
Intellectual capital: Australian annual reporting practices

Annual
reporting
practices

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Keywords *Intellectual capital, Company reports, Intangible assets, Europe, Australia*

Abstract *This study reports the results of an empirical examination of Australian annual reporting of intellectual capital. The findings suggest that the development of a model for reporting intangibles is piecemeal and not widely spread. The outcomes of our exploratory investigation are threefold. First, the key components of intellectual capital are poorly understood, inadequately identified, inefficiently managed, and not reported within a consistent framework when reported at all. Second, the main areas of intellectual capital reporting focus on human resources; technology and intellectual property rights; and organisational and workplace structure. Third, even in an Australian enterprise thought of as "best practice" in this regard, a comprehensive management framework for intellectual capital is yet to be developed, especially for collecting and reporting intellectual capital formation. In conclusion, Australian companies do not compare favourably with several European firms in their ability to measure and report their intellectual capital in the annual report.*

Introduction

This study examines the proposition that knowledge management is an important strategy to large companies and that this will be reflected by way of disclosure of intellectual capital items in the firm's annual report. Supporting this expectation is considerable evidence, in particular from Europe, of the genesis of reporting frameworks that demonstrate a previously unseen level of public disclosure with respect to the intangible assets of firms (Organisation for Economic Co-operation and Development, 2000). In the light of these changes to disclosure, and the pressure such changes have imposed to bring about a review of reporting standards generally, we aim via content analysis methods to establish a better understanding of how Australian firms have responded to the challenge of reporting on intellectual capital.

The growing importance of knowledge management intellectual capital

Most first-world nations have experienced a shift in their source of gross domestic product (GDP) away from traditional commodities and manufacturing based sectors towards a broader concept of economic value creation that encompasses service items and intangible-based output (Petty and Guthrie, 2000a; 2000b; Tissen, 1998). In Australia, this transformation has been more pronounced than in most other countries (Guthrie and Petty, 2000). Australia's economy has traditionally rested on the commodity and

resource sectors. Manufacturing was never a huge part of the Australian economic fabric and has in recent years waned almost completely. The deregulation of the banking sector in the 1980s by the then treasurer Paul Keating (later Prime Minister of Australia) is credited with starting the investment boom of the latter part of that decade. This period saw a transformation of the Australian economy that was unprecedented in Australian history. Tourism and education became dominant sectors and Australia embraced a vision of becoming a high technology society by pouring huge sums of money into research and becoming a leader in the fields of bio-technology, financial services, insurance products, software development, and training and development (Guthrie, 1999a). In a few short years, the corporate landscape changed forever. Whereas companies in industries requiring heavy capital investment had been the mainstay of Australia's corporate top 50, new companies in the financial services, media and telecommunications, consulting, and tourism sectors now challenged their dominance.

By the end of 1998 only two of Australia's largest ten companies were resource based and the remaining eight companies were characterised by a preponderance of intellectual capital. This level of change, concentrated in such a short space of time, makes studying the Australian experience particularly interesting. Table I illustrates the shift that has occurred over the last 18 years in terms of the composition of the top 20 Australian companies (by market capitalisation).

Clearly there has been a shift of some significance. In 1980, eight of the top ten companies were in mining or resource based industries. By 1987, only four of the top ten were in these traditional industries. By 1998 this number had fallen to two. The general trend away from fixed asset and capital intensive industries towards those that are more service based is also evident for the remaining companies in the top 20. Consequently the management, measurement, and disclosure of intellectual capital have gained relevance as a topic (Petty and Guthrie, 1999).

What do we mean by intellectual capital?

In recognition of the limitations of the existing financial reporting system, there has emerged a "new dialogue" on the significance of finding new ways to report on a company's intellectual capital. The product of this dialogue is a myriad different measurement approaches and reporting philosophies that all have the aim, to a greater or lesser extent, of synthesising into one report the financial and non-financial value generating aspects of the company (Petty and Guthrie, 2000b; Brennan and Connell, 2000).

In conducting the empirical aspects of this research[1] we have chosen to use one of the more popular frameworks for understanding intellectual capital that was developed by Karl Erik Sveiby (1997, pp. 8-11). Sveiby classifies intangibles into three parts: internal structure; external structure; and employee competence.

