As nations move away from traditional manufacturing economies to knowledge economies, the debate on how to report the 'value' of intangible assets has re-emerged. Knowledge-based industries need to find a way of communicating their intellectual capital to their stakeholders and the capital markets. A firm's intellectual capital includes 'new' intangibles, such as staff competences and customer relationships, which generally do not meet the balance sheet recognition criteria for intangible assets.

In the absence of balance sheet recognition, how can firms' performance in managing their intellectual capital be assessed? This report aims to address this question by furthering the understanding of when, and how, organisations voluntarily report their intellectual capital. The report first reviews contemporary developments in, and frames works for, intellectual capital reporting, including the role of management commentary. The report then explores the existing literature on why, and how, firms disclose their intellectual capital. This study investigates the voluntarily intellectual capital disclosure of companies in Australia and Hong Kong, where intellectual capital reporting is purely voluntarily. The authors consider the need for some level of international standardisation and the implications for policy setting. They recognise that further research is required to establish a consensus between business about the need to report, what to report, and how to report it.
INTELLECTUAL CAPITAL REPORTING:
LESSONS FROM HONG KONG
AND AUSTRALIA

by

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Published by

The Institute of Chartered Accountants of Scotland
CA House, 21 Haymarket Yards, Edinburgh EH12 5BH
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The Research Committee is grateful to all those who participate in the refereeing process.
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As nations move away from traditional manufacturing economies to knowledge intensive economies, the debate on how to account or report the ‘values’ of intangible assets has re-emerged.

‘Knowledge-based’ industries need to find a way of communicating their intellectual capital to their stakeholders and the capital markets. A firm’s intellectual capital includes ‘new’ intangibles, such as staff competences and customer relationships, which generally do not meet the balance sheet recognition criteria for intangible assets.

In the absence of balance sheet recognition, how can firms’ performance in managing their intellectual capital be assessed? This report aims to address this question by furthering the understanding of when, and how, organisations voluntarily report their intellectual capital.

The report firstly reviews contemporary developments in, and frameworks for, intellectual capital reporting. This part of the report looks at regulatory reporting in Austria and Denmark and voluntary reporting guidelines elsewhere in Europe, Australia and Japan. The role that management commentary plays in communicating performance measures to stakeholders is also investigated. The report then explores the existing literature on why, and how, firms disclose their intellectual capital.

The study investigates the voluntary intellectual capital disclosure of companies in Australia and Hong Kong. Neither of these countries have formal reporting frameworks for intellectual capital reporting and therefore any disclosure is purely voluntary.

The research finds that in both countries, intellectual capital is expressed in narrative rather than numerical terms, and that the current intellectual capital policy vacuum results in a lack of standardisation of
reporting. The level of intellectual capital disclosure is relatively low and is linked to company size. The report analyses the level and type of intellectual capital reporting between Australian and Hong Kong companies and between the following categories: internal capital; external capital; and human capital.

The authors conclude that voluntary reporting of intellectual capital information indicates that the provision of this data has a value. They consider the need for some level of international standardisation and recognise that any international policy guidelines would need to be flexible to accommodate the dissimilarities in organisations.

The report identifies implications for policy setting, including how a policy could be developed. The authors recognise that further research is required to establish a consensus between business and researchers about the need to report, what to report, and how to report it.

The researchers challenge the Accountancy Profession to take a lead by establishing a stakeholder taskforce, to help finance research on the management and disclosure of intangibles and encourage the development of necessary policies, voluntary guidelines and reporting systems.

This project was funded by the Scottish Accountancy Trust for Education and Research (SATER). The Research Committee of the Institute of Chartered Accountants of Scotland has also been happy to support this project and hope that the report will add to the debate on how to enhance the transparency of corporate reporting.

The Committee recognises that the views expressed do not necessarily represent those of ICAS itself, but hopes that this project will contribute to the current debate on corporate reporting of intellectual capital.

