Intellectual Capital Reporting Practices of the Top Australian Firms

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ABSTRACT

Using content analysis of annual reports of the top 20 firms (by market capitalisation) listed on the Australian stock exchange in 2004, this paper reports the state of intellectual capital reporting practices in Australia. The paper also compares the results with a previous Australian study carried out by Guthrie and Petty (2000) and reconfirms that reporting of intellectual capital is yet to be done within a consistent framework in Australia. Although most of the reporting was done through qualitative statements rather than quantitative terms, an encouraging shift towards quantitative reporting has become evident. Within the intellectual capital categories, external capital attributes were reported most and increased in reporting frequency relative to the Guthrie and Petty study. Industry had a significant effect on the reporting of IC. An attempt is made to explain the reporting practices with the use of media agenda setting theory.

Key words: Australia, intellectual capital, media agenda setting theory.

1. INTRODUCTION

The relevance of traditional financial accounting information has diminished in the last few decades (Lev and Zarowin, 1999), and the limitations of the traditional financial reporting framework have attracted greater attention in the wake of a series of accounting scandals and corporate collapses in recent years (Barsky, Catanach, Rhoades-Catanach and Thibodeau 2003; Abeysekera, 2005a, 2006a). Intellectual capital (IC), which has become increasingly important with the rise of the knowledge-based economy, has the potential to explain many of the differences causing divergence between a firm's market value and its book value (Brennan and Connell 2000; Abeysekera 2003a, 2003b) that is unexplained through traditional financial reporting (Petty and Guthrie, 2000a). Research also shows that IC reporting can have a number of benefits. These include improving the decision-making capability of stakeholders about the firm and its performance, and helping reduce the gap between a firm's market and book value (Marr, Gray and Neely 2003; Andriessen 2004). The importance of IC has special relevance to Australia, with the service sector contributing almost 80% of the economic activity, and with recent policy debate about driving the Australian economy from predominantly manufacturing and resource-based sectors to more innovative and high-tech sectors in the future (ABS, 2004; Backing Australia's Ability 2005). These recent trends and changes in the Australian economy are expected to have influenced the IC reporting of Australian firms.

With the backdrop of developments in the field of IC reporting and its greater visibility within the accounting profession and academia, it is of interest to investigate how Australian firms report on their intellectual capital. This paper employs content analysis

to investigate IC reporting in the annual reports of the top 20 firms (by market capitalisation) listed on the Australian Stock Exchange in 2004. The study has five aims. First, the IC reporting literature is reviewed, to provide an understanding of how firms voluntarily report IC in their annual reports. The review explains important theoretical and empirical contributions as well as gaps in the literature relating to the identification and reporting of IC in annual reports. Second, the study investigates the voluntary reporting of IC in the annual reports of a sample of Australian Stock Exchange (ASX) listed firms. Third, where appropriate, the findings are compared with those of previous studies, particularly the Australian study of Guthrie and Petty (2000) . Fourth, the study utilises a theoretical framework to analyse some of the results and explain why firms might prefer to disclose certain types of IC rather than others. Finally, the study identifies avenues for future research into IC reporting.

2. LITERATURE REVIEW

2.1 *What is Intellectual Capital?*

The literature provides a number of definitions of IC (Stewart 1997; Union Fenosa 1999; Martensson 2000; Ordonez de Pablos 2002). Further, IC has been categorised in several ways for analysis and interpretation (OECD[2] 1999; Abeysekera and Guthrie 2004). The recent literature, in general, delineates IC along three dimensions, (1) 'internal (structural) capital', (2) 'external (relational/customer) capital' and (3) 'human capital' (Brennan 2001; Ordonez de Pablos 2002; Bozzolan, Favotto and Ricceri 2003; Abeysekera and Guthrie 2004, 2005). Internal capital and external capital comprise 'organisational capital' as classified by the OECD. Internal capital includes intellectual properties,

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[2] Organisation for Economic Co-operation and Development

processes, organisational culture, etc., whereas external capital represents the relationship with various stakeholders (Roos, Roos, Edvinsson and Dragonetti 1998). External capital is the knowledge embedded in organisational relationships with customers, suppliers, stakeholders, strategic alliance partners (Bontis 1998). In this paper we classify IC into three categories: internal, external and human capital, and we use a comparison with a similar previous Australian study of IC reporting practices to understand the changes that have taken place from a theoretical perspective.

2.2   *Recent Studies of Intellectual Capital Reporting*

Recent studies of IC reporting have attempted to explore the IC practices of firms through an analysis of firms' annual reports (Abeysekera, 2006). Studies making notable contribution in this regard are those of Guthrie, Petty, Ferrier and Wells (1999) and Guthrie and Petty (2000) in Australia, Brennan (2001) in Ireland, Bozzolan *et al.* (2003) in Italy, April, Bosma and Deglon (2003) in South Africa, and Abeysekera and Guthrie (2004, 2005) in their study of Sri Lanka. Subsequent studies in IC reporting literature, including those mentioned above, have referred to Guthrie *et al.* (1999) and Guthrie and Petty (2000) interchangeably but essentially referring to a study[2] entailing a content analysis of the annual reports of the top Australian-listed firms (by market capitalisation) to ascertain the level of IC disclosure. In undertaking their research the authors categorised intangibles into internal structure (internal capital), external structure (external capital) and employee competence (human capital). Their research revealed that key components of IC were poorly understood, inadequately identified, inefficiently managed and inconsistently reported in Australian annual reports. On the whole, firms did

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[2] It should be noted here that Guthrie and Petty's (2000) paper was based on the Guthrie *et al.* (1999) study, which was presented at the OECD conference in Amsterdam in 1999.

not have a consistent framework for reporting IC. The Australian research showed that most of the IC information reported related to external capital (40%). Reporting of human capital (30%) and internal capital (30%) occurred equally. The framework for this research has been used in several subsequent studies including the present one (e.g. Brennan 2001; April *et al.* 2003; Bozzolan *et al.* 2003).

Brennan (2001) carried out a similar study of technology and people-oriented firms listed on the Irish stock exchange, analysing the annual reports of 11 listed firms using the IC framework of Guthrie *et al.* (1999). Brennan found significant differences between market and book values, suggesting that knowledge-based Irish listed firms had a substantial level of non-physical, intangible, intellectual assets. According to Brennan, these assets were not fully referred to in annual reports, and when they were referred to, it was in highly qualitative terms.