						Annual reporting practices
31/12/80	Sector	30/10/87	Sector	18/12/98	Sector	
1 BHP	Resources	BHP	Resources	News Corp Ltd	Media	243
2 CRA	Resources	Western Mining	Mining	NAB	Banking	
3 MIM	Mining	Elders IXL	Primary industry	Telstra	Telecom	
4 CSR	Resources/ mining	ANZ	Banking	BHP	Resources	
5 Western Mining	Mining	News Limited	Media	AMP	Insurance	
6 Woodside	Petroleum	CRA	Resources	CBA	Banking	
7 Santos	Mining	Westpac	Banking	Westpac	Banking	
8 ANZ	Banking	Fairfax	Media	ANZ	Banking	
9 Bank of NSW	Banking	Coles Meyer	Retail	Rio Tinto	Resources	
10 North Broken Hill	Resources	NAB	Banking	Lend Lease	Financial	
11 Peko	Mining	Boral	Resources	BTR	Manufacturing	
12 Southern Pacific Petroleum	Petroleum	Pacific Dunlop	Manufacturing	C&W Optus	Telecom	
13 ICI	Chemicals	CSR	Resources	Coles Myer	Retail	
14 Howard Smith	Manufacturing	Pioneer	Resources	Brambles	Transport	
15 Central Pacific Minerals	Resources	Goodman Fielder	Food	Foster's	Beverage	
16 NAB	Banking	MIM	Mining	Woolworths	Retail	
17 EZI	Resources	ACI	Chemical	CC Amatil	Beverage	
18 Pioneer	Resources	Industrial Equity	Financial	WMC (Western Mining)	Resources	
19 Coles	Retail	TNT	Transport	Placer Dome	Resources	
20 Bougainville	Resources	Lend Lease	Financial	Colonial	Banking	

Source: *Australian Financial Review* (1998)

Table I.
Changing industry area
of Australian top 20
companies over an
18-year period

The three parts are explained here in greater detail:

- (1) *Internal structure.* This consists of such items as patents, concepts, models research and development, and computer and administrative systems. These are usually created by the employees or are brought in. Decisions can be made to invest in or replace these intangibles. Organisational culture and spirit are also considered part of the internal structure, as are organisational structure and legal parameters.
- (2) *External structure.* This consists of relationships with customers and suppliers, brand names, trademarks and reputation. Some of these can be considered to be proprietary, but only in a temporal sense and, even

then, not with any degree of confidence. For instance, a company has some influence over the value of its customer relationships; however, reputation and relationships can change over time and a company cannot control the behaviour of customers or suppliers if they are not compliant. The tenuous nature of the supplier-firm-customer nexus complicates the measurement process. Hence, the economic value of this relationship is at present not determined by any generally accepted definition or measurement system.

- (3) *Employee competence.* This refers to the individual's education, skills, training, values, experiences, and so forth. The non-revenue generators are called support staff. As is the case for customers and suppliers, these cannot be owned by an organisation. However, from a value-based perspective they should be measured and placed on the balance-sheet, as one cannot envisage an organisation without employees. Employee competence requires the capacity to create both tangible and intangible assets in a wide variety of situations. In knowledge organisations there is little "machinery" other than the employees.

A methodology for identifying and reporting IC in annual reports

Several aims for the empirical investigation were set. Primarily we wanted to assess the extent to which large[2] organisations are publicly reporting their intellectual capital. We were interested in both the amount and type of information being reported. Also, we wanted to investigate how some Australian enterprises record, measure and manage the three elements of IC. Our specific objectives were:

- To use content analysis as a framework for examining corporate annual reports with the aim of providing an overview of intellectual capital reporting practices. The sample was Australia's 19 largest listed companies and one other company that holds itself out as being an example of best practice in the field of intellectual capital reporting.
- To examine the extent to which the various categories of intellectual capital are represented in the annual reports of the 20 sample companies.

Annual reports are a highly useful source of data, because managers of companies commonly signal what is important through the reporting mechanism. As a technique for gathering data, content analysis involves codifying qualitative and quantified information into pre-defined categories in order to derive patterns in the presentation and reporting of information. This methodology seeks to determine the manifest content of written or other published communications by "systematic", "objective" and "reliable" analysis (Krippendorff, 1980; Guthrie and Parker, 1990). Content analysis (see, for example, Holsti, 1969) of annual reports has been used and held to be empirically valid in the corporate social, ethical and environmental reporting fields of accounting research (Gray *et al.*, 1995; Guthrie and Parker, 1990).

