in companies considering the adoption of a new operating system (i.e., Linux) that in terms of 'relative advantage', the proposed new system when compared to company's existing system is perceived from a technological perspective almost entirely in terms of cost advantage (both hardware and software costs) and reliability advantage. They further find that In terms of 'compatibility', the decision to adopt the new system is greatly influenced by the compatibility of the new technology with the company's current applications, skills and tasks.

Drawing on the technological perspective in the TOE framework and the types of technology attributes from DOI theory that are found to be influential on the intention to adopt technological innovations, the following three hypotheses are generated:

H1: The degree of relative advantage of SBR over existing systems of financial reporting by the company to government agencies, as perceived by the CFO, is positively related to (a) the degree of intention to adopt and (b) the likelihood of adoption in the near future.

H2: The extent of compatibility of SBR with the company's existing financial reporting applications and financial reporting skills and tasks, as perceived by the CFO, is positively related to (a) the degree of intention to adopt and (b) the likelihood of adoption in the near future.

H3: The degree of complexity of SBR for users of financial reporting systems within the company to understand and maintain, as perceived by the CFO, is positively related to (a) the degree of intention to adopt and (b) the likelihood of adoption in the near future.

4. Methods

4.1 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 top 500 listed companies on the Australia Stock Exchange are chosen as the sample. The data collection method employed is a self-administered questionnaire addressed to the CFO of each sampled company. 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 and likelihood of adoption within 18 months). 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 were constructed from key statements in the literature. Questions are anchored on a six point likert scale from strongly disagree (1) to strongly agree (6). However, the variable 'likelihood of adoption of SBR in 18 months' was a single dichotomous question with the choice 'highly likely' or 'less likely'. 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 questionnaire was first pilot tested by sending it to 10 organizations. Based on the feedback, minor modification were made before administration to the full sample of 500. Data collection was carried out between February and May 2010. To increase the response rate, reminders were sent out to the organizations. At the end of data collection period, 54 usable responses were received which constitutes more than 10% of the sample. Even though the total number of received responses is low, the researchers proceeded with the data analysis considering the newness of the idea in the field of accounting reporting. The researchers also considered the number of variables in the study before deciding whether to proceed with the data analysis. It must be stressed that the questionnaire made sure the responses are received from those CFOs who had some knowledge about SBR (or XBRL). This is because in the first section of the questionnaire the respondents were asked about their knowledge about SBR (or XBRL) and if a particular respondent had no knowledge, that respondent was requested not to proceed with the questionnaire.

4.2 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 by the respondents is 2.48 which means they are close to being 'somewhat familiar' on average. Of the companies of these respondents, less than 25% represented companies with less 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.

4.3 Validity and Reliability Tests of the Variables

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.

First, the Kaiser-Meyer-Olkin (KMO) measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to proceed. Results in Table 1 reveal that KMO is above .5 for each variable, although 'complexity' is only just .5. Bartlett's test of sphericity is significant for each variable. That is, its associated probability is less than 0.05. In fact, it is 0.000 in each case. This means that the correlation matrix is not an identity matrix, indicating that the factor model is appropriate.

Table 1 reveals that the eigenvalues for each item in the respective constructs load onto a single component. This confirms the construct's convergent validity for each of the four separate constructs in Table 1. Finally, 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.

Table 1: Construct Validity and Reliability Tests for the Three Technology Variables

Latent Variable and Items	***KMO Measure of Sampling Adequacy***	***Bartlett's Sphericity Test***		***Factor Analysis***		***Cronbach's Alpha***
		Chi-sq.	***Sig.***	***% Variance Explained***	***Loadings on Component 1***	
Perceived Advantage	.865	210.917	.000	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	
Could increase productivity					.865	
Compatability	.720	157.87	.000	75.166		.887
Compatible with infrastructure					.935	
Compatible with organ-izations computerised data resources					.838	
Compatible with trans-action processing tasks					.878	
Compatible with financial report preparation practices					.618	
Complexity	.500	33.62	.000	84.619		.818
Would be complex to maintain (reverse score)					.920	
Would make reporting to government simple					.920	
Intention to Adopt SBR	.736	98.59	.000	83.291		.899

Has a strong intention to adopt				.885	
Asked for preparation of proposed plans				.919	
Have a very positive view				.933	