Bozzolan *et al.* (2003) examined voluntary IC reporting by 30 listed Italian non-financial firms in annual reports from 2001. The sample was chosen randomly from two markets in the Italian stock exchange. The first group came from the 'nuovo marcato' (i.e. new market), the market for hi-tech industries, while the second group was chosen from 'ordinario, star and blue chip', representing 'traditional' industries. This study was also modelled on that of Guthrie and Petty (2000), using the same IC framework with a slight modification. Bozzolan et al. found that, as in previous IC reporting studies, the amount and attributes disclosed were mostly external capital. The authors claimed that the extent of IC disclosures was determined, at least in part, by industry type and market capitalisation.

April *et al.* (2003) conducted a similar study involving the 20 largest listed firms in South Africa, focusing on the mining industry which had seven firms in the top 20. The research methodology was based on that of Guthrie *et al.* (1999). Results showed that mining firms reported on fewer IC attributes than other firms, focusing more on external capital attributes such as business collaborations and favourable contracts. Overall, external capital was the most reported IC category within the sample.

Abeysekera and Guthrie (2005) examined the annual reports of each of the top 30 firms listed on the Colombo stock exchange over the period 1998/1999 to 1999/2000. They found that the most reported IC category during the period of study was external capital. The IC framework used in this study differed from that of Guthrie *et al.* (1999) in that it included more IC attributes (e.g. *training*) in its human capital category, as the focus was on human capital reporting in the developing nation of Sri Lanka.

This literature review shows that the IC reporting studies in different countries have used corporate annual reports as the main source of data and have employed content analysis method as the vehicle to analyse and report IC reporting trends and practices of the firms. It is also important to note that for reporting purposes, all the studies used an IC framework which, in several instances, was adopted directly or with slight modification from the study reported by Guthrie *et al.* (1999) and Guthrie and Petty (2000). The present study similarly adopts the content analysis method. It also uses annual reports as the unit of analysis. The IC framework applied is the same as that used by Guthrie et al. (1999) with a slight modification (see section 4.4). A contribution of this paper is to suggest an explanation for the industry effect that is commonly observed in IC reporting

studies but rarely explained theoretically, using media agenda setting theory which is outlined in the next section.

3. THEORETICAL FRAMEWORK AND THE RESEARCH QUESTIONS

This section introduces media agenda setting theory to analyse IC reporting in a sample of Australian companies and to explain why firms might prefer to disclose particular IC attributes rather than others. We acknowledge that there could be other theoretical perspectives, such as legitimacy theory (Guthrie and Parker 1989; Wilmshurst and Frost 2000) and stakeholder theory (Jones and Fleming 2003), that could be engaged, but media agenda setting theory seems fruitful in the context of this study.

3.1 *Media Agenda Setting Theory: Overview*

The basic ideas of the media agenda setting theory can be traced to the work of Walther Lippmann, a prominent American journalist. Lippmann (1922) proposed that people did not respond directly to events in the real world but lived in a *pseudo-environment* composed of images created by the mass media. The media would play an important part in the furnishing of these images and the shaping of the pseudo-environment. The basic premise of the theory in its modern form, however, was formulated by Bernard Cohen (1963:13) who stated: "[The press] may not be successful much of the time in telling its readers what to think, but it is stunningly successful in telling its readers what to think *about*".

From this intellectual heritage, Maxwell McCombs and Donald Shaw provided the first systematic study of 'agenda setting' in the 1970s and propounded the agenda setting theory, according to which mass media set the agenda for public opinion by highlighting certain issues (McCombs and Shaw 1972; Mayer 1991). They found the main effect of news media to be agenda setting, telling people (1) what to think about, and (2) how to think about it (Griffin 2006:395). Put simply, media agenda setting is the process whereby the news media lead the public in assigning relative importance to various public issues. The media accomplish this agenda setting function not by directly telling the public that a certain issue is more important than another; instead, they signal the importance of certain issues by giving these issues preferential treatment, such as more frequent coverage and more prominent positions (Zhu and Blood 1996). News outlets act as *gatekeepers* of information and make choices about what to report and what not. What the public know and care about at any given time is mostly a product of media gatekeeping (Griffin 2006:399). Therefore, media agenda setting shapes the public agenda. As several lines of research illustrate, agenda setting can have far-reaching consequences. For example, public concerns about certain issues, triggered by news coverage, can affect policy making (Page and Sharpio 1992). The agenda setting metaphor has been applied to other contexts, including voluntary reporting, such as the public disclosure of corporate environmental performance information (Brown and Deegan 1998). Brown and Deegan argued that media could be particularly effective in driving the community's concern about the environmental performance of a particular firm, impacting on its reporting strategies.

3.2 *Corporate Annual Reports as Media*

Corporate annual reports are considered by stakeholders to be an important source of information about a firm (Lang and Lundholm 1993; Niemark 1995). They are produced regularly and provide a special communication opportunity for firms to go beyond reporting simply financials (Cameron and Guthrie 1993) and to show leadership and vision reflecting their values and position (Niemark 1995). Furthermore, as in the gatekeeping concept in the media agenda setting theory, what firms include in (and omit from) their annual reports reflects a conscious decision that communicates a significant message to stakeholders (Guthrie *et al*. 1999). Therefore (following the essence of the agenda setting theory) firms may endeavour through their annual reports to lead their stakeholders in assigning relative importance to certain issues. They accomplish this agenda setting function through giving such issues greater prominence, more coverage in the annual reports. It could be argued that the purpose is to give stakeholders such as investors the feeling of comfort that they are being informed about what they should think is important to know. The things that firms believe stakeholders such as investors should think important to know can be driven by industry classification. This distinction can also be analysed in terms of reporting differences between the knowledge-based service sector and other industry sectors (Brennan 2001; Bozzolan *et al.* 2003), as outlined in section 4.

3.3 *Research Questions*

In light of the literature review and in the context of the proposed theoretical framework, this study addressed three research questions:

1. What is the current status of IC reporting in Australia?

2. Can the media agenda setting theory explain the status of IC reporting in relation to (a) reporting differences among industry sectors (classified based on the GICS[3] industry code), and (b) reporting differences between the knowledge-based and service sector, and other sectors?

3. How do the results of the current study compare with those of the previous studies and can the media agenda setting theory explain the comparison?