David Spence
Convener
Research Committee
May 2007
ACKNOWLEDGEMENTS

The authors would like to thank The Institute of Chartered Accountants of Scotland and The Scottish Accountancy Trust for Education and Research, for their financial support and commitment. We also thank Niamh Brennan and Ulf Johanson for their suggestions and support. Finally, we thank Melissa Jamcotechan, Fiona Crawford, Christina Boedker and Kittiya Yongvanich for their research and editorial assistance, and the anonymous academic and professional reviewers of this project for their constructive comments.
EXECUTIVE SUMMARY

Around the world many organisations claim to be investigating the potential for reporting information on intellectual capital (IC) beyond that required to meet conventional financial accounting standards. Collectively, their efforts have precipitated the re-emergence of a long-standing debate about whether or not to report values for internally generated, as opposed to purchased, intangible assets in financial statements, and have framed that debate in new ways.

Although the focus of this study is on the firm level, there is also evidence to support the assertion that intellectual capital is instrumental in driving national economic performance. This is probably because many nations have transformed their economy from an industrial base to a knowledge economy. In line with a shift in the type of businesses populating most developed economies, from capital intensive to knowledge intensive, and moves to challenge the existing financial model, by making intangibles part of the dialogue, it is expected that companies in Asia will make greater efforts to report on their intellectual capital in much the same way as some companies in Europe have been doing.

The fact that traditional financial reporting practice does not include non-financial performance adversely impacts knowledge-based organisations. Those that are looking to raise capital in the debt and/or equity markets are particularly affected. ‘New’ intangibles and their value, such as staff competencies, customer relationships and computer and administrative systems, receive little recognition in traditional financial reporting models. Even traditional intangibles, like brand equity, patents and goodwill, are reported in the financial statements only when they meet stringent recognition criteria. They are otherwise omitted from the financial statements.
The invisibility of intellectual capital has led to calls from regulators and practitioners, as well as academics, for intellectual capital information to be disclosed in company annual reports via management commentary or in separate intellectual capital reports. This realisation is underscored by observers, who argue that organisations need to go beyond disclosing just financial performance metrics and also report non-financial indicators, so that a more balanced approach to performance can be found.

This study investigates the voluntary disclosure of companies located in both Australia and Hong Kong, and their intellectual capital attributes. The study uses content analysis to analyse annual reports in order to determine intellectual capital disclosure levels. An earlier review by Guthrie and Petty (2000) revealed that annual reports were a key communication tool to legitimise corporate activity. However, when performing content analysis, the impact of size is commonly assessed and this size effect on voluntary disclosure practices is also examined in line with the exploratory mission of this study.

In addition, this research monograph extends the literature on cross-border comparisons of intellectual capital reporting (ICR) practices and identifies the differences in the types of reporting and the variation in reporting frequency of companies voluntarily reporting.

The types of IC reporting investigated are: external capital; internal capital; and human capital. The results indicate that, on average, Australian companies disclose a greater amount of IC information than Hong Kong companies. However, in both countries, nearly every instance of ICR is expressed in discursive rather than numerical terms. An examination of the content of the disclosure reveals a relevant change in the pattern of disclosure. The results of a previous Australian study (Guthrie and Petty, 2000) and Hong Kong study (Petty, 2003) showed that the information disclosed was evenly distributed across the intellectual capital categories. In this study, in Australia, the internal and external capital categories now account for the majority (90%) of the IC
reported. The human capital category is, by comparison, significantly less reported (10%) and the external capital category accounts for almost half of the observed reporting practices (49%). Interestingly, Hong Kong companies are disclosing, in percentage terms, more information on human capital than Australian, and even European, companies.

In conclusion, this study examines the voluntary reporting of IC using Hong Kong and Australian data. It reveals that levels of intellectual capital disclosure are relatively low. Further, the results indicate that, where there is disclosure, it is mainly expressed qualitatively rather than quantitatively. Finally, the level of disclosure is positively related to company size, a finding that is consistent with the previous literature on voluntary reporting.