5. Results and Discussion

5.1 Results for the Effects of Technology Factors on Degree of Intention to Adopt SBR

This section presents the results of multiple regressions analysis to test hypotheses 1(a), 2(a) and 3(a). These hypotheses concern determinants of the CFO's view of top management's degree of intention to adopt SBR. The survey questions on the degree of intention measured the extent to which top management has a strong positive position, is considering a formal proposal or is seeking in-depth familiarity with SBR. Table 2 presents results of hierarchical regression – model 1 has the three test variables alone and model 2 has the test variables and two control variables. 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). 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(a), 2(a) and 3(a) are rejected. The technological perspective does not provide an explanation of the degree of top management's intention to adopt SBR, as viewed by the CFO. The inference is that the CFO is not persuaded by technology arguments about the gains SBR adoption can bring over the existing financial and compliance reporting systems of the company. For the CFO, the intention to adopt SBR may be driven by other perspectives other than technological one in the TOE framework.

Table 2: Regression Results for Effects of Technology Factors on Degree of Intention to Adopt SBR

Model Summary	R	R Square	Adjusted R Square	Std. Error of Estimate	ANOVA F	ANOVA Sig.
Model 1	.365	.133	.081	.979	2.560	.065
Model 2	.374	.140	.050	.996	1.558	.190

Dependent Variable: Intention to adoption SBR by 2011		Unstandardized Coefficients		Stand-ardized Coef			Collinearity Statistics	
Independent Variables		*B*	*Std. Error*	*Beta*	*t*	*Sig.*	*Tolerance*	*VIF*
Model 1	(Constant)	1.016	.542		1.873	.067		
	Perceived Advantage	.267	.155	.290	1.730	.090	.618	1.618
	Compatability	.000	.188	.000	-.003	.998	.501	1.996
	Complexity	-.143	.149	-.148	.956	.344	.726	1.377
Model 2 (incl. controls)	(Constant)	1.229	.982		1.252	.217		
	Perceived Advantage	.254	.165	.275	1.541	.130	.563	1.777
	Compatability	-.012	.202	-.012	-.060	.953	.446	2.241
	Complexity	-.145	.153	-.150	.943	.350	.708	1.413
	Familiarity with SBR or XBRL	-.090	.240	-.056	-.376	.708	.802	1.246
	Company Size (Number of People)	.035	.115	.046	.305	.762	.796	1.257

5.2 Results for the Effects of Technology Factors on the Likelihood of Adoption of SBR within 18 months

This section presents the results of multiple regressions analysis to test hypotheses 1(b), 2(b) and 3(b). These hypotheses concern determinants of the CFO's view of top management's likelihood of adopting SBR within 18 months of the government agencies going live in July 2010. Before presenting the regression results, a frequency distribution of responses on the likelihood of adoption of SBR in the near future is presented in Table 3. It shows that only 33% of respondent companies are likely (or highly likely) to adopt SBR in the first 18 months of the facility being made available by key government agencies. This confirms other evidence of a slow take-up of SBR by businesses during the initial 3 months.

Table 3: Frequency Distribution of Likelihood of adoption in 2011

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly Unlikely	13	24.1	24.1	24.1
	Unlikey	23	42.6	42.6	66.7

Likely	12	22.2	22.2	88.9
Highly Likely	6	11.1	11.1	100.0
Total	54	100.0	100.0	

Table 4 reveals that both models have considerable overall explanatory power (Adj.R Square = .400 and .399). In terms of the explanatory variables, *compatibility* is significantly positively related to the likelihood of adoption, and remains weakly significant after the control variables are added to the regression model. Therefore, hypothesis 2(b) is accepted. This result suggests that CFOs who have assessed SBR to be compatible with the company's existing financial accounting applications and financial and compliance reporting skills and tasks, will be more likely to adopt SBR in the near future because the adoption process will not be so costly on the time and resources of the CFO's department.

Also in Table 4, *complexity* is found to be significantly negatively related to the likelihood of adoption (sig. = .023 and .025). Therefore, hypothesis 2(c) is accepted. The inference is that the more the CFO perceives SBR to be difficult to understand and potentially maintain as a financial reporting and compliance system of the company, the lower the likelihood that SBR will be adopted in the near future. These two technological attributes of SBR, compatibility and complexity, are significant off-setting factors that negate the likelihood of SBR adoption on the near future.

Further, Table 4 reveals the interesting result that the *relative advantage* of SBR technology over existing systems operated in the company, as perceived by the CFO, does not have a significant effect of the likelihood of SBR adoption. Hypothesis 1(c) is rejected. Again the inference is that the CFO is not persuaded by the technological arguments about the relative benefits of SBR.

