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Standard Business Reporting in Australia: efficiency, effectiveness, or both?

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Abstract

The benefits of using eXtensible Business Reporting Language (XBRL) as a business reporting standard have been widely canvassed in the extant literature, in particular, as the enabling technology for standard business reporting tools. One of the key benefits noted is the ability of standard business reporting to create significant efficiencies in the regulatory reporting process. Efficiency-driven cost reductions are highly desirable by data and report producers. However, they may not have the same potential to create long-term firm value as improved effectiveness of decision making. This study assesses the perceptions of Australian business stakeholders in relation to the benefits of the Australian standard business reporting instantiation (SBR) for financial reporting. These perceptions were drawn from interviews of persons knowledgeable in XBRL-based standard business reporting and submissions to Treasury relative to SBR reporting options. The combination of interviews and submissions permit insights into the views of various groups of stakeholders in relation to the potential benefits. In line with predictions based on a transaction-cost economics perspective, interviewees who primarily came from a data and report-producer background mentioned benefits that centre largely on asset specificity and efficiency. The interviewees who principally came from a data and report-consumer background mentioned benefits that centre on reducing decision-making uncertainty and decision-making effectiveness. The data and report consumers also took a broader view of the benefits of SBR to the financial reporting supply chain. Our research suggests that advocates of SBR have successfully promoted its efficiency benefits to potential users.

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However, the effectiveness benefits of SBR, for example, the decision-making benefits offered to investors via standardised reports, while becoming more broadly acknowledged, remain not a priority for all stakeholders.

Key words: Standard Business Reporting; Business reporting; Transaction cost economics; Efficiency; Effectiveness

JEL classification: M15, M41, M48

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1. Introduction

In Australia, Standard Business Reporting[1] (SBR) is a multi-agency programme intended to reduce the regulatory reporting burden, and in consequence, also reduce the attendant cost burden for business.[2] As noted in its SBR options paper (Treasury, 2012), the premise is that businesses reporting information to Government will be 'recorded once, reported to many' to help enhance business efficiency. This efficiency-based goal is to be realised by removing duplicated information on government forms and utilising business software to automatically pre-fill government forms via the Australian XBRL-based taxonomy.[3] Efficiency has been the consistent and pervasive theme of SBR from its inception with its overall intention to make financial reporting to government or other agencies a by-product of natural business processes.[4]

Given its multi-agency focus, Australia's SBR is largely similar to the Netherlands' instantiation of SBR. Both implementations permit businesses to submit reports to multiple agencies, for example, for tax, statistical and financial regulatory purposes.[5] This similarity is no accident with recommendation 6.3 of the Report of the Taskforce on Reducing Regulatory Burdens on Business stating that 'The Australian Government should develop and adopt a business reporting standard within the Australian Government sphere by 2008,

[1] SBR in the context of this study refers only to the Australian instantiation of its XBRL-based standard business reporting program.

[2] In the context of business reporting, the costs arise due to the exchanges between those who prepare (data and report producers) and those who use (data and report consumers) financial reports.

[3] XBRL is an acronym for eXtensible Business Reporting Language.

[4] For example, see, http://www.sbr.gov.au.

[5] See http://www.sbr-nl.nl/english/ and http://www.sbr.gov.au/about-sbr/what-is-sbr/sbr-enabled-reports.

based on the Netherlands model and work undertaken by the ATO' (Productivity Commission, 2006, p. 142).

In contrast, the US and UK instantiations of XBRL-based reporting tend to be more single regulator implementations. For example, in the US, the Securities and Exchange Commission (SEC) uses their XBRL-based reporting system for submission of public companies' financial statements and the Federal Financial Institutions Examination Council (FFIEC) uses their XBRL-based reporting system for Reports of Condition and Income (Call Report) for those companies required to lodge reports under Section 1817 (a)(1) of the Federal Deposit Insurance Act.[6] In the UK, HM Revenue and Customs (HMRC) uses its XBRL-enabled system for company tax returns (HMRC, 2011).

In Australia, SBR went live on 1 July 2010 with Treasury expecting uptake to gather pace in the ensuing years as SBR-enabled reporting software becomes progressively more available. While efficiency has always been promoted as the primary benefit of SBR, it was expected to provide beneficial impacts to all participants in the financial reporting supply chain, for example, the providers of financial information, financial analysts, investors and regulatory bodies (Foroughi *et al.*, 2001). Indeed, Treasury's (2012, p. 8) options paper is quite clear about the benefits of SBR to analysts and investors stating that 'Analysts, investors and reporting entities can benefit from greater transparency of financial reports. . .'.

The technology enabling SBR and facilitating the efficiency gains anticipated by Treasury is XBRL. XBRL harnesses the many benefits of XML for business reporting purposes.[7] Standard business reporting systems use XBRL to provide sets of tags from enabling taxonomies that reflect the accounting standards used in particular countries. For example, the Australian XBRL taxonomy has its bases in the International Financial Reporting Standard (IFRS) with extensions particular to Australia. In practice, the intention is that such standardisation simplifies and helps automate regulatory reporting.

Prior research notes that there are various potential benefits relative to XBRL-based reporting instantiations (see, e.g., Appendix A); however, there

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[6] See http://www.sec.gov/spotlight/xbrl/what-is-idata.shtml and https://cdr.ffiec.gov/public/.

[7] XBRL is one of a family of XML languages that is becoming a standard means of communicating information between businesses, and on the Internet. XBRL is an open standard, free of licence. Instead of treating financial information as a block of text – as in a standard Internet page or a printed document – XBRL provides an identifying tag for each individual item of data. This feature makes XBRL-based information computer readable. For example, company net profit has its own unique tag. Computers can treat XBRL data 'intelligently'; they can recognise the information in a XBRL document, select it, analyse it, store it, exchange it with other computers and present it automatically in a variety of ways for users. XBRL greatly increases the speed of handling of financial data, reduces the chance of error, and permits automatic checking of information (XBRL International, 2010).

appears to be limited research examining stakeholders' perceptions of those benefits, especially for financial reporting. While current literature suggests there are potential efficiency and effectiveness benefits of XBRL-based reporting, it does not offer insights into whether the efficiency benefits or effectiveness benefits, or both, are the driving force(s) behind (i) XBRL-based reporting's initial implementation and (ii) XBRL-based reporting's continued use.[8] Accordingly, the purpose of this study is to determine what type of net benefits might drive the uptake of Australia's XBRL SBR instantiation.

We approach this study from a net-benefit position of the type detailed by DeLone and McLean (2003) and Seddon (1997). We conceptualise 'net benefits' largely as does Seddon (1997, p. 246), 'Net benefits is an idealized measure of the sum of all past and expected future benefits, less all past and expected future costs, attributed to the use of an information technology application.' We then employ the finance-economics paradigm of rationality in decision making based on perceived benefits outweighing perceived costs to inform the following expectations. In Australia, where the efficiency benefits of the SBR programme are (and have been) the consistent theme, then we expect that the uptake of the Australian instantiation of SBR will be data and report-producer driven to benefit from improved efficiencies, for example, via reduced preparation time and costs for completion of financial reports.[9] Furthermore, if potential users of SBR perceive that the benefits of SBR outweigh the costs associated with the implementation of SBR, then we expect that the perceived positive view of SBR will lead to its uptake (Davis, 1989; Venkatesh *et al*., 2003; Burton-Jones and Hubona, 2006; King and He, 2006; Zhu *et al*., 2006). We also believe that the volume and frequency of the data and reports produced will have some bearing on our expectations. Specifically, data and report-producers that have a bigger client base (e.g., large accounting firms) over which to amortise the costs of implementing SBR are expected to adopt SBR more rapidly and more completely. In contrast, data and report producers that have a smaller client base (e.g., small public practices) have a smaller base over which to amortise such costs, leading, we expect, to slower SBR uptake.

For stakeholders who understand and value the potential effectiveness benefits offered by SBR, that is, investors, lenders and regulators, there will demand for the use of SBR so they can benefit from improved decision making,

[8] In the context of our study, an efficiency benefit means a benefit leading to a reduction in the time or cost of preparing the financial reports, for example, a reduction in the use of resources to achieve the same outcomes. An effectiveness benefit means a benefit leading to better decision making by the users of the financial information, for example, an improvement in achieving organisational goals.

[9] Data and report producers are those companies that both produce data and reports for submission to regulatory agencies themselves, or they produce data and reports for submission to regulatory agencies on behalf of client companies, for example, accounting or business services companies.

for example, via more accurate and more easily aggregated financial data. Under such circumstances, we expect that the uptake of the Australian instantiation of SBR will be data and report-consumer driven.[10] Again, we expect data and report-consumers that use the data and reports more frequently, or they have a larger volume of data and reports available, will have more rapid and complete uptake of SBR. For example, large accounting firms will use the data provided by SBR to offer more innovative and diverse products to decision makers, or large lenders may use the financial data available via SBR to undertake rapid risk assessments of customers.

Motivated by the limited voluntary take-up of standard business reporting by organisations (Drummond, 2013), and to examine our expectations, the objectives of this study are to:

1 Identify whether efficiency or effectiveness is the main driving force behind the uptake and continuance of SBR, and in support of that objective and;
2 Explore the perceptions held by SBR stakeholder groups of the potential benefits/costs (in the economic sense) of SBR.

Given these objectives, the results from this study make several contributions. First, insights into the expectations and priorities of the likely SBR user groups are presented. Second, initial resistance to the use of SBR from a significant data and report-producer group was identified. Third, and in contrast to the aforementioned data and report-producer group, one group of data and report-consumers is anticipating substantial cost savings and an improved range of services for its client base as a result of the SBR programme.