The research monograph also considers the implications for policy setters. It is recognised that there is value in the disclosure of intellectual capital information and that practice is leading policy in this field. The current policy vacuum in intellectual capital reporting has resulted in a lack of standardisation of reporting. However, any future guidelines will need to be flexible to accommodate the dissimilarities in organisation type and reporting.

Developments in intellectual capital reporting are currently being led by practice rather than policy. Questions arise as to how ICR policy can be developed. The profession should be actively involved in this development, establishing a shareholder taskforce. This taskforce should: facilitate the participation of stakeholders; help finance research on the management and disclosure of intangibles; and encourage the development of voluntary guidelines and reporting systems.

Further research is required to establish a consensus between business and researchers, about the need to report, what to report and how to report it. To support this, research should be undertaken to identify what is driving the voluntary disclosure of intellectual capital reporting and to obtain evidence of best-practice models of intellectual capital reports.
1 INTRODUCTION

Background

The past two centuries have witnessed major transformations in the structure of the Western economy (see Table 1.1). These transformations have been driven by the growth in service-based industries wherein knowledge-intensive resources constitute the main part of the value-creation process. Today, service-based industries comprise over 68% of world GDP, up from 61% in 1990 (World Bank, 2005). Goods producing industries contribute 28% to world GDP, down from 34% in 1990; and agriculture contributes 4%, down from 5% in 1990 (ibid).

Table 1.1 Economic transformations

<table>
<thead>
<tr>
<th>Economic Activity</th>
<th>Factors of Economic Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Economy</td>
<td></td>
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<tr>
<td>Pre 1800 Harvesting</td>
<td>• Land</td>
</tr>
<tr>
<td></td>
<td>• Land owners and workers</td>
</tr>
<tr>
<td>Industrial Economy</td>
<td></td>
</tr>
<tr>
<td>18th to 20th century</td>
<td>• Labour</td>
</tr>
<tr>
<td></td>
<td>• Machinery</td>
</tr>
<tr>
<td></td>
<td>• Raw material</td>
</tr>
<tr>
<td>Knowledge Economy</td>
<td></td>
</tr>
<tr>
<td>20th century onwards</td>
<td>• Relational capital</td>
</tr>
<tr>
<td></td>
<td>• Structural capital</td>
</tr>
<tr>
<td></td>
<td>• Human capital</td>
</tr>
</tbody>
</table>

Source: Society for Knowledge Economics (2005, p.19)
In the late 20th century, the fact that traditional financial reporting (TFR) practice does not include non-financial performance indicators in organisations adversely impacts knowledge-based organisations (IFAC, 1998; SMAC, 1998; Guthrie et al., 1999; Blair and Wallman, 2000). Those that are looking to raise capital in the debt and/or equity markets are especially affected (EC, 2006). ‘New’ intangibles, such as staff competencies, customer relationships and computer and administrative systems, receive no recognition in traditional financial reporting models. Even traditional intangibles, like brand equity, patents and goodwill, are reported in the financial statements only when they meet stringent recognition criteria; otherwise, they are omitted from financial statements (IASC, 1998; IFAC, 1998).

The invisibility of intellectual capital has led to calls from regulators and practitioners, as well as academics, for intellectual capital information to be disclosed in company annual reports or in separate intellectual capital reports (Wallman, 1995; Stewart, 1997; Glassman, 1999; Guthrie et al., 1999; Holland, 2004; SKE, 2005; EC, 2006).

Also, in the past two decades it has become increasingly evident that intellectual capital represents a significant portion, often the largest portion, of a firm’s total value. While the balance sheet of a firm ordinarily shows the historical and book values of a firm’s fixed and current assets, it often fails to disclose a value for a firm’s intellectual capital. This reluctance to report on intellectual capital items has the effect of making a company appear less valuable or more valuable than is reported1, particularly when intellectual capital attributes constitute a large part of a company’s asset base.