In this literature, the corporate annual report[3] is viewed as a means by which corporations seek to establish an image in the public sphere. The standpoint adopted in the current research is to view annual reports as a means by which a corporation locates and identifies itself with various external and internal stakeholders[4]. The 20 companies chosen for the Australian study are shown in Table II, which lists the top 20 Australian listed companies as at December 1998.

The content analysis involved reading the annual report of each company and coding the information contained therein in accordance with a selected framework of intellectual capital indicators. The original intellectual capital framework was derived from several professional pronouncements on intellectual capital (see International Federation of Accountants, 1998; Society of Management Accountants of Canada, 1998).

The content categories used for the analysis followed the contemporary classification scheme for intangibles derived from Sveiby's (1997) intellectual capital framework: internal structures (organisational capital); external structures (customer/relational capital); and employee competence (human capital).

For the purposes of our analysis we modified the professional intellectual capital framework to achieve a better convergence with items likely to be reported by Australian companies. Following these changes, 24 variables remained (nine relating to internal capital, nine external capital, and six human capital); these variables are shown in Table III.

The method employed was for one researcher to read the annual reports and record information related to each variable (location, quantity, and nature of the information) on to a coding sheet. A second researcher independently confirmed the coding of each item and constructed a spreadsheet on the basis of the information reported on the coding sheets[5].

Therefore the results of our content analysis focus purely on (voluntary) information not required by an accounting standard or under corporations law. The results represent a matrix of information identifying the incidence of intellectual capital reporting across 24 separate intellectual capital attributes, divided into three categories, for 20 companies. The matrix was used to facilitate an overall assessment of the extent of intellectual capital reporting by large Australian companies.

When performing content analysis in corporate social, ethical and environmental reporting, the impact of differences in company size is commonly assessed (see Gray *et al.*, 1995). In this study, size effects were largely controlled by selecting 19 of the 20 companies in the information set

Number of sample companies	20
Number of industry groups	6
Number of intellectual capital attributes in model	24
Average number of attributes reported per company	8.9
Minimum number of attributes reported by any one company	2
Maximum number of attributes reported by any one company	17

Table II.
Descriptive statistics
for the sample

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	<hr/>	
246	<i>1. Internal (structural) capital</i>	
	Intellectual property	0
	Patents	3
	Copyrights	1
	Trademarks	2
	Infrastructure assets	0
	Management philosophy	12
	Corporate culture	6
	Management processes	15
	Information systems	10
	Networking systems	3
	Financial relations	1
	<i>2. External (customer/relational) capital</i>	
	Brands	9
	Customers	16
	Customer loyalty	7
	Company names	5
	Distribution channels	10
	Business collaborations	13
	Licensing agreements	8
	Favourable contracts	1
	Franchising agreements	1
	<i>3. Employee competence (human capital)</i>	
	Know-how	6
	Education	6
	Vocational qualification	1
	Work-related knowledge	12
	Work-related competencies	9
	Entrepreneurial spirit	19
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Table III.
Frequency of reporting
specific attributes

from the top end of the market capitalisation scale (only Morgan and Banks is outside the top 20). Granted, size differences exist among the chosen companies, but considering that we are interested in evaluating general reporting trends, and that each company we examined unquestionably has the financial resources enabling a move in the direction of intellectual capital reporting, we judged these differences immaterial. We further concluded, therefore, that size disparities were unlikely to explain differences in the incidence of reporting of intellectual capital items in this study.

The findings for organisational annual reporting of intellectual capital

Our analysis of reporting practice indicates that there appears to be a lot of empty rhetoric surrounding the notion of measuring, valuing and reporting intellectual capital. For instance, apart from Morgan and Banks, none of the companies had instituted systematised intellectual capital reporting frameworks. In mentioning this, it is worth noting that, despite including an Intangible Assets Monitor (adapted from Sveiby's model (1997)), Morgan and Banks reported fewer intellectual capital attributes than the average number reported for all companies in the sample.