4.   RESEARCH METHOD

4.1   *Firms in the Sample*

The firms selected in the sample were the top 20 firms (by market capitalisation) listed on the Australian Stock Exchange (ASX) at 31 December 2004. These firms represented approximately 60% of the total market capitalisation of the ASX at that time.[4] Therefore, the sample taken for the study represented a substantial portion of the firms listed on the ASX and included a range of industries (see Table 1).

4.2   *Source of Data: Annual Reports*

Annual reports of the firms listed in Table 1 were used as the source of raw data for this study, on the model of previous IC reporting studies (e.g., Guthrie *et al.,* 1999; Guthrie and Petty, 2000; Brennan, 2001; April *et al.* 2003; Bozzolan *et al.* 2003; Abeysekera and Guthrie 2005). Annual reports were chosen as the source of data for a number of reasons, some of which were discussed in the previous section. Furthermore, Lang and Lundholm (1993) demonstrated that the reporting level in annual reports is positively correlated with

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[3] Global Industry Classification Standard (GICS), used to define industries around the world. The ASX has been using the GICS since 1 July 2002 (Source: http://www.asx.com.au/research/indices/gics.htm).

[4] Source: Aspect Financial Analysis database and the ASX website

the amount of corporate information communicated to the market and to stakeholders using other media. Additionally, annual reports are the main external reporting vehicle used for communicating IC information. Finally, annual reports are regularly produced and offer an opportunity for a comparative analysis of management attitudes and policies across reporting periods (Niemark 1995; Guthrie, Petty, Yongvanich, and Ricceri 2004).

Table 1: Top 20 Australian firms by market capitalisation[5]

Ranking by mkt. cap.	ASX Code & Firm name	Industry group (GICS[6])
1	BHP (BHP Billiton Limited)	Materials
2	TLS (Telstra Corporation Limited)	Telecommunications services
3	RIO (Rio Tinto Limited)	Materials
4	NAB (National Australia Bank Limited)	Banks
5	CBA (Commonwealth Bank of Australia)	Banks
6	ANZ (ANZ Banking Group Limited)	Banks
7	AAI (Alcoa Inc.)	Materials
8	SGT (Singapore Telecommunications Limited)	Telecommunications services
9	WBC (Westpac Banking Corporation)	Banks
10	WDC (Westfield Group)	Real estate
11	NWS (News Corporation)	Media
12	NEM (Newmont Mining Corporation)	Materials
13	AMP (AMP Limited)	Insurance
14	WPL (Woodside Petroleum Limited)	Energy
15	AGG (Anglogold Ashanti Limited)	Materials
16	WOW (Woolworths Limited)	Food and staples retailing
17	QBE (QBE Insurance Group Limited)	Insurance
18	SGB (St. George Bank Limited)	Banks
19	WES (Wesfarmers Limited)	Capital goods
20	CML (Coles Myer Limited)	Food and staples retailing

Due to the differences in the financial year-ends of the firms in the sample, annual reports were from March, June, September or December 2004. Because of these financial year-end differences, 31 December 2004 was used as a cut-off point to ascertain the market capitalisation of the firms.

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[5] Table prepared with input from Aspect Financial Analysis database and the ASX website.

4.3   *The Method of Content Analysis*

The research methodology adopted for this study was content analysis of annual reports. Content analysis is a data-gathering technique that consists of codifying qualitative information, in anecdotal and literary form, into categories in order to derive quantitative scales of varying levels of complexity (Abbott and Monsen 1979:504; Krippendorf 1980). Content analysis of annual reports has been carried out in previous IC reporting studies, demonstrating that it is a rigorously tested research instrument for such studies (Guthrie *et al.* 1999; Brennan, 2001; Bozzolan *et al.* 2003).

4.4   *The IC Framework Used for This Study*

The IC framework used for this study is the same as in several previous studies (Brennan 2001; Guthrie and Petty 2000; April *et al.* 2003; Bozzolan *et al.* 2003) with the exception that the attribute *training* was added to this framework under the human capital category. This was added because training has been identified as a key source of HC value creation and has been included in the IC frameworks in several recent IC reporting studies (e.g., Abeysekera and Guthrie 2004, 2005; Abeysekera 2005b, 2006b). The study used operational definitions for each IC attribute in the framework as developed by Guthrie et al. (1999) and for the training attribute as used by Abeysekera and Guthrie (2004, 2005).

4.5   *Data Capture*

The content analysis of annual reports involved reading each annual report and recording information related to each attribute on a coding sheet. A numerical coding scheme was employed for each attribute. For each firm, a value of zero was used to indicate that an attribute did not appear in the annual report; a value of one denoted that the variable

appeared in qualitative form; a value of two was assigned if the variable was expressed in numerical (non-fiscal) terms; and a value of three was assigned if the variable was quantified in dollar (fiscal) terms. The coding scheme was based on that of Guthrie *et al.* (1999) and was consistent with subsequent studies in IC reporting which followed the Guthrie *et al.* framework..

As in previous studies, only voluntary reporting was measured (Guthrie and Petty 2000; Brennan 2001; April *et al.* 2003; Bozzolan *et al.* 2003). Information relating to IC that was reported to comply with accounting standards and Corporations law was excluded from the data set on the grounds that mandatory reporting does not indicate the level of management commitment towards reporting IC. To include compulsorily reported information in the analysis could obscure the desired focus on the initiatives taken by firms in voluntary reporting (Guthrie *et al.* 1999).

The reporting document for content analysis was the entire annual report. Hence, if reporting of the same attribute was repeated in the annual report it was recorded only once. For each attribute investigated, the highest order of reporting was recorded (i.e. narrative – 1; numerals – 2; dollar terms – 3). For instance, if an attribute scored 2 in one place and 3 in another place in an annual report, the attribute was scored as 3. This approach is consistent with that followed by Guthrie *et al.* (1999) and Guthrie and Petty (2000).

4.6   *The Effect of Size and Industry on IC Reporting*

Previous studies have highlighted the relevance of industry and size in determining the amount of social and environmental reporting (Mathews 1997; Gray 2002; Bozzolan *et*

al. 2003). The size effect in this study was largely controlled by selecting the top 20 firms by market capitalisation. This approach was taken by Guthrie *et al.* (1999) and Guthrie and Petty (2000) in their study of Australian firms, April *et al.* (2003) in South Africa and Abeysekera and Guthrie (2005) in their study of Sri Lanka.