This paper is presented in the following manner. First, it provides a brief background on SBR and other instantiations of XBRL-based reporting, before examining the claims behind the promoted benefits of the use of SBR to determine whether these are efficiency or effectiveness benefits. It uses the theoretical basis of transaction cost economics (TCE) to examine those claims and present our research expectations in relation to the various benefits and stakeholder groups. Second, the exploratory study incorporating semi-structured interviews and content analysis of submissions to Treasury's (2012) Options paper is described. These interviews, in conjunction with analysis of the submissions to Treasury, provided the data to examine our three expectations and permitted comparisons and contrasts between the groups. Finally, we conclude the paper with a summary of the work performed, note its limitations and propose directions for future research.

[10] Data and report consumers are those regulatory agencies that consume data and reports for regulatory purposes, for example, taxation and compliance. Data and report consumers may also be companies that consume data and reports for making investment decisions themselves or on behalf of clients, for example, investment advisors and stockbrokers.

2. Background and theoretical foundations

2.1. Background

As noted in the previous section, the potential of XBRL-based business reporting has been recognised in countries other than Australia. For example, the Netherlands, the USA and the UK have rolled out XBRL-based reporting programmes. The Netherlands' standard business reporting programme is well advanced – the Netherlands was one of the earliest standard business reporting adopters, having initiated its standard business reporting programme in 2004 with the development of the Netherlands taxonomy (Productivity Commission, 2012).

Both the Netherlands and Australia have multi-agency implementations of standard business reporting; Australia differs from the Netherlands, however, in the maturity of standard business reporting use. Since finalising their taxonomy in 2007, the Netherlands has had its standard business reporting programme in place. Dutch companies and accounting firms have the capability to send reports directly to the appropriate agencies from their accounting software. Aside from reporting purposes, the Dutch bank, ING, completed a pilot on 1 October 2011, whereby loan applications from SMEs were trialled using standard business reporting (Esser and van Donkersgoed, 2011). By way of comparison, SBR in Australia went live on 1 July 2010.

As noted in the introduction, there has been a close relationship between the two countries with respect to the implementation of standard business reporting. The common goal of both countries' standard business reporting programmes is the reduction of the reporting burden. In Australia, SBR-enabled accounting software is becoming progressively more available. For example, Reckon has released GovConnect its SBR-enabled SME accounting software.[11]

The US SEC and FFIEC have also implemented XBRL-based systems for financial reporting and banking regulation, respectively (FFIEC, 2006; Pinsker and Li, 2008). As part of a planned 4-year phase-in, the SEC XBRL-based filing was initially restricted to the top 500 publicly listed companies filing their Financial Statements and Disclosures. Since 25 June 2011, such filing has become mandatory for all filers including foreign companies (Treasury, 2012). US companies submit their Financial Statements and Disclosures via the SEC's Interactive Data system (SEC, 2008). The SEC (2010) notes on its website that, 'Interactive data can provide investors quicker access to the information they want in a form that's easily used and can help companies prepare the information more quickly and more accurately.' Prior research suggests that such standardisation makes comparisons, particularly with respect to investment choices, potentially more effective (Pinsker and Li, 2008). Similarly, the

[11] See http://www.reckon.com/au/business/one/.

FFIEC (2006, p. 6) notes that relative to its XBRL-based Call Report system, 'The overall result has been that high-quality data collected from the approximately 8,200 U.S. banks required to file Call Reports is available faster, and the collection and validation process is more efficient.'

Australian SBR differs from the US XBRL system in, at least, three key ways. First, the US instantiations of XBRL-based systems are single-regulator implementations unlike Australia's multi-agency implementation. Second, unlike the SBR programme, the US SEC XBRL-based programme does not have reporting burden reduction as part of its scope. Third, the use of SBR for financial reporting is entirely voluntary regardless of company size. The business case for SBR's use is promoted on the basis of reducing the reporting burden and, therefore, reporting costs for Australian businesses.[12] The business case for using SBR is focussed on cost efficiencies rather than making business information more accessible to investors or improving timeliness of reports. In November 2012, the Australian Treasury Department (as the responsible Government agency for the SBR programme) issued an options paper to consult with stakeholders about the use of SBR for financial report lodgement, including whether the use of SBR should be mandated.

The UK's HM Revenue and Customs (HMRC) has mandated filing of Company Tax Returns via iXBRL since 1 April 2011 (HMRC, 2011). Like the UK's HMRC, the Australian Tax Office (ATO) has a range of forms that can be lodged via SBR-enabled software, for example, activity statements, payroll tax, tax file number declarations and PAYG payment summaries. More forms, including the individual tax return, will be added by July 2015 (ATO, 2013). The UK's HMRC requires that most companies must file their Company Tax Returns, including financial accounts and computations via iXBRL from 1 April 2011, for accounting periods after 31 March 2010 (HMRC, 2011). HMRC shares data with Companies House aligning, in part, with SBR's goal of 'record once, reported to many'.[13]

Australia's SBR instantiation differs from the UK's XBRL instantiation in three key areas. First, like the US instantiations of XBRL-based systems, the HMRC is a single regulator implementation unlike Australia's multi-agency implementation. Second, the HMRC's Tax Returns are filed using iXBRL, while SBR uses XBRL as the enabling technology. In addition, HMRC's primary focus is on tax reporting, rather than SBR's more broad focus on tax

[12] Almost 12,000 Australian businesses, however, used the Auskey portal (SBR also uses the Auskey portal) to lodge government forms such as business activity statements, tax-file declarations and payment summaries during the 2012–2013 financial year (Anderson, 2013).

[13] The main functions of Companies House are to incorporate and dissolve limited companies, examine and store company information delivered under the Companies Act and related legislation and make this information available to the public (Companies House, 2013).

and regulatory reporting, for example, Offices of State Revenue and Australian Bureau of Statistics. Third, HMRC's filing is mandatory, unlike Australia's voluntary system.

As shown from the ING example, XBRL-based systems can offer substantially more capabilities than simply facilitating regulatory reporting. For example, XBRL can also enable easier analysis and evaluation of financial banking supervision, national statistics, business registration, stock market exchanges and revenue and tax filing (Bonson *et al*., 2010; Yoon *et al*., 2011; Chen, 2012; Elam *et al*., 2012). These capabilities are important; however, reducing the overall reporting burden has always been central to the message conveyed from Treasury regarding the SBR programme since its inception.

Much of the prior literature on XBRL-based reporting programmes is centred on potential benefits to the financial reporting chain. Appendix A provides a brief summary of some of the claimed benefits of XBRL-based financial reporting noting both the efficiency and effectiveness benefits to financial reporting.

Recall that, in the context of our study, an efficiency benefit is a benefit leading to a reduction in the time or cost of preparing the financial reports, whereas an effectiveness benefit is a benefit leading to better decision making by the users of the financial reports. International research on XBRL-based reporting, noted in Appendix A suggests that, as expected, the efficiency benefits tend to be mostly reported by data and report-producers while the effectiveness benefits tend to be reported by data and report-consumers. As mentioned in the introductory section, we expect that if potential users of SBR perceive that the benefits of SBR outweigh the costs of adoption of SBR, those potential users of SBR should form positive views on SBR leading to an uptake of SBR (Davis, 1989; Venkatesh *et al*., 2003; Burton-Jones and Hubona, 2006; King and He, 2006; Zhu *et al*., 2006).

Recall, also that the consistently stated benefit of the Australian SBR programme is efficiency. Thus, one might expect that the uptake of SBR will be data and report-producer driven (see e.g., www.sbr.gov.au). If the effectiveness benefits of SBR are not fully recognised and exploited by potential SBR users, however, maintaining existing or attracting new SBR users may be more difficult in the current voluntary environment. Indeed, uptake of SBR has been lower than initial expectations (Drummond, 2013). Recognising the limitations that fully voluntary SBR adoption apparently presented, Treasury released an options paper outlining three adoption options in November 2012, with submissions closing in March 2013.

2.2. Transaction cost economics

To obtain a better understanding of whether efficiency and/or effectiveness benefits will be perceived in the uptake of SBR, we use TCE. TCE is centred on the cost of making an economic exchange (Williamson, 1979, 1981). In the

context of business reporting, the costs of the exchanges are between those who prepare (data and report-producers) and those who use (data and report-consumers) financial reports. The costs of such transactions are characterised by three dimensions, *viz*, asset specificity, uncertainty and transaction frequency.[14]

The three dimensions of TCE are examined now to predict the SBR drivers. First, if the use of SBR for financial reporting leads to a reduction in asset specificity, we expect that efficiency will become the primary driver. That is, the same item of reported data would have a broader range of application for a wider array of users, thus indicating SBR's efficiency benefits. Second, if SBR leads to a reduction in the uncertainty of the financial reporting transaction, we expect that effectiveness will become the primary driver. Lower levels of uncertainty about what the data items mean should increase the sureness about performance and thus improve decision-making performance. That is, financial reports presenting their information in a uniform, well-defined manner will permit analysts, lenders, investors, and those advising investors to make decisions on the basis of transparent comparisons between firms, thus facilitating effectiveness benefits. Third, transaction frequency is pertinent to both data and report-producers, and data and report-consumers, for it is the number of times the same data are used or accessed that influences the cost per individual use. That is, more frequent use of the same data provides a wider base over which to amortise the cost of its production. For data and report-producers, particularly those producing large volumes of data and numbers of reports regularly for their data consumers, the costs of SBR adoption, for example, mapping of accounts to the SBR taxonomy, can be amortised over a large base, thus reducing the cost per individual use. For data and report-consumers, likewise, the larger the volume of data and number of reports aggregated for consumption, the lower the cost per individual aggregation. Data and report-consumers, particularly large consumers, for example, government regulatory reporting agencies, are able therefore to amortise the costs of adopting SBR over a larger volume of data and reports. Following these arguments, our expectations relative to SBR uptake are as follows:

Expectation 1. Data and report-producers, through reduced asset specificity and increased transaction frequency, will derive principally efficiency benefits from SBR.