Perhaps the most significant finding is that nearly every instance of reporting involved the intellectual capital attribute being expressed in discursive rather than numerical terms. What is lacking is a clear attempt to translate the rhetoric into benchmark measures that enable performance in managing the human and relational attributes of the firm to be assessed, and therefore improved, in a systematic fashion. Given the difficulty involved in trying to quantify what is, in many instances, essentially a qualitative item, the finding was not unexpected. The absence of a quantitative expression of intellectual capital items seems to confirm the widely held view that companies are, at this juncture, more interested in simply understanding where the real value of the firm lies than in assigning dollar values to such items. The only other instance where an attribute was expressed in numerical terms involved BHP reporting on the number of management processes that were introduced or re-engineered during the year[6].

The descriptive statistical evidence presented in Table II begins to construct a picture of the reporting practices of the companies in the sample.

The figures indicate that, while all the companies reported on some aspect of their intellectual capital, the extent of reporting varied greatly. The type of attribute reported for each individual company appears fairly randomly distributed and there is no obvious pattern or trend in the data set. The average number of attributes reported for each company is high enough to suggest that there is an awareness of the importance of intellectual capital variables. While the incidence of reporting is not great enough to be considered systematic, it is significant enough to support the contention that firms have a loose commitment to the notion of communicating information about their intellectual capital to an external audience. It would be interesting perhaps to conduct a time-series analysis and investigate the development of intellectual reporting practices on a longitudinal basis. This might enable further comment on the manner in which such practices are disseminating across firms in general and also within specific industries.

Individual attribute level findings

We further examined the incidence of reporting at an individual attribute level. The data presented in Table III illustrate the relative popularity of reporting specific intellectual capital variables.

Entrepreneurial spirit was the most frequently reported attribute. Only the Commonwealth Bank did not make specific mention of a commitment to (entrepreneurialism) in its annual report. This is surprising given that the Commonwealth Bank (with 17 attributes reported) is the most active organisation in terms of reporting intellectual capital attributes. Information reported least often, with only one hit in each category, related to copyrights, financial relations, favourable contracts, franchising agreements, and vocational qualification. Again, there is no discernible pattern to the reporting as the least popular attributes are spread across the three classes of capital. However, the Commonwealth Bank accounts for the reporting of three of the

five least frequently reported items. Only Morgan and Banks succeeds in convincingly persuading the reader of its annual report that intellectual assets are the bedrock of its success, but even it falls short of delivering a report which communicates this in substantive terms (seven items of intellectual capital reported).

Reporting categories findings

The incidence of reporting by category of intellectual capital (internal, external, and human capital) was also examined to determine whether there was a particular focus on one particular category of capital. Figure 1 shows the breakdown of reporting in terms of intellectual capital category.

The internal capital and human capital categories are quite evenly matched, with internal capital scoring 54 hits (30 per cent) and human capital 53 hits (30 per cent). Reporting external capital appears to be more in favour with companies with 71 reported attributes across the 20 companies belonging to this category of capital (40 per cent). This skewing towards reporting external (customer and relational) capital items is unsurprising in the light of the emphasis in recent years on rationalising distribution channels, reconfiguring firm value chains, and re-assessing customer value (customer profitability analysis etc.). It is also consistent with increased competition globally, particularly in the financial services and retail sectors, where markets are being further segmented and fractured and vying for market share is once more a priority.

In summary, it may be that the reason for this dearth of Australian intellectual capital reporting is in fact the lack of an established, and generally accepted, framework for reporting. It may also be the case that companies are genuinely committed to the idea of managing and developing their intellectual capital but do not have, or are not aware of, mechanisms for assessing the change in their intellectual capital stocks. Some companies may view the development of intellectual capital as being an internal management issue and therefore outside the scope of the annual report (see Guthrie, 1999a).

Conclusion and summary

In summary, the main findings of this exploratory study are as follows. First, the key components of intellectual capital are not reported within a consistent framework when reported at all. Second, the main areas of intellectual capital reporting focus on human resources; technology and intellectual property rights; and organisational and workplace structure. Third, in considering the

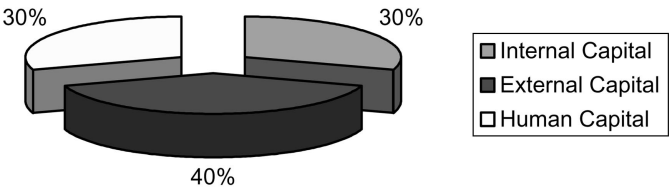


Figure 1.
Relative emphasis in
terms of intellectual
capital categories

above points in a more detailed fashion, the study has concluded that there is no established and mutually agreed framework for reporting intellectual capital by large Australian companies and the accounting profession. Further, despite a general consciousness about the importance of intellectual capital and the role it assumes in ensuring long-term organisational success, few enterprises appear to have adopted a proactive stance in attempting to measure and externally report this type of information.