Another variable considered in relation to IC reporting in this study was differences in industries. There are a number of reasons that prompted examination of industry effects. Firstly, there is a dearth of research examining the extent of voluntary reporting of intangibles by different industry groups. Secondly, the few studies that have examined industry effects on the reporting of IC have used diverse classifications of industry sectors (see e.g., Subbarao and Zeghal 1997; Abeysekera 2003c; Bozzolan *et al.* 2003). This study used two approaches to analyse industry effect. The first approach employed the GICS world classification of industry sectors, which is also currently used by the ASX. Table 2 clusters the firms by their industry group/sector.

Table 2: Sample Australian firms grouped by GICS industry code

Industry Group	ASX Code & Firm name
Materials and Energy	BHP (BHP Billiton Limited) RIO (Rio Tinto Limited) AAI (Alcoa Inc.) NEM (Newmont Mining Corporation) AGG (Anglogold Ashanti Limited) WPL (Woodside Petroleum Limited)
Financial	NAB (National Australia Bank Limited) CBA (Commonwealth Bank of Australia) ANZ (ANZ Banking Group Ltd) WBC (Westpac Banking Corporation) SGB (St. George Bank Limited) AMP (AMP Limited) QBE (QBE Insurance Group Limited) WDC (Westfield Group)
Media and telecom	NWS (News Corporation) TLS (Telstra Corporation Limited) SGT (Singapore Telecommunications Limited)
Retail and others	WOW (Woolworths Limited) CML (Coles Myer Limited) WES (Wesfarmers Limited)

Because the sample size is small, some groups were merged with similar industry groups to facilitate meaningful comparisons. Then, comparison among the groups was performed using one-way ANOVA with industry sector as a polychotomous categorical variable and IC reporting as the dependant variable. A post hoc test was also carried out to provide multiple comparisons between industry groups.

In the second approach to testing for industry effect, the firms were clustered into two industry groups, 'knowledge-based and service firms' and 'others' (see Table 3). This grouping of firms was influenced by anecdotal suggestions in the literature that they

might differ. A two-sample t-test was conducted to determine whether there was a significant difference in IC reporting between these two industry groups.

Table 3: Sample Australian firms with a simple two-industry grouping

Industry Group	ASX Code & Firm name
Knowledge-based & service	NAB (National Australia Bank Limited) CBA (Commonwealth Bank of Australia) ANZ (ANZ Banking Group Ltd) WBC (Westpac Banking Corporation) SGB (St. George Bank Limited) AMP (AMP Limited) QBE (QBE Insurance Group Limited) WDC (Westfield Group) NWS (News Corporation) TLS (Telstra Corporation Limited) SGT (Singapore Telecommunications Limited)
Others	BHP (BHP Billiton Limited) RIO (Rio Tinto Limited) AAI (Alcoa Inc.) NEM (Newmont Mining Corporation) AGG (Anglogold Ashanti Limited) WPL (Woodside Petroleum Limited) WOW (Woolworths Limited) CML (Coles Myer Limited) WES (Wesfarmers Limited)

4.7   *Issues Related to the Validity and Reliability of Content Analysis*

The study used several methods to increase objectivity in recording and analysing data. First, it used an established IC framework, introduced by Guthrie *et al.* (1999) and followed in several subsequent studies. This IC framework captures IC attributes under three categories: internal capital, external capital and human capital. Second, for inter-coder reliability, one researcher read the annual reports and recorded information on the coding sheets and the second researcher independently confirmed the coding of each attribute. Third, since the content of the annual reports was coded by the researchers interacting with the documents, the researchers' frame of reference could influence

content analysis. The researchers minimised this error by pre-defining IC attributes prior to analysing the content in the annual reports. As an additional precaution, the researchers re-examined the annual reports after a time interval, to confirm consistent identification of content in the annual reports (intra-coder reliability).

5.   RESULTS AND DISCUSSION

5.1   *Status of IC Reporting*

Reporting practice: The IC reporting examined was not structured and systematic; rather it was inconsistent: the content and frequency of reporting varied across firms and industry sectors. This variation is possibly attributable to the lack of an established and generally accepted framework for IC reporting. Another reason could be that firms are simply not equipped with the measurement tools or mechanisms for assessing and reporting changes in their IC base. This justification, however, becomes weaker when the top firms in the market are considered. It can be reasonably assumed that the firms examined in this study have the financial resources to support a move in the direction of IC reporting. An alternative reason for the inconsistency in reporting could be that some firms may regard IC reporting as an internal management issue, due to absence of a uniform external IC reporting framework. They may therefore set priorities as to what is to be reported and what is not to be reported in their annual reports to stakeholders (see Guthrie *et al.* 1999). The differential reporting across the firms and industry sectors, in the context of a lack of a uniform external reporting framework, allows firms to set the agenda for reporting.

Qualitative vs. quantitative reporting: Table 4 shows the aggregated data.

Table 4: The intellectual capital coding framework with aggregated data

IC reporting of the top 20 ASX firms (by market capitalisation)			2004
	Market cap.	% of total	
Top 20 (in $m)	587,924	59%	
ASX Total (in $m)	991,000		

	IC attributes in Firm Annual Reports:				
	Not mentioned-"0"	Mentioned in qualitative-"1"	Mentioned in quantitative-"2"	Mentioned in dollars-"3"	Total no. of firms reporting the attribute	in % of the total category
1. INTERNAL CAPITAL					
1. Patents		1	2	0	2	3%
2. Copyrights	0				0	0%
3. Trademarks	0				0	0%
4. Management philosophy		19	0	0	19	30%
5. Corporate culture		12	0	0	12	19%
6. Management processes		14	2	6	17	27%
7. Information systems		8	0	3	9	14%
8. Networking systems		2	2	0	3	5%
9. Financial relations		0	0	6	2	3%
Subtotal		**56**	**6**	**15**		
Total Internal Capital score	**77**					
Total # of Internal Capital attributes rptd.	**64**					
2. EXTERNAL CAPITAL					
10. Brands		10	6	0	13	13%
11. Customers		3	24	0	15	15%
12. Customer loyalty		8	6	0	11	11%
13. Firm names		14	6	0	17	17%
14. Distribution channels		3	22	3	15	15%
15. Business collaborations		15	2	6	18	18%
16. Licensing agreements		3	4	0	5	5%
17. Franchising agreements		0	0	3	1	1%
18. Favourable contracts		3	4	3	6	6%
Subtotal		**59**	**74**	**15**		
Total External Capital score	**148**					
Total # of External Capital attributes rptd.	**101**					
3. HUMAN CAPITAL					
19. Know-how		1	4	0	3	7%
20. Education		6	0	0	6	14%
21. Vocational qualification		1	0	0	1	2%
22. Training		8	6	3	12	27%
23. Work-related knowledge		6	0	0	6	14%
24. Work-related competencies		3	0	0	3	7%
25. Entrepreneurial spirit		12	2	0	13	30%
Subtotal		**37**	**12**	**3**		
Total Human Capital score	**52**					
Total # of Human Capital attributes rptd.	**44**					