[14] Asset specificity is the degree to which an investment made to support a particular transaction is idiosyncratic to that transaction. Uncertainty relates to the expected degree of ambiguity associated with a transaction between the transacting parties, that is, the unsureness about what performance will be required. Transaction frequency refers to the frequency of the transaction. Frequency is typically dictated by the 'buyer' party of a transaction or, in this case, the data and report-consumer. For example, in the context of financial reporting, the regulatory bodies prescribe how often reporting entities must prepare financial reports.

Expectation 2. Data and report-consumers, through reduced transaction uncertainty and increased transaction frequency, will derive principally effectiveness benefits from SBR.
Expectation 3. Data and report-producers and report-consumers, for example, large accounting firms that produce and consume reports, through reduced asset specificity, reduced transaction uncertainty and increased transaction frequency, will derive efficiency and effectiveness benefits from SBR.

3. Method

To examine the three expectations of our study, two data collection methods and one common method of analysis were used. Relative to the data collection methods, eleven in-depth interviews were conducted, and data from stakeholders' submissions to Treasury's SBR options paper were collected.

3.1. Interviews

The interview participants were selected using purposive sampling from four key stakeholder groups: Australian government agencies, members of XBRL Australia, partners from major accounting firms and representatives of professional accounting associations.[15,16] All 11 interviewees were personally contacted by the researchers, and all agreed to be interviewed and have those interviews recorded for later transcription and textual analysis. No other interviewees were approached or interviewed. Given the nature of the research and consequently the limited number of potential interviewees, a key consideration of the authors was that there was no single dominant group of stakeholders (see Table 1).

These four stakeholder groups were in the best position to make informed observations relative to our questions for the following reasons. First, given their involvement in the development and consultation relative to SBR programme, they were more likely to have sufficient knowledge and experience with SBR to properly respond to our questions. Second, the background and characteristics of the members of XBRL Australia, the representatives of the professional accounting bodies, and, in part, accounting firm partners, suggested a data and report-producer orientation for these stakeholder groups. The government agencies and, in part, accounting firm partners' characteristics suggested a data and report-consumer orientation. Third, their perspectives

[15] Given that SBR was a relatively new approach within financial reporting, the number of practitioners in the financial reporting supply chain with sufficient experience or knowledge of SBR to provide useful responses to a randomised survey was limited.

[16] XBRL Australia's mission was to promote the development and uptake of the XBRL standard in Australia (see www.xbrl.org/au).

Table 1
Interviewee representation

Stakeholder group	Stakeholder code	Number
Accounting firm partner	[AF 1-3]	3
Professional accounting association	[AP 1-2]	2
XBRL Australia	[XBRL 1-4]	4
Government agency	[GA 1-2]	2

should accurately reflect the Australian context of this study. Fourth, while the number of interviewees was limited, prior research indicates that theoretical saturation occurs between six and 12 interviews (Guest *et al*., 2006).

Interviews were conducted during 2010, the period in which the SBR programme was being developed (e.g., final development and release of taxonomy, development of single logon, and pilot instances). All participants were interviewed at length for this study using the semi-structured interview protocol provided in Appendix B.[17]

3.2. Interview development and procedures

To form the basis of a semi-structured interview protocol, questions that were relevant to the constructs being investigated were required. To ensure the validity of the questions as representative of the constructs being investigated, an 'expert study' was performed (Benbasat and Moore, 1992).[18] Six questions related to overall benefits. Eighteen items in total related to asset specificity, uncertainty and transaction frequency. Additional open-ended questions were also included at the beginning of the protocol to allow participants the opportunity to give broad and comprehensive responses relating to the prospective benefits. To help promote uniformity during the interview process, the same questions were presented to all interviewees in the same order. Additional neutral prompts were added as the interviewer deemed appropriate, in reaction to responses given by the interviewee. The interviews were recorded and then transcribed to permit textual analyses.

[17] To preserve interviewee anonymity, descriptions of the interviewees' occupations, professions and experiences are available from the authors upon request. Transcripts of the interviews are, similarly, available upon request.

[18] The questions' representativeness of their respective constructs was rated as follows: Questions scoring 'substantial' agreement were used as is, and some questions scoring 'fair' or 'moderate' were included, after rewording to better represent the construct. Cohen's (1960) Kappa was used to determine agreement. Kappa scores of over 0.61 represented 'substantial agreement', over 0.41 represented 'moderate agreement' and over 0.21 represented 'fair agreement' (Landis and Koch, 1977).

3.3. Submissions to Treasury's options paper

In addition to the 11 interviews conducted, we conducted textual analysis of the contents of the 23 submissions to Treasury's options paper. The 23 submissions were assembled into the same stakeholder groups as the interviewees. There were two key differences between the interviewee stakeholder groups and the options paper submission groups. First, at the time of the interviews, the SBR programme in Australia was in its initial implementation stages, and consequently, we were unable to interview facilitators. Given the evolution of SBR, facilitators have now entered the SBR arena and have made submissions to Treasury's options paper. Second, some 3 years had elapsed between the interviews and the submissions to the options paper permitting comparisons between the two sets of data.

3.4. Computer-aided text analysis

Analyses on the transcribed interviews and the options paper submissions were conducted using Leximancer, a computer-aided text analysis programme that provides awareness of the global context and significance of concepts, thereby, helping to avoid fixation on anecdotal evidence, which may be atypical or erroneous (Smith and Humphreys, 2006). Leximancer employs proximity values for text-mining and artificial learning (Smith and Humphreys, 2006) to automatically identify and map themes and concepts in textual data. Theme circles summarise main ideas by clustering relevant concepts together. The most prominent concept lends its name to the theme cluster, and it is indicated by the largest dot in the cluster. Leximancer uses word frequency and co-occurrence of those words to identify families of terms that tend to be used together in manuscripts. Leximancer identifies what concepts exist in manuscripts, allowing concepts to be automatically coded in a grounded fashion (Cretchley *et al*., 2010). Thus, the map visually represents the strength of association between concepts, and provides a conceptual overview of the semantic structure of the data (Cretchley *et al*., 2010).

Aside from Leximancer's ability to analyse large data sets quickly, its reliability was a key factor in its choice as our analysis tool. Leximancer's reliability is assessed in two ways, namely, stability and reproducibility. Stability is equivalent to inter-coder reliability. Leximancer is highly consistent in the way it classifies text and identifies the relationships between concepts. Relative to reproducibility, the concept network patterns remain the same regardless of how many times a data set is analysed (Smith and Humphreys, 2006).

An important consideration when using Leximancer is its customisation. This study used three strategies. First, several words in the transcripts were deleted. For example, the expressions 'um' or 'yeah' often appear but are of no semantic value. Generally, such utterances indicate the interviewee is taking

time to *formulate* a response, but those utterances are *not* part of the response. Second, because the thesaurus in Leximancer is built on co-occurrence in the text being analysed (Smith and Humphreys, 2006), some synonymous terms need to be merged to increase their significance. For example, business, firm and company are synonymous terms in this study and thus were merged, that is, one term was selected and the occurrences of the other terms replaced. Third, some of the interviewees, when referring to the concepts of interest, did not specifically use the concept's name. To overcome problems associated with the use of pronouns such as 'it', the authors 'backfilled' those pronouns with the appropriate proper noun.

While there is much detailed grammatical information that cannot be obtained using methods that discard words and their ordering within sentences, there is still an abundance of rich and complex information that can be extracted by using means such as Leximancer (Smith and Humphreys, 2006). Briefly, via its concept mapping and drill-down capabilities, Leximancer allows rapid, reliable appreciation of the information contained within non-trivial amounts of natural language (Smith and Humphreys, 2006), hence its selection for use in the analysis of our data.

4. Interviewee stakeholder analysis

We now present the detailed analysis for each of the four interviewee stakeholder groups: Australian government agencies; members of XBRL Australia; partners from major accounting firms; and, representatives of professional accounting associations. Following this analysis, we present the analysis based on submissions to the Australian Treasury's options paper.

4.1. Government agencies

The first interviewee map presented is for the Australian government agencies (see Figure 1). The members of the Australian government agencies stakeholder group are closely involved in the SBR programme and, within the context of this research, are primarily data and report-consumers. In this map, *SBR* is the most prominent theme or idea. *People* and *financial* which intersect with SBR are the next most prominent themes, followed by *language* and *information*. Unlike language, *information* does not intersect with *SBR* suggesting that theme is somewhat separate from *SBR*. For the government agencies, SBR's intersection with the majority of the other themes suggests the government agencies have a holistic view of SBR's role in the business reporting process. The government agencies, however, perceive *information* as separate from the other themes implying the interviewees perceive *information* as, perhaps, arising from the interaction of SBR with the other themes.