The reporting of intellectual capital, begun by Swedish consulting firm Celemi, in 1994, pioneered the development of an ‘intangible assets monitor’ (Sveiby, 1997). Around the same time, another Nordic firm in the financial services sector, Skandia, began reporting on its intellectual capital. Skandia’s ‘Navigator’ reporting system was the result of work aimed at valuing Skandia’s knowledge capital that commenced in 1991
(Edvinsson and Stenfelt, 1999). The examples of Skandia and Celemi illustrate how extensions to traditional financial reporting practices can be engineered. Johanson et al. (2001b) identify several other firms in Sweden that developed reporting on intellectual capital around the same time as Celemi and Skandia. These include Telia, Swedebank and NCC. This community of IC reporting entities is growing rapidly. Many companies around the world now claim to be investigating the potential for reporting information on IC beyond that required to meet conventional financial accounting standards (OECD, 1999; MERITUM, 2002; Mouritsen, et al., 2003; SKE, 2005; EC, 2006).

Table 1.2 shows a number of interpretations of intellectual capital and addresses the link between IC and the structure and performance of an organisation.
Table 1.2 Various definitions of intellectual capital

- ‘Intangible knowledge and competence base that provides the capacity for organizational performance’ (Collier, 2001, p.437).


- From an accounting perspective: ‘those knowledge based items that a company owns, which will produce a future stream of benefits for the company. They can include technology, management, and consulting processes and patented intellectual capital’ Society of Management Accountants of Canada (1998: p.287, in Tansey et al., 2000, p.297).

- From a corporate strategy perspective: ‘IC is best conceived as the knowledge and creativity available to a firm to implement a business strategy that maximises stakeholder value’ (Tansey et al., 2000, p.297).

- ‘Intellectual capital can be divided into three relatively “concrete” components: one relating to human abilities, another to internal organisational structure, and a third to external structure’ (Roslender et al., 2004, p.12).
Intellectual capital

This research monograph uses the Guthrie and Petty (2000) modification of Sveiby’s (1997) tripartite IC classification. In that model, IC is divided into the following three categories, with 15 sub-categories:

- Internal: patents; concepts; models; research and development; organisational culture; and structure;

- External: relationships with customers and suppliers; brand names; trademarks; and reputation; and

- Human: individuals’ education; skills; training; values; and experiences.

The Society for Knowledge Economics (2005) proposed a tripartite map for visualising three common categories of intangible resources. This classification scheme comprises relational capital (the organisation’s relationships with external stakeholders be they suppliers, customers or others); structural capital (the structures and processes employees develop and deploy in order to be productive, effective and innovative); and human capital (the skills, attitudes, abilities, competencies and qualities of the organisation’s employees). This model also acknowledges the interconnections between organisational management and the environment within which organisations operate, and highlights the intangible costs and benefits that flow to the broader community, economy and environment as a result of organisational performance. Figure 1.1 shows this tripartite model.
**Figure 1.1** Tripartite model of organisational intangibles resources

![Tripartite model of organisational intangibles resources](image)

- Management processes & programmes
- Information systems & processes
- New product development
- Management philosophy
- Organisational structure
- Organisational culture
- Intellectual property
- Contracts
- R&D

- Company name & brands
- Alliances & partnerships
- Licensing/franchising
- Government relations
- Community relations
- Distribution channels
- Customer relations
- Financial relations
- Industrial relations
- Supplier relations

**Economic Impacts**
- Employee diversity
- Employee demographics
- Employees’ innovative capacity
- Learning & development abilities
- Educational & work-related qualifications
- Leadership & top management quality

**Environmental Impacts**

Source: Society for Knowledge Economics, (2005, p.25); and Boedker et al. (2005)

**Alternative frameworks**

Critics of traditional financial reporting have identified the need for the adoption of different techniques including ‘new’ frameworks for measuring and reporting organisational performance. These frameworks are labelled Extended Performance Management and Reporting (EPMR) frameworks (Yongvanich and Guthrie, 2006). EPMR frameworks can broadly be grouped into two categories:
• Social, environmental and sustainability frameworks, that trace stakeholder perspectives and the external impacts of organisational activity, be they environmental, social, ethical and economic; and

• Scorecard and intellectual capital frameworks, which place the management, measurement and reporting of organisational knowledge intensive resources within a strategic context.