Summary Table	Total	Internal	External	Human
Total IC score of all firm	277	77	148	52
In %		28%	53%	19%
Total # of IC attributes reported by all firms	209	64	101	44
In %		31%	48%	21%

Type of reporting (in 'Number' of IC attributes)		In %
Reported in qualitative terms	152	73%
Reported in numeric terms	46	22%
Reported in dollar terms	11	5%
Total IC attributes reported	209	

Of the IC related information reported, 73% was in qualitative terms, which essentially creates difficulty in setting benchmarks for managing, measuring and reporting IC performance. It is acknowledged that some IC attributes are easier to quantify (such as items 6, 7, 14, 15 and 22 in Table 4) and some others are difficult to quantify, in many instances having qualitative form only (e.g., corporate culture, management philosophy), but there are avenues for other attributes to be quantified, at least numerically if not consistently in dollar terms, which only a few firms have done. Examples from the annual reports analysed include the Commonwealth Bank of Australia (CBA) reporting on its new management process initiative, the 'Which new Bank' program, as follows:

> Which new Bank consists of 20 workstreams and over 100 initiatives. All of the workstream activities to June 2004 were completed as planned (CBA 2004:6).

The CBA took a further step of reporting fiscal benefits related to the 'Which new Bank' program:

> In our first nine months of the 'Which new Bank' program, we have delivered within planned investment and the benefits have exceeded our target by $37 million (CBA 2004:6).

Category and Attribute Level Findings: External capital was the most reported category, with 48% of the overall IC reporting in this category. It was followed by internal capital with 31% and human capital with 21%. Within IC categories, the IC attributes that were reported most are listed in Table 5.

The least reported attributes were *copyrights and trademarks* with no hits (no firms reporting these attributes), *franchising agreements* and *vocational qualification* with one hit each, and *patents* with two hits. The attributes which had the most quantitative reporting were *distribution channels* and *customers*. Possible explanations as to why

firms tended to report certain categories and attributes more than others were discussed in the section on the background of media agenda setting theory.

Table 5: IC attributes most reported per category

Category	IC Attribute	No. of firms reporting this attribute	% of firms reporting this attribute
Internal	Management philosophy	19	95%
	Management processes	17	85%
External	Business collaborations	18	90%
	Firm names	17	85%
Human	Entrepreneurial spirit	13	65%
	Training	12	60%

5.2 *IC Reporting Differences among Industry Sectors*

Industry-wide findings: Findings based on GICS classification of industries showed that the Media and telecom sector reported most, with 12.7 attributes on average, followed by Retail and others with 12.3 and Financials with 11.9. The Materials and energy sector reported least, with an average of 6.5 attributes. The result of the ANOVA on the four GICS industry sectors was significant (F-statistics: 10.35, p-value: 0.000). However, results of the post hoc test which performed multiple comparisons among these industry groups showed significant differences in the mean reporting levels between the Materials and Energy industry sector and the other three industry groups. Those three industry sectors did not show significant differences from each other in the mean reporting level. The finding that the materials and energy sector reported significantly less IC than other sectors is not surprising, as the market values of firms in this sector are not dominated by IC; rather, they are dominated by factors like physical assets, new mining discoveries, advanced mining, manufacturing and refining technology, and world materials and oil prices.

On the other hand, findings based on classification into two industry groups revealed that 'Knowledge based and service firms' reported significantly higher IC content than 'Other firms' on average (12.1 vs. 8.4 attributes; t-statistics: -2.71, p-value: 0.022). It could be argued that knowledge-based and service firms are more proactive than others because they face greater competition and often have to rely on immutable intangibles that are difficult to imitate to gain a competitive advantage (Teece 2000). Hence, knowledge-based and service firms have the incentive to set the agenda for more IC reporting through the medium of the annual report, and boast of their IC assets to signal their superiority over competitors in possessing immutable assets in their industry.

5.3   *Comparison with Previous Studies*

As mentioned in the literature review, similar IC studies have been conducted in other countries including Ireland, Italy, South Africa, and Sri Lanka. However, for greatest relevance, the key findings of this study are compared with those of Guthrie and Petty (2000), as that study was also based on Australian data (see Table 6).

The descriptive statistics show that there was a modest increase in IC reporting. However, the increase in quantitative reporting is remarkable. Analysis of annual report data revealed that 27% (57 attributes) of the overall IC information was reported quantitatively (22% numerically and 5% in dollar terms) compared to almost no quantitative reporting found by Guthrie and Petty (2000). The fact that such evident effort was made to quantify IC reporting signals an increase in the significance of IC as an area of voluntary reporting.

Table 6: Comparison of some descriptive statistics: Guthrie and Petty (2000) and
the current study

	G & P[7]	Current study
Data years	1998	2004
Number of firms in the sample	20	20
Number of attributes in the IC framework	24	25
Average number of attributes reported per firm	8.9	10.5
Minimum number of attributes reported for any one firm	2	3
Maximum number of attributes reported for any one firm	17	15
Total number of attributes reported across all 20 firms	178	209
Number of attributes reported in quantitative terms	1	57

Table 7 provides category-wise comparisons of findings of the current study and that of Guthrie and Petty (2000). It is evident that external capital reporting increased while human capital reporting decreased comparatively. The increase in external capital reporting could be due to increased competition in the market resulting from liberalisation of trade and commerce. This phenomenon is explained further with the help of the media agenda setting theory in the next section. The decrease in human capital reporting could be due to the relaxation of labour laws, giving employers more freedom to hire and fire and leading to reduced endeavours to win the loyalty of employees. As a result the perceived value of HC has probably decreased, leaving less room for HC reporting in the annual reports. However, the exact reasons for the decrease in HC reporting warrant further investigation.