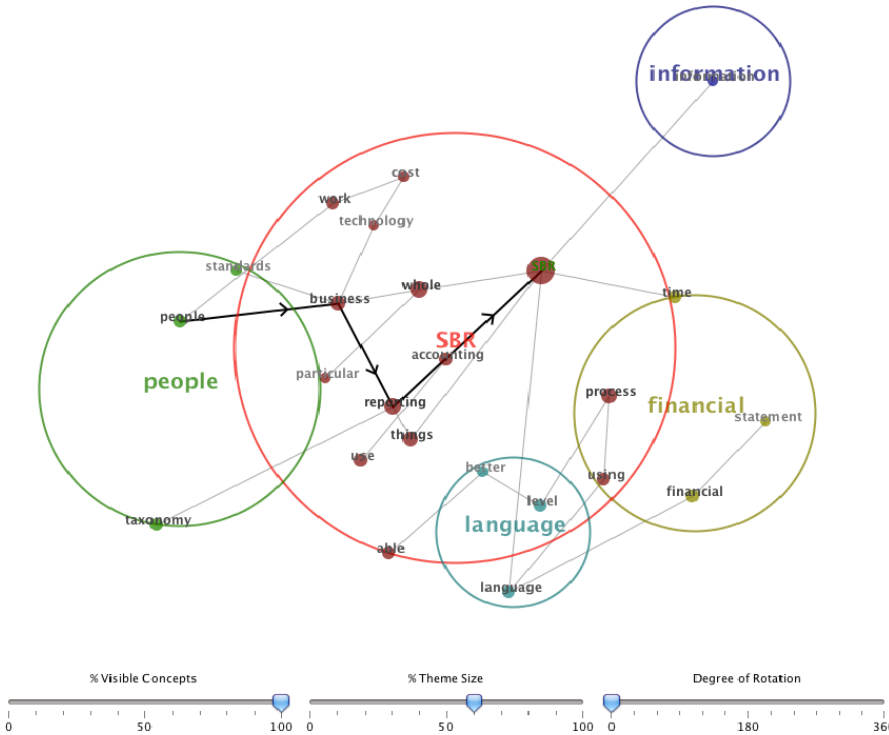

Figure 1 Australian Government agencies.

We speculate that such a separation is consistent with the government agencies' focus on efficiency rather than effectiveness, that is, the form of SBR, rather than the content of SBR. Many of the concepts in the map are indicative of the efficiency focus being pursued by the government agencies, for example, *time* is at the intersection of SBR and financial and suggests SBR will positively affect the time spent working on reports.

This observation is supported by the following comments from the interviewees:

> '... they announced sometime ago that by using SBR, their working time for the creation of financial statements for privately held entities has yielded a 71% labour resource reduction for that process.' [GA 1]

Recall that the SBR programme is being promoted by the government agencies on the basis of efficiency benefits. However, our expectation is that data and report-consumers, such as accounting firms could derive effectiveness benefits through reduced uncertainty and in the presence of high transaction frequency. This expectation appears to be borne out by comments from the government agency stakeholders who recognise the potential effectiveness benefits of SBR to other stakeholder groups, for example:

'Once we have this available electronically via SBR they will be able to take a lot more in and to a much greater depth and compare... and do analysis on a lot more things than they would have ever thought possible previously.' [GA 2]

4.2. *Accounting firm partners*

The second interviewee map presented is that for the accounting firms' partners (see Figure 2). The members of this group, within the context of this research, are data and report-consumers in their advisory role. They are also data and report-producers in that they are responsible for submitting data on behalf of their clients to the relevant government agencies to satisfy regulatory requirements. Thus, our expectation is that the partners' discussion will consider both efficiency and effectiveness.

In this map, the most prominent themes or ideas are *SBR* and *benefits*. The next most prominent theme is *reporting*.*SBR*, *benefits*, and *reporting* all intersect with *SBR*, the central theme. *Programme* is the fourth theme; however, it does not intersect with *SBR* suggesting that theme is somewhat

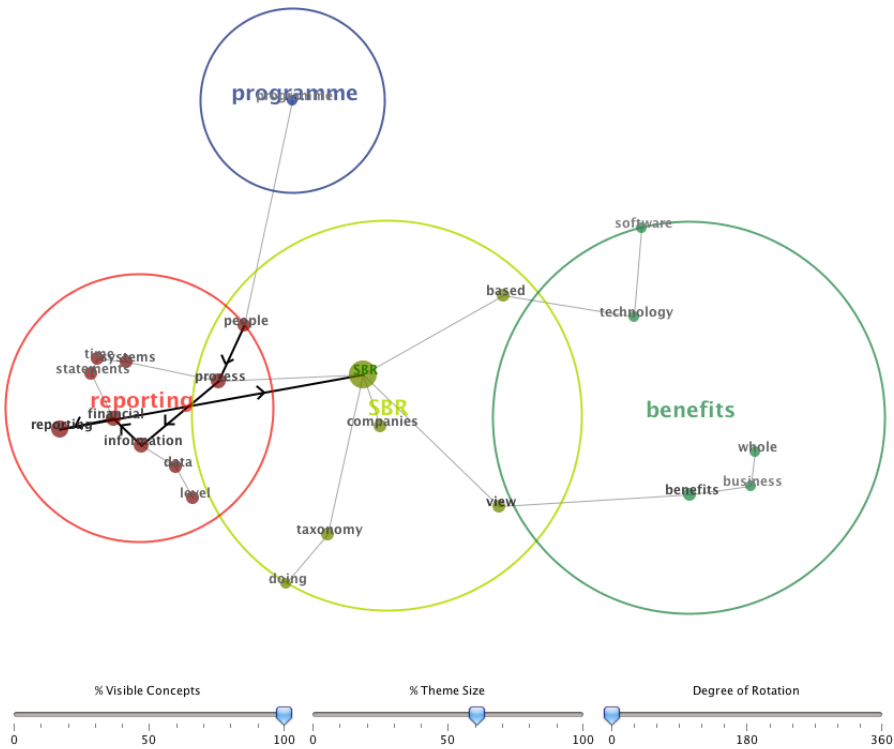

Figure 2 Accounting firm partners.

distinct from *SBR*. In this instance, *programme* is taken to mean a plan or course of action. We speculate that the accounting firms' partners view the SBR programme as being separate and detached from its use and potential benefits.

The concepts in the map are suggestive of efficiency, for example, *process*, *reporting*, *time*, and *systems*. There are also concepts that appear to be aligned with effectiveness, for example, *benefits*, *business*, and *information*. The following quotes by the accounting firm partners reflect this perception of efficiency and effectiveness benefits being delivered by SBR:

> '. . . what you're doing is you're effectively saying to the finance function you know we need you to spend less time on a manual aggregation and compilation process which gives you greater capacity to spend more time on analysis and value add for the business. It will free up capacity in the financial reporting process and therefore allow that capacity to be deployed elsewhere. So the time spent by people extracting and manually inputting information into financial statements that get vetted and lodged etc. can be better used in analysing the information that's automatically coming out of the financial reporting systems and the GL's etc. '[AF3]

> 'global trends may mean that increased regulation may force the mandatory requirements be quicker because you know one of the benefits obviously is more consistent visible transparent reporting. The first year SBR will be a cost of set up whether that exceeds the . . .I don't think there'll be massive efficiencies the first year because they'll be learning. . . Second year you would hope that the benefits of SBR are starting to come through.' [AF2]

4.3. XBRL Australia

The third interviewee map presented is for the members of XBRL Australia (see Figure 3). Unlike the government agencies or the accounting firm partners, the XBRL Australia members' primary focus is data and report production. We expect, therefore, that their discussion will principally focus on the efficiency benefits of XBRL-based reporting systems.

In this map, the most prominent themes or ideas are *XBRL* and *cost*. The next two most prominent themes are *use* and *business*. The two other, less prominent, themes are *people* and *time*. *Cost*, and to a lesser extent *people*, both intersect with *XBRL*; however, *use*, *time* and *business* do not, perhaps suggesting those themes are somewhat distinct from *XBRL*.

Relative to the members of XBRL Australia, the themes *use*, *people*, *time*, *XBRL*, *business*, and *cost* imply a focus centred on efficiency. Unlike the government agencies or the accounting firm partners, there is little overlap among the themes in the XBRL Australia map.

We speculate that for the XBRL Australia members the efficiency benefits are clear and distinct; however, they are not viewed in the same, whole-of-process manner, as they are by the government agencies or the accounting firms' partners.

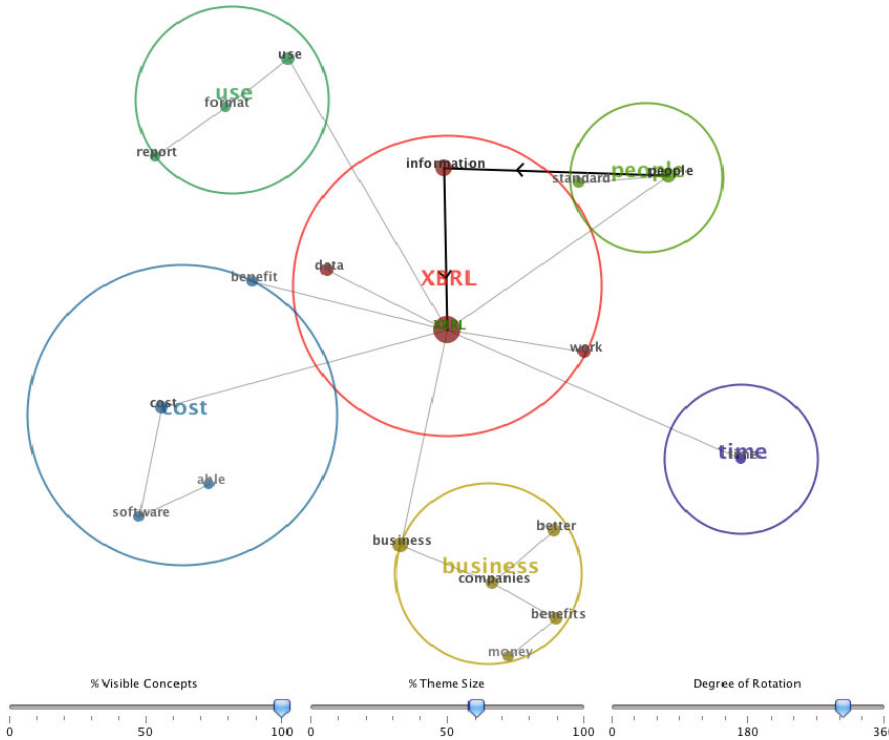

Figure 3 XBRL Australia members.