Table 4: Regression Results for Effects of Technology Factors on Likelihood of Adoption of SBR in 2011

Model Summary	R	R Square	Adjust-ed R Square	Std. Error of Estimate	ANOVA F	ANOVA Sig.
Model 1	.658	.434	.400	.728	12.757	.000
Model 2	.675	.456	.399	.728	8.044	.000

Dependent Variable: Intention to adoption SBR by 2011		*Unstandardized Coefficients*		*Stand-ardized Coef*			*Collinearity Statistics*	
Independent Variables		*B*	*Std. Error*	*Beta*	*t*	*Sig.*	*Toleran ce*	*VIF*
Model 1	(Constant)	-.146	.403		-.361	.719		
	Perceived Advantage	.148	.115	.174	1.287	.204	.618	1.618
	Compatability	.312	.140	.336	2.234	.030	.501	1.996
	Complexity	-.256	.111	-.289	2.315	.025	.726	1.377
Model 2 (incl. controls)	(Constant)	.084	.718		.117	.908		
	Perceived Advantage	.133	.120	.156	1.103	.276	.563	1.777
	Compatability	.281	.148	.303	1.900	.063	.446	2.241
	Complexity	-.264	.112	-.298	2.357	.023	.708	1.413
	Familiarity with SBR or XBRL	-.119	.175	-.081	-.678	.501	.802	1.246
	Company Size (Number of People)	.076	.084	.109	.911	.367	.796	1.257

Additional analysis of the individual items contained within each technology attribute (or independent variable) is presented in Table 5. The sample had been split into two independent sample groups – the likely/highly likely SBR adoption group and the unlikely/highly unlikely SBR group. The results in Table 5 show a significant difference between means of all items within all three variables. The likely/highly likely to adopt group records a significantly higher mean on all items of *relative advantage, compatibility and complexity* (reverse scored) than the unlikely/highly unlikely group. The inference from Table 5 is that the 20% of CFO respondents who indicate a likely/highly likely adoption of SBR in the near future have been significantly influence by the technology perspective, but not the remaining 80% of CFO respondents.

Table 5: Comparison of Means of Technology Items for High versus Low Intention to Adopt SBR in 2011

Items and their latent concept	*Intend to adopt in 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**		
Compatible with organization's IT infrastructure	Low	3.00	.956	-2.153	.036
	High	3.61	1.037		
Compatible with organizations computerised data resources	Low	3.00	1.042	-1.703	.095
	High	3.56	1.294		
Compatible with transaction processing	Low	2.61	1.076	-3.446	.001

tasks	High	3.67	1.029		
Compatible with financial report preparation practices	Low	2.42	1.131	-5.734	.000
	High	4.22	1.003		
Compatability	**Low**	**2.76**	**.901**	-3.876	.000
	High	**3.76**	**.897**		
Would be complex to maintain (reverse score)	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**		

5. Conclusions

This study has extended the literature on adoption of information technology innovations. It draws on concepts from DOI theory and the TEO framework to address the research question about the extent to which technological attributes of SBR are drivers of thinking by CFOs about their company's adoption (or intended adoption) of SBR. From a survey of company CFOs, this study finds that the degree of intention to adopt SBR is not explained by taking a technological perspective. No technology attributes, apart from a weakly significant *relative advantage* of SBR over existing company systems of financial and compliance reporting, have an influence on CFOs. On the other hand, this study finds strong effects of the technological perspective on the likelihood of a company adopting SBR in the near future. When the CFO perceives higher value from the relative advantage of SBR, the compatibility of SBR, and the lower complexity of SBR, then it is found that the likelihood of the company adopting SBR is greater.

The implications of the findings for the SBR project implementation group in the Australian Treasury are that continued focus on the technological benefits to companies of SBR adoption may be ineffective. Alternative dimensions in the TOE framework, namely, the organizational perspective and the environmental perspective, should be considered by the government's SBR group in their endeavours to convince more businesses to take up

SBR. There is also an implication for preparers of financial and compliance reports within companies. The company CFOs who lead the way in adoption of SBR will need to demonstrate that adoption by their company has lead to burden-reducing, efficient and secure financial reporting outcomes. Otherwise, the take-up rate by competitor businesses is not likely to increase.

The 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 fatigue, acquiescence error or the halo effect. The response rate was low which may have resulted in some non-respondent bias. The suggestion for further research is to replicate this study using constructs from the organizational and environmental perspectives of TOE to establish in a more comprehensive way the factors that encourage or inhibit CFOs in getting their company to voluntary take-up of SBR in Australia.

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