Table 7: Comparison of IC categories: Guthrie and Petty (2000) and the current study

	G & P (2000)	Current Study
Internal capital as a percentage of total reporting	30%	31%
External capital as a percentage of total reporting	40%	48%
Human capital as a percentage of total reporting	30%	21%

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[7] Guthrie and Petty (2000)

Table 8 compares attribute-level findings between the current study and that of Guthrie and Petty (2000). It shows that the most frequently reported IC attributes within the three IC categories mostly remained unchanged. Although the attribute *customers* remained the fifth most reported attribute overall in the current study (see Table 4), the upsurge in the reporting of attributes like *business collaborations* and *firm names* compared to *customers* (the most frequently reported in the 2000 study) within the external capital category reconfirms the increased competition globally, not only from the developed world but also from the developing and emerging nations (e.g. China and India) (Abeysekera 2005b). Stakeholders such as investors now have more choices to invest anywhere in the world, and this rise in competition stimulates intense effort by firms to report such attributes to heighten investor confidence so that existing investors will remain and new investors will be attracted (Holloway 1994).

The greater reporting of *training* within the HC category confirms its importance as a key source of HC value creation, as recognised in other IC studies (e.g., Abeysekera and Guthrie 2004, 2005).

Table 8: Comparison of top IC attributes: Guthrie and Petty (2000) and the current study

Category	Top IC Attributes (Guthrie & Petty 2000)	Top IC Attributes (Current study)
Internal	Management processes	Management philosophy
	Management philosophy	Management processes
External	Customers	Business collaborations
	Business collaborations	Firm names
Human	Entrepreneurial spirit	Entrepreneurial spirit
	Work related knowledge	Training

External capital was the most reported category in both Guthrie and Petty (2000) and the present study. The consistently high reporting of external capital is evidence of the agenda setting process of the firms through the medium of corporate annual reports for their stakeholders. It also reveals how the firms conduct the gatekeeping function in their media at two levels: first, by reporting more attributes from the external capital category, and second, by including a higher level of quantitative reporting for several external capital attributes (see Table 4 for detailed results). Both the differential reporting of IC attributes and the nature of reporting (i.e., qualitative or quantitative) have the potential to influence the thinking of stakeholders about the relative importance of IC attributes from the firm's perspective of rather than that of stakeholders. It could be argued that stakeholders may be influenced about the types of IC attributes to be thought about by providing more information about them in annual reports, and that reporting certain IC attributes in quantitative form may imply that they deserve serious thought. The purpose, as predicted in the theoretical framework in section 3, is possibly to imbue stakeholders such as investors with comfort and confidence that they are being informed on what they should think is important to know, so that they will continue supporting the firm.

The finding that firms placed more importance on IC attributes of the external capital category could be foreseen in the wake of intense competition both domestically and globally, resulting in frequent engagement in business collaborations at the strategic, tactical or operational level, and the projection of the firm name in all possible instances to boost investor confidence. This trend is increased because competition stems from several developing countries. As Ueng, Kim and Lee (2000) point out, business collaborations with developed countries yield higher returns than with developing countries. Thus IC reporting by Australian firms enables them to attract investor capital

from other developed nations to their firms. It can be argued that the factor of increased competition creates the background agenda for the firms which, in turn, shapes their public (for stakeholders such as investors, in this case) agenda setting by projecting those IC attributes that determine success amid fierce competition.

Attributing importance to internal capital attributes like *management philosophy*, *corporate culture* and *management processes* may be a response to the erosion of investor trust in corporate financial information after highly publicised corporate collapses (Main 2003:263). Management would therefore be inclined to project (the process of agenda setting) the firm as having a strong philosophy, transparent culture, and effective management processes, to protect and enhance investor interest (see Appendix).

On the other hand, reporting more on human capital categories like training (indicating it as a priority of the firm) and *entrepreneurial spirit* (alluding to the creativity, research and development involvement, and adaptability of employees) can serve the dual purpose of assuring stakeholders such as investors that the firm is managed and served by capable and competent employees, and may increase the visibility of the firm in the labour market to attract the best people.

7.   CONCLUSION

7.1   *Summary*

It can be concluded from the study that there is still no generally accepted and established framework for IC reporting. However, the need for such reporting appears to have been recognised and generally understood, with a considerable advance in quantifying IC

reporting compared to the practice in 1998. Nevertheless, in the absence of a uniform external IC reporting framework, the questions still remain as to what to report and how to report. This study also identified differences in IC reporting across industry sectors which may warrant different approaches to managing, measuring and reporting IC.

7.2   *Contributions*

The study contributes in four ways. First, it adds to the understanding of the current IC reporting practices of the top Australian firms by updating the findings of Guthrie and Petty (2000). Second, as the first study to empirically test industry effect on IC disclosure based on the GICS, it adds to the IC reporting literature. Further, the study demonstrates differences between 'knowledge-based and service firms', and 'others', which was previously predominantly an anecdotal observation. Third, this is one of the few studies in the IC reporting literature to use a theoretical framework to explain IC reporting practices of firms, and appears to be the first study in IC reporting to apply media agenda setting theory. Finally, for IC researchers and policymakers alike, the study confirms that there is no consistent and mutually agreed framework for IC reporting in Australia. However, it is acknowledged that a single framework for all firms might not serve the best purpose, because of critical industry differences.

7.3   *Limitations*

The study and the results are subject to four limitations. First, as a research method, content analysis involves the application of judgment in deciding whether an IC attribute belongs to a given IC category. Although every effort was made to ensure the reliability of the coding process and to minimise error, there remains the possibility that a few errors of coding were made. Further, content analysis is a static tool to capture a phenomenon at

a given point in time. It does not cast light on underlying processes, nor does it reveal much about strategies over the longer term. Content analysis provides an overview of what is happening, and may be used to identify trends, but it lacks the potential to make qualitative assessments regarding levels of motivation and the commitment to a specific strategy or corporate philosophy (see Guthrie *et al.* 2004). Second, the sample used represents the largest firms by market capitalisation only. Therefore the results cannot be generalised to the IC annual reporting practices of all Australian firms. Third, by replication and comparison with Guthrie and Petty's (2000) study, this study compares two different time periods. However, it does not capture a trend in IC annual reporting practices over the years, as it does not analyse IC reporting longitudinally over these years. Instead, it compares the reporting practices of 1998 with those of 2004. Finally, besides actual differences, there could be some differences (error terms) in the results owing to inter-coder differences between this study and that of Guthrie and Petty (2000), since different researchers were involved in the coding process of the annual reports.