The following comments made by XBRL Australia members highlight the expected cost reductions afforded by the use of XBRL-based systems, again suggestive of expected efficiencies:

> 'I would expect that if XBRL is widely adopted that the cost of preparing reports for government at all levels will be reduced...' [XBRL4]

> 'For accountants you get your stuff out very quickly and efficiently. XBRL will lead to big efficiencies... XBRL saves you 70% of the effort. So yeah, my expectations are that there's a lot to be harvested.' [XBRL2]

4.4. *Professional bodies*

The fourth interviewee group map presented is that of the senior representatives from the major Australian professional accounting bodies (see Figure 4).[19] Given the membership of the professional accounting bodies and

[19] The major professional accounting bodies in Australia are the Institute of Chartered Accountants in Australia (ICAA) and CPA Australia (CPAA).

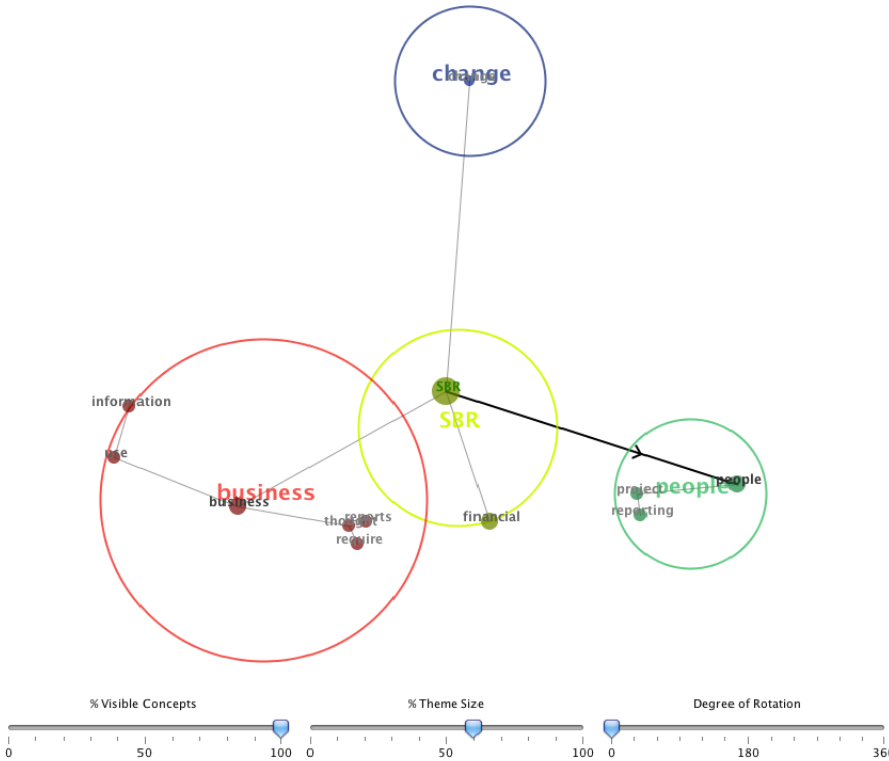

Figure 4 Professional bodies.

their role in undertaking compliance work, within this context, the professional bodies represent primarily data and report-producers. We expect, therefore, the representatives' discussion will focus on efficiency.

In this map, the most prominent theme or idea is *business*. The central, but less prominent, theme is *SBR*, followed by the two least prominent, separate, themes, namely, *people* and *change*.*SBR* intersects with *business*; however, *change* and *people* do not, suggesting those themes are somewhat distant from *business*.

Like the members of XBRL Australia, the professional bodies' focus appears to be one of efficiency, with concepts like *use*, *reports*, and *reporting* emerging from the map. The theme, *change,* also has some prominence, leading us to speculate that the professional bodies would be wary of any new initiative likely to have an effect on their membership. The following comments from members of the professional bodies appear to confirm, as expected, their focus on efficiency:

> 'That's what the SBR programme is really aimed at. . .benefits to the preparers to save compliance costs of business. . . . when SBR first kicked off I thought we were

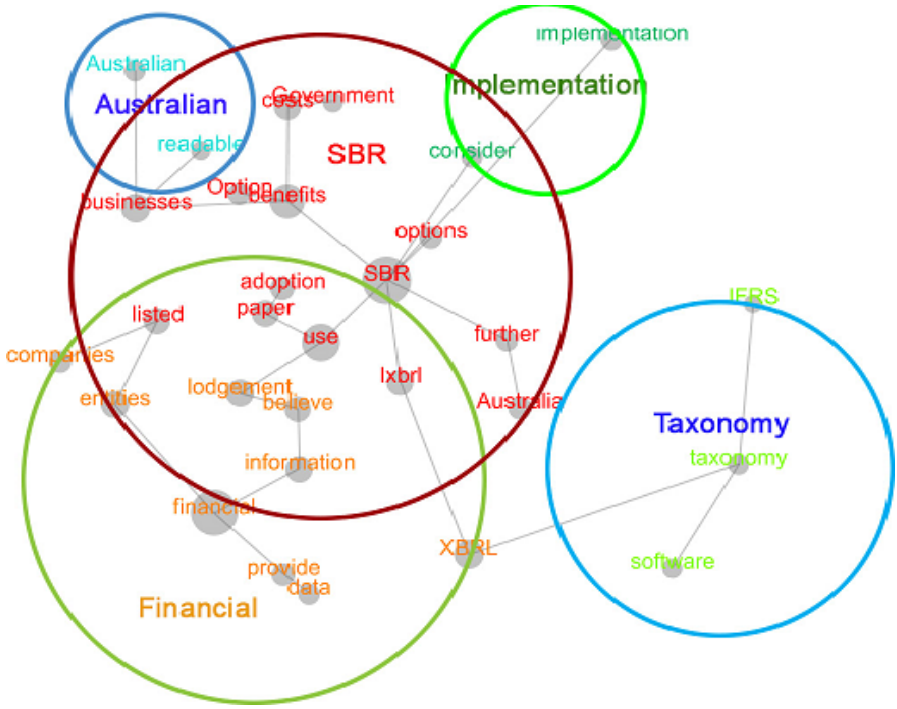

Figure 5 Accounting firms.

going to also see benefits in the user area. As we're getting more and more through this SBR process I'm not really sure that there are going to be benefits in the user area.' [AP 2]

'So my expectations are that if SBR goes well there should be cost savings both to the Government and to the business community out of improved lodgement processes for that business information and probably a lot of simplification of the underlying definitions and forms that are used.' [AP 1]

5. Analysis of responses by stakeholder groups to Treasury's options paper

Australian Treasury released an options paper on the use of SBR for financial reporting in November 2012. Interested stakeholders were invited to submit their views on the issues raised in the paper relative to the preferred option for using SBR for financial reporting by 15 March 2013. The three options presented in the options paper were as follows: (i) mandatory lodgement of financial reports using SBR, that is, mandatory XBRL and mandatory PDF; (ii) voluntary lodgement of financial reports in iXBRL format using SBR; and (iii) status quo, that is, voluntary XBRL and

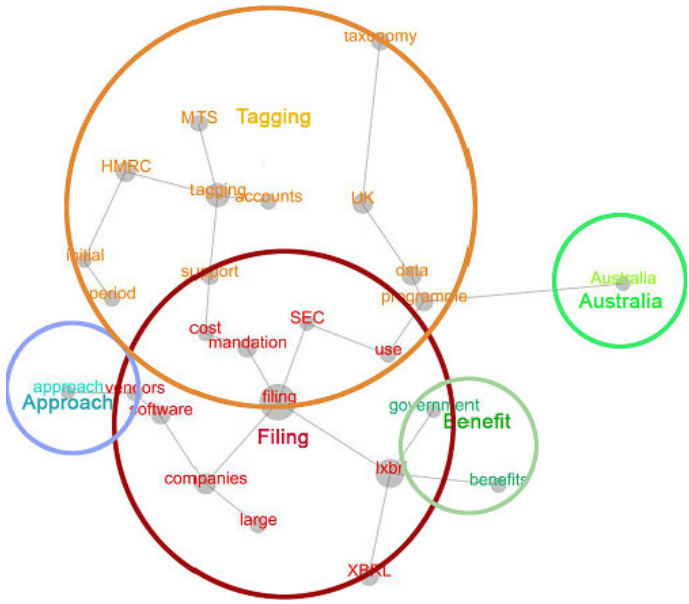

Figure 6 XBRL UK.

mandatory PDF. Submissions were made publicly available by Treasury in mid-2013.

The submissions were readily grouped according to our original four stakeholder groups. More importantly, the perceptions of a fifth stakeholder group, facilitators, that were not originally available to us could be analysed.[20] Analysis of the written submissions allows triangulation and a contrast to the results of the analysis of our original interviews, particularly with respect to the stakeholder groups, accounting firms, professional associations, and XBRL Australia. More importantly, it provides data from an important stakeholder group not originally canvassed – facilitators. Facilitators are neither report-producers nor report-consumers. However, they have a strong vested interest to promote, as far as possible, the net benefits inherent in the use of SBR to clients. Because the efficiency benefits promoted by the government are the most obvious, we expect that the submissions from the facilitators will accentuate their net benefits. We did not include government agencies in our analysis of responses by stakeholder groups to Treasury's options paper, given there was no submissions from such agencies. We begin our options paper analysis with accounting firms, followed by XBRL-UK, the professional associations, and conclude with the facilitators.