Several policy issues

The biggest challenge by far is establishing a consensus about the need to report, what to report, and how to report it. Much of what has been done in the field to date has intuitive appeal, but is this enough to attract and convince the critical mass within the accounting profession which is necessary if any real change is to occur (Guthrie, 1999b)? Without a consensus as to the need to report and other related issues, there is little hope that the reporting of intellectual capital will become standardised without intervention by regulators.

If and when consensus is reached, then the next major step is either to refine the reporting models in use or to develop new models.

Those who maintain that objectivity is everything, and who have a penchant for steadfastly refusing to accept that anything other than “hard” quantifiable data should appear in accounting reports, will once again raise the question of how we can know that the value imputed to these new intangibles is correct. Also, how can we have faith in the output of such a subjective reporting system?

By way of response, consider whether the figures reported for the other firm assets are “correct”. Is the current Australian financial reporting system providing information that is truly objective regarding the firm’s position in the marketplace? No. At least by reporting something for intangibles we acknowledge their existence. This broadens the scope for decision making by those relying on the financial statements and it also means that we have a platform to provide some leverage in improving reporting methods already in evidence in Europe (Petty and Guthrie, 2000b).

Avenues for further investigation

The study reported here is still only exploratory in nature. There is scope to extend the work we conducted in several ways. First, the most obvious next step would be to expand the sample size to convey a more comprehensive understanding of what smaller and less accessible Australian enterprises are doing. Second, further work needs to be done in the area of understanding what kind of intellectual capital and knowledge management information is actually sought by decision makers.

Third, there is a case for experimental work that applies the reporting frameworks in existence to problem based models, in an effort to determine which framework operates most successfully and why. Fourth, future research could add sophistication to the model presented in this study by attempting to

assess the quality of the disclosure in the annual reports. In particular, the location of the disclosure is potentially quite revealing in terms of formulating a view of the company's commitment to the development of its intellectual capital.

Notes

1. The content analysis of the annual reporting of intellectual capital is the first in the literature. This methodology has been used in two further papers so far (see Brennan, 1999; Abeysekera, 2000).
2. The decision to focus on large companies was driven by our belief that they are more likely to take the lead in the area of financial reporting. This is chiefly because, due to their size, they are more visible and generally have more resources at their disposal which can be employed in sponsoring new initiatives (reporting and other). Further, large companies are better positioned to be industry leaders and assume the role of being a "significant other" that the other organisations look to for guidance. This phenomenon is well documented in the institutional theory literature, which explores why a population of organisations becomes more homogeneous, that is, experiences isomorphic change (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Tolbert and Zucker, 1983). A final, and perhaps more pragmatic, reason for focusing on large companies is that in aggregate terms they are likely to possess more intellectual capital.
3. The corporate annual report encompasses all information including the audited annual financial statements.
4. This view is supported by several theoretical perspectives; legitimacy theory and classical political economy theory (see Guthrie and Parker, 1989; 1990) and stakeholder theory (Gray *et al.*, 1995).
5. A separate record was kept of information relating to intellectual capital that was reported only because accounting standards required disclosure of the item in the annual report. We excluded this information from our primary analysis and discussion of intellectual capital reporting on the grounds that disclosure made simply in response to accounting rules does not indicate what level of commitment management holds towards reporting intellectual capital.
6. We recorded, but did not include in the main analysis, items appearing in the financial statements that were disclosed by virtue of a requirement under an accounting standard that such items be reported. For instance, five companies (Telstra, Fosters, Coca-Cola Amatil, BHP, and Woolworths) disclosed dollar values for intangibles of various types including brand names, trademarks, patents and copyrights. However, this disclosure says little about management's position regarding its intellectual capital other than that management dutifully complied with accounting and legislative edicts. These edicts generally apply only to intangibles that have been traded in an arm's-length deal to be disclosed and therefore take no account of the vast store of intellectual capital that is internal to the firm and was developed from scratch.

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