7.4   *Avenues for Future Research*

Five avenues are suggested for further research. First, an obvious extension would involve expanding the sample size to develop a more comprehensive understanding of IC practices of mid-sized and small Australian firms. Second, enlarging the sample in terms of size and industry sector representation would allow more statistical inferences to be made about reporting practices and would increase the robustness and external validity of the findings. Third, relationships could be investigated between IC reporting and other variables, such as firms classified by most frequently traded shares, differences in ownership, and political visibility. Fourth, further sophistication could be added to the coding framework used in this study by attempting to assess the quality of the reporting in

the annual reports. In particular, the location of IC reporting in the annual report is potentially revealing in terms of formulating a view of the firm's commitment to the development of its IC. For instance, comments made in the managing director's report may carry more authority and credibility than comments made elsewhere. Finally, it can be suggested that multiple research methods could provide better insights into the IC reporting practices of firms. One such additional method could be interviews, which could enrich the understanding of the organisational interactions that ultimately decide what is reported and the manner in which the information is presented. This would be instrumental in furthering the understanding of the complex human dynamics that surround the IC reporting framework.

REFERENCES

Abbott, W., and R. Monsen, 1979, "On the Measurement of Corporate Social Responsibility: Self-Reported Disclosures as a Method of Measuring Corporate Social Involvement", *Academy of Management Journal*, 22, 3: 501-15.

Abeysekera, I., 2003a, "Accounting for Intellectual Assets and Intellectual Liabilities", *Journal of Human Resource Costing & Accounting*, Autumn, 7, 3: 7-14.

Abeysekera, I., 2003b, "Intellectual Accounting Scorecard – Measuring and Reporting Intellectual Capital", *The Journal of American Academy of Business,* 3, 1&2: 422-7.

Abeysekera, I., 2003c, *Intellectual Capital Reporting in Sri Lanka with a Focus on Human Capital*, Unpublished doctoral dissertation, Macquarie Graduate School of Management, Macquarie University, Sydney.

Abeysekera, I., 2005a, "Accounting: In Crises or Ascendancy?", *Accounting History*, November, 10: 71-88.

Abeysekera, I., 2005b, "Intellectual Capital Reporting Differences Between a Developed and Developing Nation", *Asian Academic Accounting Association 2005*, 6th Annual Conference, Berjaya Times Square Hotel and Convention Center, Kuala Lumpur, November 15-17.

Abeysekera, I., 2006a, "Politics Meet Accounting: Theoretical Interpretation of Some Key Events (1940 to 2003) of the Accounting Profession in Australia", *Australian*

Accounting Review, March, 16, 1: 64-74.

Abeysekera, I., 2006b, "The Project of Intellectual Capital Disclosure: Researching the Research", *Journal of Intellectual Capital*, 7, 1: 61-77.

Abeysekera, I., and J. Guthrie, 2004, "How Is Intellectual Capital Being Reported in a Developing Nation?", *Research in Accounting in Emerging Economies*, Supplement 2: Accounting and Accountability in Emerging and Transition Economies: 149-69.

Abeysekera, I., and J. Guthrie, 2005, "An Empirical Investigation of Annual Reporting Trends of Intellectual Capital in Sri Lanka", *Critical Perspectives on Accounting*, 16, 3: 151-63.

ABS (Australian Bureau of Statistics), 2004, *National Income, Expenditure and Product*, June quarter, Canberrra.

Andriessen, D., 2004, "IC Valuation and Measurement: Classifying the State of the Art", *Journal of Intellectual Capital*, 5, 2: 230-42.

April, K., P. Bosma, and D. Deglon, 2003, "Intellectual Capital Measurement and Reporting: Establishing a Practice in South African Mining", *Journal of Intellectual Capital*, 4, 2: 165-80.

Backing Australia's Ability, 2005, *Backing Australia's Ability: The Australian Government's Innovation Report 2004-2005*. Department of Education, Science and Training, Canberra.

Barsky Jr, N., A. Catanach, S. Rhoades-Catanach, and J. Thibodeau, 2003, "Enron: Did the Financial Reporting Model Really Fail?", *Commercial Lending Review* 18, 2: 5-9.

Bontis, N., 1998, "Intellectual Capital: An Exploratory Study That Develops Measures and Models", *Management Decision,* 36, 2: 63-76.

Bozzolan, S., F. Favotto, and F. Ricceri, 2003, "Italian Annual Intellectual Capital Disclosure: An Empirical Analysis", *Journal of Intellectual Capital*, 4, 4: 543-58.

Brennan, N and B. Connell, 2000, *"Intellectual Capital: Current Issues and Policy Implications"*, paper presented at the 23rd Annual Congress of the European Accounting Association, March 29-31, Munich.

Brennan, N., 2001, "Reporting Intellectual Capital in Annual Reports: Evidence from Ireland", *Accounting, Auditing and Accountability Journal*, 14, 4: 423-36.

Brown, N., and C. Deegan, 1998, "The Public Disclosure of Environmental Performance Information – A Dual Test of Media Agenda Setting Theory and Legitimacy Theory", *Accounting and Business Research,* 29, 1: 21-41.

Cameron, J., and J. Guthrie, 1993, "External Annual Reporting by an Australian University: Changing Patterns", *Financial Accountability and Management,* 9, 1: 1-13.

CBA 2004, Annual report, Commonwealth Bank of Australia, Australia.

Cohen, B., 1963, *The Press and Foreign Policy,* Princeton University Press, Princeton, NJ, in J. Zhu and D. Blood (eds) (1996), Media Agenda-Setting Theory: Review of a 25-Year Research Tradition, *Hong Kong Journals Online,* [Online] Spring, 8. Available: http://sunzi1.lib.hku.hk/hkjo/article.jsp?book=10&issue=100013 [2005, October 30].

Gray, R., 2002, "The Social Accounting Project and Accounting Organization and Society – Privileging Engagement Imaginings, New Accountings and Pragmatism over Critique?", *Accounting, Organization and Society*, 27: 687-708.

Griffin, E., 2006, *A First Look at Communication Theory,* McGraw-Hill, Boston.

Guthrie, J., and L.D. Parker, 1989, "Corporate Social Reporting: A Rebuttal of Legitimacy Theory", *Accounting and Business Research*, 19, 76: 343-352.

Guthrie, J., and R. Petty, 2000, "Intellectual Capital: Australian Annual Reporting Practices", *Journal of Intellectual Capital*, 1, 3: 241-51.