[20] Individuals and organisations who offer tools and/or services to assist firms to transition to SBR financial reporting.

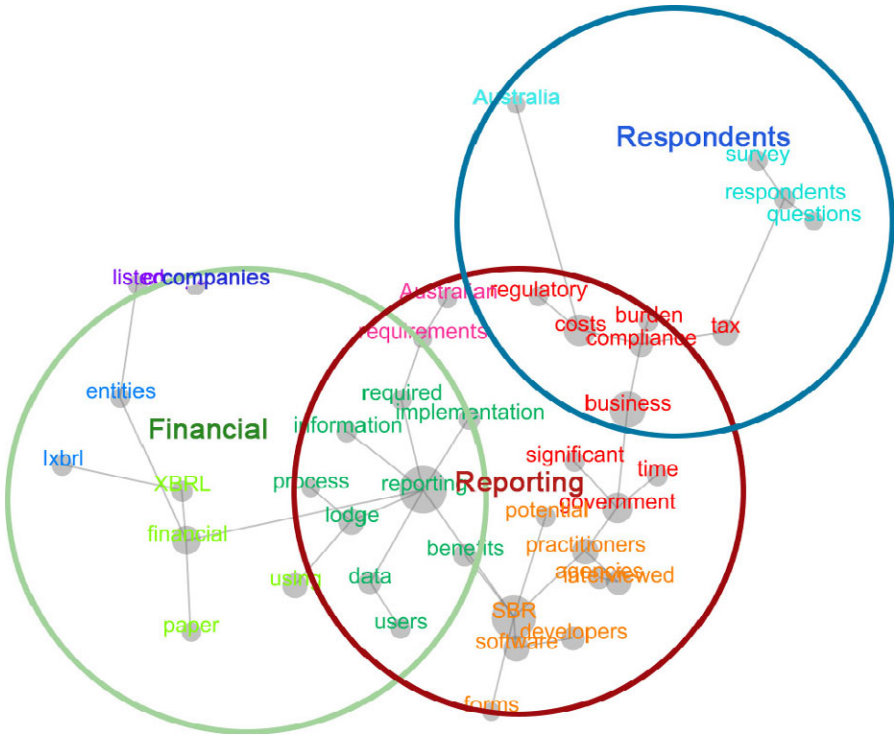

Figure 7 Professional bodies.

5.1. *Accounting firms*

In the accounting firms' map the most prominent themes or ideas are *SBR* and *financial*. The next most prominent theme is *taxonomy*, followed by *Australian* and *implementation*. *Financial*, *Australian* and *implementation* all intersect with *SBR* as the central theme. *Taxonomy*, however, does not intersect with *SBR* suggesting that theme is somewhat distinct from *SBR* and the other themes.

Similar to the initial analysis, the accounting firms appear to have a unified view of SBR. Again, SBR and benefits are central to the views of the accounting firms; however, these two concepts have a closer proximity than in the previous analysis, suggesting a somewhat more integrated view of SBR.

The concepts in the new map remain suggestive of efficiency, for example, *costs*, *use* and *lodgement*. Concepts that broadly align with effectiveness also remain present, for example, *benefits*, *readable* and *information*. In the initial analysis of the accounting firm partners, the theme *programme* was separate

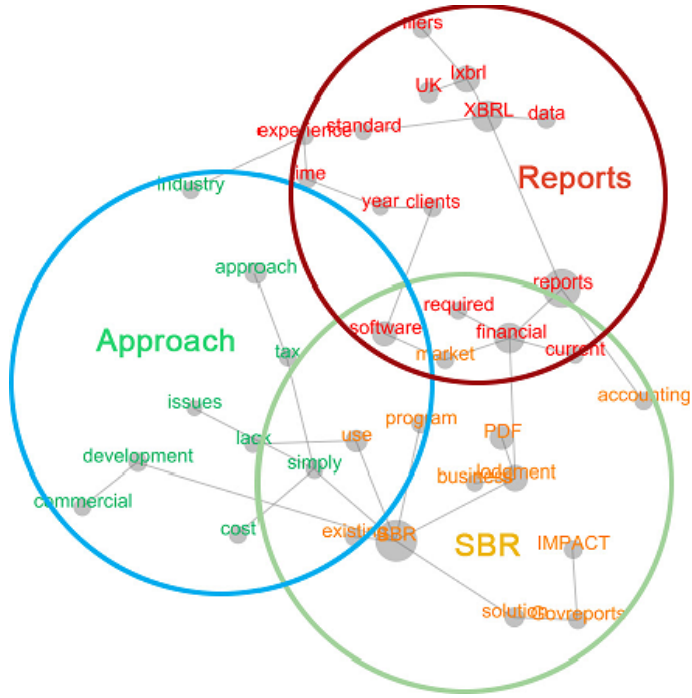

Figure 8 Facilitators.

from the other themes, suggesting that the SBR programme was viewed as the enabling technology discrete from the benefits it could provide to the financial reporting process. The accounting firms' submissions suggest that they now also view the software, *taxonomy* and the *IFRS* as being discrete enabling tools. The following quotes by the accounting firms reflect this enduring perception of efficiency and effectiveness benefits being delivered by SBR:

> 'PwC supports initiatives that improve the transparency of financial reporting, the comparability of information in the global capital markets, and efficiencies in the systems and processes used by businesses. We believe the SBR initiative will provide significant benefits across all of these areas.' [PriceWaterhouseCoopers]

> 'We believe that requiring mandatory lodgement of financial reports using SBR for listed entities would be more beneficial for investors in the long term. Mandatory lodgement is proposed as option 1 in the options paper. While our preference is to use SBR in iXBRL format, further factors not covered in the options paper should be considered prior to moving away from the requirement to lodge PDF or paper versions of the financial report.' [Ernst & Young]

5.2. XBRL UK

In XBRL UK's[21] map, the most prominent theme or idea is *tagging*, followed by *filing*. The next most prominent themes are *approach, benefit and Australia*. *Tagging*, *filing*, *approach* and *benefit* all intersect to varying degrees. *Australia*, however, does not intersect with any of the other themes, suggesting that this theme is somewhat discrete.

There was little overlap among the principal themes in the initial XBRL Australia map (XBRL Australia no longer exists as a standalone entity; rather, it now represents the Australian jurisdiction of XBRL International). The XBRL UK map, however, is generally unified with tagging and filing as the major themes. We speculate that the mandatory filing of Company Tax Returns via iXBRL in the UK may influence XBRL UK's apparent focus on *tagging* and *filing*. Indeed, the inclusion of concepts such as *HMRC* and *mandation* lend support to such a notion.

Like the XBRL Australia members, XBRL UK is aware of efficiency benefits with concepts such as *cost* and *use* being concepts within the *filing* theme. Furthermore, it sees those benefits being closely associated with *government*.

The following quotes from XBRL UK indicate its keen awareness of costs, but also XBRL UK's awareness of the benefits that arise from enhanced transparency and accessibility of data:

> '... HMRC's filing programme in the UK accepts iXBRL with the proviso that data can be included on the face of the rendering but not necessarily tagged internally. This means that data which doesn't fit into the standard national taxonomy does not need to be tagged. As a result, although extension taxonomies are accepted by HMRC, we understand that not a single extension taxonomy has been submitted since the beginning of mandation in April 2011. Filing costs in the UK are consequently much lower than in the US, falling in the range of GBP 50 to GBP 1,000 per annum' [XBRL UK]

> 'Experience in the UK has been that the collection of mandatory iXBRL data has the potential to transform data use and analysis within government. In the Australian context an early move to mandation would secure such benefits within a much shorter timeframe.' [XBRL UK]

[21] XBRL UK is the UK jurisdiction of XBRL International. Similarly, XBRL Australia is the Australian jurisdiction of XBRL International. We expect that XBRL UK reflects the aims and aspirations of XBRL International. As the HMRC has implemented mandatory tax reporting via iXBRL, we believe that the views and opinions of XBRL UK on the HMRC instantiation of XBRL would echo those of XBRL Australia had there been mandatory XBRL-based reporting in Australia, and had XBRL Australia continued to exist in its own right. In short, we believe XBRL UK was a reasonable proxy for what was XBRL Australia, particularly given the historical similarities between the two countries' systems of government and law.

5.3. Professional bodies

The most prominent and central theme or idea in the professional bodies' map is *reporting* closely followed by *financial* and *respondents*. All three themes intersect with *reporting*, with reporting and financial having the most intersection.

In the initial analysis, the professional bodies' map was notable for being somewhat disjoint, which we speculated was due to the professional bodies apparently not fully integrating the benefits of SBR across a wide range of reporting activities. *SBR* and *companies* remain the central themes of the professional bodies' map; however, given the passage of time, the professional bodies now seem to have more fully integrated the benefits offered by SBR resulting in a more unified map.

Notably, *change* no longer appears as a separate theme. Like the initial analysis, the professional bodies' focus apparently remains one of efficiency, with the concepts *use*, *reports* and *reporting* again featuring on the map. The concepts *costs* and *time* now also feature on the professional bodies' map further reinforcing the efficiency focus. The concept *benefits* continue to feature on the map. The following quotes from professional bodies indicate their focus on efficiency; however, professional bodies, in particular, the Institute of Chartered Accountants in Australia (ICAA) and CPA Australia (CPAA) also refer to SBR's potential to improve decision-making effectiveness:

> 'AIST supports the intention of this options paper whereby standard business reporting (SBR) becomes mandatory, or enabled by way of soft compulsion. Already, AIST is aware of the work being done to support the SuperStream measures, both at the end of superannuation funds, as well as at the ATO. We believe that there is scope for greater productivity enhancements throughout the economy generally in having one language for business to talk to regulators financially, and welcome this dialogue as well as the reduction in channels by which this dialogue takes place.' [Australian Institute of Superannuation Trustees (AIST)]

> 'We believe the effectiveness and efficiency of the capital market will be enhanced if the inputs to the decision making of analysts and investors included having access to the SBR lodged financial reports of listed public companies and listed registered schemes.' [ICAA & CPAA]

5.4. Facilitators

The facilitators were not included in the original interviews due to the recent advent of SBR at the time; however, as SBR advances, facilitators have become more popular and important. The almost equally prominent themes or ideas in the facilitator's map are *reports, approach* and *SBR*. All three themes intersect, with *approach* and *SBR* having the most intersection. Both *approach* and *SBR* also have equal intersections with *reports*. The facilitators' map, then, is one of

interrelation with the themes *SBR*, *approach* and *reports* almost alike in size, proximity and overlap, indicating an apparent equal focus on each theme. The concepts in the map such as *cost*, *time*, *simply*, *use* and *reports* suggest the facilitators are mindful that the approach to instantiations of SBR should be time and cost efficient, and simple to use for reporting.

We speculate that the facilitators are more focussed on the efficiency benefits of SBR rather than the potential effectiveness benefits. Given that facilitators focus on those clients filing reports, such speculation appears justified. A matter explicitly raised by one of the facilitators was that of mandatory SBR reporting. Undoubtedly, such mandatory reporting would be in the best interests of the facilitator group; however, the main point made by the particular facilitator was quite salient. That is, without compulsion, firms will simply continue to submit as usual and take-up of SBR will remain at low levels. The following quotes from facilitators' submissions indicate a focus primarily on efficiency:

> 'Once introduced, all indications are that efficiencies will be achieved, initially on the part of the receiving party– in this case the SBR. For filers, the usage of XBRL starts to give return on investment once multiple parties request the data. Unfortunately the "recorded once, reported to many" principle has not yet gained much ground in the UK and the production of iXBRL reports is still seen as a compliance issue rather than a streamlining exercise. This was not the original intention.' [Arkk Solutions]

> 'With strong support from our users and industry such as the Institute of Certified Bookkeepers and the Australian Bookkeepers Network, we achieved manageable growth. Early feedback indicates lodging via GovReports and SBR is easier, quicker and saving users' significant amounts of time and expense.
>
> Our experience and success is proof the public policy outcomes pursued by the Commonwealth are achievable and industry can potentially save the millions claimed by the Commonwealth.' [Impact Management Group]

6. Discussion

This study has examined the proposed benefits of the adoption and use of SBR for business reporting. It used transaction cost economics to examine the anticipated benefits from the perspectives of data and report-producers and data and report-consumers. The data producers appear to focus primarily on efficiency-related concepts; however, now, at least two of the professional bodies (ICAA and CPAA), which are more generally aligned with data producers, have recognised the effectiveness benefits available via SBR. The groups with a primarily data-consumer focus (accounting firm partners and accounting firms) appear now to understand more completely the interdependence and communality of the processes and participants in the entire reporting

chain. That is, they understand the efficiency benefits of SBR to the reporting process, and are also aware of the potential, more wide-ranging effectiveness benefits that SBR permits. Thus, expectation 1 appears supported, expectation 2 is, at least, partially supported, and for the accounting firm partners, expectation 3 appears supported.

Table 2 summarises the outcomes of our research expectations. Even though the various stakeholders in the SBR programme hold many similar views and expectations, the Leximancer maps and the comments illustrate points of difference made by the five stakeholder groups.

6.1. Government agencies

The members of this group perceived SBR evenly. The efficiency benefits, they believed, would provide a compelling business case for the uptake of SBR. They also felt that, once SBR was adopted into the mainstream financial reporting supply chain, the effectiveness benefits of SBR would begin to become more apparent. This would allow users to develop the ability to easily aggregate financial data to analyse and produce information that would lead to better organisational decision making, for example, via benchmarking, market comparisons and credit risk reporting.

6.2. Large accounting firms

While the partners of these firms initially acknowledged the effectiveness benefits of SBR, they more keenly appreciated its many potential efficiency benefits. Their perspective suggests that SBR could alleviate much of the drudgery of financial reporting across a broad range of activities so that resources could be redeployed for analysis and value-adding, for example, using more readily available data to generate better information to achieve better decision making via Web-based benchmarking and business intelligence. Because the large accounting firms emphasise their prowess in the areas of business advisory, assurance and strategic services, they evidently appreciate

Table 2
Research expectations and outcomes

Research expectation	Stakeholder group	Benefit	Expectation outcome
Expectation 1	Data and report-producers and facilitators	Efficiency	Appears to be supported
Expectation 2	Data and report-consumers	Both	Appears to be partially supported
Expectation 3	Data and report-producers and consumers	Both	Appears to be supported (at least, for accounting firms)

the effectiveness benefits of SBR. The analysis of their submissions to Treasury found that the accounting firms were mindful of the efficiency benefits arising from SBR. However, they expanded on earlier comments from their partners, with at least one accounting firm explicitly mentioning that investors would benefit from introducing mandatory SBR financial reporting, that is, effectiveness benefits.

6.3. XBRL Australia stakeholders

As indicated by their initial interviews, these stakeholders focussed primarily on the technical aspects of SBR, particularly XBRL, and the direct efficiency benefits that such a system could produce, for example, reduced reporting burden. The potential effectiveness benefits SBR offers for financial data aggregation and analysis, while acknowledged, were not much considered. Given the data and report-producer background of the members of XBRL Australia, their perspective on SBR is not unexpected. Like the members of XBRL Australia in its submission to Treasury, XBRL UK also focussed on efficiency, particularly concerning costs. Likely relying on experience with HMRC, XBRL UK recognised the benefits arising from enhanced transparency and accessibility of data; perhaps, they were obliquely identifying effectiveness benefits.

6.4. Professional accounting bodies

While the members of these bodies recognised the potential efficiency benefits of SBR, they mentioned concern during the initial interviews as to whether those benefits would be fully experienced by their members. We speculate that such concern about uptaking SBR may result from costs and from the potential for loss of business arising from SBR's ability to streamline clients' regulatory reporting. The effectiveness benefits of SBR did not feature prominently in the interviews with the members of the professional bodies. As evident from their submissions to Treasury, with the passing of time, the professional bodies appear to view more cohesively the benefits arising from SBR including effectiveness benefits. The ICAA and CPAA, in particular, championed SBR as enhancing the effectiveness and efficiency of capital markets when analysts have access to SBR-lodged financial reports.

6.5. The facilitators

This group appeared focussed on how those who file financial reports use SBR, particularly concerning the ease of use and time and cost efficiency. Given this focus, the Leximancer map indicated no concepts that would suggest that the facilitators particularly considered potential effectiveness benefits. However, one issue raised was that if organisations are not required to file financial

reports via SBR, little will influence its being used to any extent, leaving the benefits that SBR can deliver to be underutilised.

6.6. *Discussion summary*

What became apparent after the analysis of these interviews and submissions is that all stakeholder groups generally expect the efficiency benefits from introducing SBR. This was also evident in their submissions to Treasury. The effectiveness benefits of SBR were and are certainly understood by the partners of the large accounting firms, the accounting firms and the government proponents. Indeed, the accounting firms' submissions to Treasury suggest that they have strengthened their position on the effectiveness benefits that SBR could provide to investors.

During the analysis of their initial interviews, we were somewhat surprised that effectiveness benefits were infrequently mentioned by the accounting professional bodies and XBRL Australia. We speculated at the time that this limitation resulted because these two groups may not have been strategic like the large accounting firms and their partners. Promisingly, their submissions to Treasury indicate that the professional bodies and XBRL UK now realise that SBR does potentially offer substantial effectiveness benefits.[22] In particular, the ICAA and CPAA have specifically identified the effectiveness benefits of SBR to capital markets.

While the major driver behind SBR is the government's own SBR programme, there is substantial enthusiasm for SBR from stakeholders such as the major accounting firms. Members of XBRL Australia were also supporters, as are XBRL UK. On the continuance of SBR, we present five findings: (i) the government agencies firmly believe that the business case for SBR will see its uptake sustained; (ii) the large accounting firms view SBR as a means to streamline the reporting process in that it allows them to provide value-adding services at minimal additional costs; (iii) like the government agencies, XBRL Australia members believe the business case for SBR is sufficiently strong to sustain its continuance; (iv) while full endorsement of the SBR programme by the professional bodies was initially rather conditional, their Treasury submissions indicated that the professional bodies have become enthusiastic supporters of SBR; and (v) given the large numbers of accounting professionals represented by these professional bodies, particularly the ICAA and CPAA, uptake and continuance of SBR will gain further traction with the recommendation of those bodies. The submissions responding to Treasury's options paper provide evidence that the professional bodies fully recognise the benefits of SBR (ICAA, 2013).

[22] XBRL UK is a member of the overarching XBRL International group like the members of the then XBRL Australia interviewed during our initial data collection.

Relative to how these SBR stakeholder groups perceive the potential benefits of SBR, while those engaged in producing data and reports focus on efficiency benefits, stakeholder groups involved in data and report consumption appreciate SBR's potential effectiveness benefits. The government agencies believe there will be many effectiveness benefits that will not be fully realised until there is broader uptake of the programme.

6.7. *Ramifications of the findings*

Efficiency benefits, while desirable, do not have the same potential to create long-term firm value as improved effectiveness of decision making. While the accounting firms and the government agency groups initially recognised SBR's potential to create longer term firm value, XBRL Australia and the professional bodies regarded that benefit less significantly, which may tend to limit its uptake. XBRL UK and the professional bodies, particularly the ICAA and CPAA, have become substantially more cognisant of the overall benefits SBR offers to capital markets. Given the number of accounting professionals represented by the ICAA and CPAA, such recognition may help reduce barriers to SBR's uptake.