Guthrie, J., R. Petty, F. Ferrier, and R. Wells, 1999, "There Is No Accounting For Intellectual Capital in Australia: A Review of Annual Reporting Practices and the Internal Measurement of Intangibles", paper presented at the international symposium on Measuring and Reporting Intellectual Capital: Experiences, Issues, and Prospects, June 9-11, OECD, Amsterdam.

Guthrie, J., R. Petty, K. Yongvanich, and F. Ricceri, 2004, "Using Content Analysis as a Research Method to Inquire into Intellectual Capital Reporting", *Journal of Intellectual Capital*, 5, 2: 282-93.

Holloway, J., 1994, "Global Capital and the Nation State", *Capital and Class,* Spring, 52: 23-51.

Jones, M.T. and P. Fleming, 2003, "Unpacking Complexity through Critical Stakeholder Analysis: The Case of Globalization", *Business and Society*, December, 42, 4: 430-54.

Krippendorf, K., 1980, *Content Analysis: An Introduction to Its Methodology*, Sage, Beverly Hills.

Lang, M., and R. Lundholm, 1993, "Cross-sectional Determinants of Analysts' Ratings of Corporate Disclosures", *Journal of Accounting Research*, 31: 246-71.

Lev, B. and P. Zarowin, 1999, "The Boundaries of Financial Reporting and How to Extend Them", *Journal of Accounting Research*, 37, 2: 353-83.

Lippman, W., 1992, "Public Opinion", Harcourt Brace, New York, in J. Zhu, and D. Blood, (1996), Media Agenda-Setting Theory: Review of a 25-Year Research Tradition, *Hong Kong Journals Online,* [Online] Spring, 8. Available:
http://sunzi1.lib.hku.hk/hkjo/article.jsp?book=10&issue=100013 [2005, October 30].

Main, A., 2003, *Other People's Money: The Complete Story of the Extraordinary Collapse of HIH*, HarperCollins, Sydney.

Marr, B., D. Gray, and A. Neely, 2003, "Why Do Firms Measure Their Intellectual Capital?", *Journal of Intellectual Capital*, 4, 4: 441-61.

Martensson, M., 2000, "A Critical Review of Knowledge Management as a Management Tool", *Journal of Intellectual Capital*, 4, 3: 204-16.

Mathews, M., 1997, "Twenty-five Years of Social and Environmental Accounting Research – Is There a Silver Jubilee to Celebrate?", *Accounting, Auditing and Accountability Journal*, 10, 4: 481-531.

Mayer, R., 1991, "Gone Yesterday, Here Today: Consumer Issues in the Agenda Setting Process", *Journal of Social Issues,* 47: 21-39.

McCombs, M., and D. Shaw, 1972, "The Agenda-setting Function of Mass Media", *Public Opinion Quarterly,* 36: 176-85.

Niemark, M., 1995, *The Hidden Dimensions Of Annual Reports: Sixty Years of Social Conflict at General Motors*, Markus Wiener, Princeton, NJ.

Ordónez de Pablos, P., 2002, "Evidence of Intellectual Capital Measurement from Asia, Europe and the Middle East", *Journal of Intellectual Capital*, 3, 3: 287-302.

OECD (Organisation for Economic Co-operation and Development), 1999, *Guidelines and Instruction for OECD Symposium,* International symposium on Measuring and Reporting Intellectual Capital: Experience, Issues, and Prospects, June 9-11, OECD, Amsterdam.

Page, B., and R. Sharpio, 1992, *The Rational Public: Fifty Years of Trends in Americans' Policy Preferences,* University of Chicago Press, Chicago.

Petty, R., and J. Guthrie, 2000a, "Intellectual Capital Literature Review: Measurement, Reporting and Management", *Journal of Intellectual Capital*, 1, 2: 155-76.

Roos, G., J. Roos, L. Edvinsson, and N.C. Dragonetti, 1998, *Intellectual Capital: Navigating the New Business Landscape*, New York University Press, New York.

Stewart, T.A., 1997, *Intellectual Capital: The New Wealth of Organisations*, Nicholas Brealey Publishing, London.

Subbarao, A.V., and D. Zeghal, 1997, "Human Resources Information Disclosure in Annual Reports: An International Comparison", *Journal of Human Resource Costing and Accounting*, 2, 2: 53-73.

Teece, D.J., 2000, "Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context", *Long Range Planning*, 33: 35-54.

Ueng, C.J., S.H. Kim, and C.C. Lee, 2000, "The Impact of Firm's Ownership Advantages and Economic Status of Destination Country on the Wealth Effects of International Joint Ventures", *International Review of Financial Analysis*, 9, 1: 67-76.

Union Fenosa, 1999, *Annual Report 1998*, Madrid.

Wilmshurst, T.D. and G.R. Frost, 2000, "Corporate Environmental Reporting: A Test of Legitimacy Theory", *Accounting, Auditing and Accountability Journal*, 13, 1: 10-26.

Zhu, J., and D. Blood, 1996, "Media Agenda-Setting Theory: Review of a 25-Year Research Tradition", *Hong Kong Journals Online,* [Online] Spring, vol. 8. Available: http://sunzi1.lib.hku.hk/hkjo/article.jsp?book=10&issue=100013 [2005, October 30].

Appendix: Comparison of IC attributes reported

1. INTERNAL CAPITAL	Guthrie & Petty (2000)	This study
1. Patents	3	2
2. Copyrights	1	0
3. Trademarks	2	0
4. Management philosophy	1	19
5. Corporate culture	6	12
6. Management processes	15	17
7. Information systems	10	9
8. Networking systems	3	3
9. Financial relations	1	2
Subtotal	*42*	*64*

2. EXTERNAL CAPITAL	Guthrie & Petty (2000)	This study
10. Brands	9	13
11. Customers	16	15
12. Customer loyalty	7	11
13. Company names	5	17
14. Distribution channels	10	15
15. Business collaborations	13	18
16. Licensing agreements	8	5
17. Franchising Agreements	1	1
18. Favourable Contracts	1	6
Subtotal	*70*	*101*

3. HUMAN CAPITAL	Guthrie & Petty (2000)	This study
19. Know-how	6	3
20. Education	6	6
21. Vocational Qualification	1	1
22. Training		12
23. Work-related knowledge	12	6
24. Work-related competencies	9	3
25. Entrepreneurial spirit	19	13
Subtotal	*53*	*44*