We recall that, if potential users of SBR perceive that the benefits arising from SBR outweigh the costs associated with the adoption of SBR, we expected that a perceived positive view of SBR will increase both its intention to be used and its actual use (see, e.g., Davis, 1989; Venkatesh *et al*., 2003; Burton-Jones and Hubona, 2006; King and He, 2006; Zhu *et al*., 2006). We retain this view, and believe that this paper's evidence suggests that SBR's benefits are more widely recognised by data producers *and* data consumers. For all of SBR's benefits though, a potentially significant barrier to its uptake remains.

We also recall also that one of the goals of SBR (as mentioned in the options paper) was that information will be 'recorded once [and] reported to many'. Unfortunately, it appears that SBR has been largely ignored by companies for financial statement reporting (Anderson, 2013). This situation was attributed to potential adopters who view the costs of adopting SBR as outweighing the benefits of SBR. Indeed, evidence of concerns on the net benefits of XBRL-based reporting in the US is apparent. Provost (2013) notes that, 'Among smaller reporting companies, 68 per cent reported that the biggest concern raised with regard to XBRL compliance is the cost-benefit equation of the XBRL mandate.' Further, in its submission to the Treasury options paper, BHP Billiton notes that it significantly doubts that any mandatory option to lodge financial reports in iXBRL or XBRL would result in a net cost saving for preparers. BHP Billiton goes on to question how the Productivity Commission derived a $500 million benefit from the introduction of SBR. More positively, the Australian Financial Review reported that Suncorp's financial controller noted that processes which formerly took several days had been reduced to a matter of minutes (Rose, 2012). Furthermore, Deloitte's Centre for the Edge

leader says it is difficult to say why XBRL has had a slow uptake, given it 'improves compliance, reduces errors, reduces costs and makes life easier' (Rose, 2012). The opinion on the benefits of SBR appears to remain divided.

A further significant factor in the low uptake rates may be that companies' financial reports have to be 'human readable' (Treasury, 2012). However, XBRL reports are not 'human readable'. To be so, such reports have to be produced via iXBRL. Current XBRL users are, therefore, still required to submit PDF or paper-based financial reports to comply with the 'human readable' requirement of the Corporations Regulations 2001, 1.1.07 (Treasury, 2012). Tellingly, one of the facilitators explicitly mentioned this apparent contradiction and suggested that the requirement to continue with PDF-based reporting was a substantial disincentive to SBR uptake. Whether Treasury mandates the use of SBR for financial reporting in Australia remains to be seen at this time.

7. Conclusion

This study has examined the proposed benefits of the adoption and use of SBR for business reporting. The research found that the anticipated benefits focus predominantly on efficiency within the realm of the data and report-producers and on effectiveness within the realm of the data and report-consumers.

This work has some limitations. First, interviewees were selected using purposive sampling and as such readers should exercise caution when generalising the results. Likewise, the submissions canvassed by Treasury in relation to its options paper, while objective, arise from the desire to present respondents' particular viewpoints. The interviewees were selected on the basis of their knowledge of SBR and their views may not fully reflect those of the groups they represent. The same caveat applies to those who submitted responses to Treasury's options paper. Second, when using textual analysis, the data is perceptual and should be viewed and interpreted subject to the usual qualifications. This limitation was mitigated, however, by ensuring that the interpretation and analysis of the data was performed by multiple independent researchers of the research team, and then a consensus view on the interpretations was reached.

Finally, this work is exploratory and requires additional work to be undertaken. First, further research needs to be undertaken to explore the perceptions of a broader cross-section of members of the financial reporting supply chain on the benefits of SBR after going live in 2010. Such research could explore perceptions from the perspectives of producers and consumers both large and small entities. For example, switching costs could usefully be researched and weighed against the benefits of SBR for SMEs versus large organisations. Intermediaries, that is, companies undertaking filings on behalf of clients, could also be investigated to determine whether there are benefits

accruing from SBR to either the intermediaries or the clients. Second, a comparison of the perceptions and experiences of international SBR users and Australian SBR users could be undertaken. In particular, investigating whether SBR instantiations such as that in the Netherlands have lowered reporting costs, and whether those costs have been lowered for all of the participants in the reporting supply chain. Such an investigation could help mitigate resistance or scepticism that may exist relative to SBR and subsequent reduced financial reporting costs in Australia. Third, the augmentation of SBR could be explored. For example, using iXBRL to underpin characteristics that enhance the effectiveness perceptions held by critical stakeholders such as analysts could be investigated. Furthermore, exploring whether introducing iXBRL could assist decision making by small investors might also be usefully explored.

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Appendix A – Prior research: XBRL benefits for financial reporting

Source	Stakeholder/s	Claimed benefits	Benefit: efficiency, effectiveness, or both
FFIEC (2006)	Banking industry reporting entities (DRP)	Increased staff productivity, faster information turnover, enhanced data accuracy, better documentation	Efficiency
ACT and IAC (2007)	Private and public sector reporting entities (DRP)	More reuse, improved accuracy, consistency, traceability, visibility, flexibility	Efficiency
Debreceny *et al.* (2005)	Regulators (DRC)	Reduced costs of obtaining and assimilating information from businesses, aids standardisation and harmonisation with IFRS	Efficiency
Farewell (2006)	Reporting entities, analysts and regulators (DRP, DRC)	Reduced need to re-enter data, reduced time to prepare and analyse financial statements, improved transparency leading to more effective regulation by regulators	Both
Hodge *et al.* (2004)	Investors (DRC)	Increase likelihood to acquire information disclosed in the notes to the financial statements	Effectiveness
Jensen and Xiao (2001)	Users (DRP)	Easier customisation of financial reports	Efficiency
CPA Australia (2011)	Preparers and users (DRP)	Cost savings, improved accuracy and reliability	Efficiency
Ernst and Young (2013)	Preparers and users (DRP)	Fewer resources required, quicker reporting, more effective decision making, more often reporting	Both
PriceWaterhouse Coopers (2006)	Regulators (DRC)	Enhanced information re-Ability, more reliable exchange of regulatory and financial information, accelerates adoption of accounting standards	Both

(continued)

Appendix A (continued)

Source	Stakeholder/s	Claimed benefits	Benefit: efficiency, effectiveness, or both
Ball (2007)	Public sector reporting entities (DRP)	Aids interoperability of data in legacy systems, automates collection, validation, extraction, and manipulations of accounting data, and minimises user complexity	Both
Deloitte (2007)	Public sector reporting entity (DRP)	Decrease in average reporting time	Efficiency
Garbellotto (2007)	Preparers (DRP)	Improves traceability by linking reported numbers to its sources	Effectiveness
Pinsker and Li (2008)	Public companies (DRP)	Lower operating costs, effective means of marketing to investors	Both
Pinsker and Wheeler (2009)	Investors (DRC)	Increase likelihood to rapidly acquire information disclosed in financial statements	Both
Yoon *et al.* (2011)	Investors (DRC)	Reducing information asymmetry	Effectiveness

DRP, Data and report-producer; DRC, data and report-consumer.

Appendix B – Interview questions

1 Firstly, <name>, can you please describe your professions or occupations which relate to SBR?
2 Can you please describe any experiences which you may have in relation to SBR? For example, conducting research in SBR issues, developing SBR taxonomies, regulation and standard setting, using SBR for preparation or analysis of financial reports.
3 What are your overall expectations about the potential benefits of SBR for the financial reporting process? By financial reporting process, I mean the preparation, analysis, regulation and other usage of financial reports.
4 Next I will ask you a series of questions examining individual benefits of SBR; in our research, we study 18 particular benefits.

For each potential benefit, please state in the long term, how much beneficial impact you would expect SBR to bring, over traditional reporting formats (interviewee responded after each sub-part).

(a): SBR will make financial statements more easily accessible to its users

(b): SBR will facilitate more frequent use of financial reports by investors
(c): SBR will improve the traceability and transparency of financial reports
(d): SBR will aid in the international standardisation and harmonisation of financial reporting
(e): SBR will reduce the amount of investment in information systems infrastructures required within the business to support the financial reporting process
(f): SBR will help reduce misinterpretations of the financial statement information by its users
(g): SBR will result in improved decision making by users of the financial statements
(h): SBR will reduce the time and resources required to prepare customised financial reports
(i): SBR will facilitate more frequent financial disclosures in accordance with regulatory requirements for continuous disclosure
(j): SBR will allow greater reuse of the investments made for the business' financial reporting process
(k): SBR will increase staff productivity in the preparation of financial statements
(l): SBR will improve the visibility of information contained in the notes to the financial statements
(m): SBR will facilitate more frequent reporting required of businesses to regulators and other stakeholders
(n): SBR will reduce the costs associated with obtaining and assimilating information from businesses for regulatory purposes
(o): SBR will reduce the amount of specific knowledge required by staff to support the financial reporting process
(p): SBR will allow regulators to make more frequent regulatory assessments of financial reporting
(q): SBR will reduce the costs to the business of preparing financial reports
(r): SBR will improve the reliability of the financial statement information for its users

5 How much practical experience do you have with using SBR for financial reporting (e.g., the preparation or usage of financial reports in SBR format)?
6 Based on your practical experience with using SBR for financial reporting, to what extent do you think the potential benefits of SBR are currently being realised in Australian practice?
7 Finally, what do you think are the current focal or central issues which may impede or hinder the realisation of the benefits of SBR (from both a business and regulatory perspective)?

Thank you very much for your responses, <name>. Are there any final comments that you would like to add?