EPMR embraces elements of both intellectual capital (including relational, structural and human capital), the triple bottom line (including social, environmental and economic impact reporting), and stakeholder interests and corporate sustainability. It is an overarching framework that embraces each of the above mentioned three categories.

*Figure 1.2 Extended performance management, measurement and reporting*
Social and environmental management and reporting has grown in importance owing to the increasing interest in the concept of sustainable development. Sustainable development is generally regarded as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED, 1987). For example, the issue of climate change and global warming is being recognised by national leaders as one of the most important issues they face. At the 2000 World Economic Forum, business leaders from throughout the world overwhelmingly voted climate change as the most significant issue facing 21st century business (Deegan, 2005).

The movement towards sustainable development has given rise to the re-emergence of the criticism that traditional financial reporting gives an incomplete account of business activities as it precludes information about an entity’s social and environmental activities (Gray et al., 1993; Gray et al., 1996; Mathews, 1997; Elkington, 1999). Traditional financial accounting has treated environmental goods as being free and in infinite supply. Consequently the use or abuse of the environment is not reflected in accounting performance indicators such as ‘profits’. Additionally, the traditional financial reporting framework ignores many social costs that an entity might have imposed upon the community within which it operates. It has been argued that there is a need to develop alternative approaches to reporting on social and environmental issues in order to account for the social and environmental impacts that organisations have on society (Deegan, 2005). The CSR literature has developed in an attempt to resolve some of the limitations of the traditional financial reporting framework. The literature provides a range of reporting approaches that seek to incorporate a firm’s social and environmental performance, as well as its financial performance.

Several international initiatives seeking to address the inherent limitations of the traditional financial reporting paradigm are reviewed in chapter two. The label EPMR is used to review trends and developments in the production and proliferation of extended performance accounts
in Australia and internationally. Common to these ‘new’ accounts of performance is a concern that performance appraisal and investment decision-making needs to look beyond the measurement and reporting of tangible resources and financial inputs and outputs (EC, 2006).

**Case study background**

To examine IC in depth, two developed nations, Australia and Hong Kong, were chosen for inclusion in this study.

**Australia**

In Australia, the contribution of service-based industries to national GDP is slightly lower than global averages, given the continued reliance on natural resources and manufacturing. Even so, the 2005 Yearbook by the Australian Bureau of Statistics shows that services contributed almost half (48.4%) to GDP in 2000-01, up from 31% in 1900-01. Agriculture, the largest individual industry in 1900-01, contributing 19.4% to GDP, accounted for only 3.7% of GDP in 2000-01. Manufacturing, the next largest industry, contributed 11.9% to the Gross Domestic Product (GDP), slightly less than its 12.2% contribution in 1900-01, but half of its contribution of 22.4% in 1950-51. The growth in service-based industries is also reflected in the changes in employment data with over 73% of the Australian workforce employed in services in 2000. At the turn of the century, the four main employment sectors in the Australian economy were: retail trade; property and business services; health and community services; and education.

**Hong Kong**

The issue of how to manage IC is a particularly important one for Hong Kong and there are unique challenges related to the management
of IC in the Hong Kong Special Administrative Region (SAR). Not the least of these challenges is the often lamented fact that Asian organisations generally have a poor record of harnessing tacit knowledge and sharing it across an organisation, thereby strongly reducing the effectiveness of their human capital (Petty and Thompson, 1999).

However, the SAR’s position as a regional hub in Asia for the financial services industry lends itself to knowledge-intensive ventures and makes it a place of unique interest to IC researchers. The uniqueness of the setting and the anticipated challenges and obstacles to the implementation of IC reporting enriches the potential for interesting and meaningful findings. A better understanding of how to report the value of IC has broad implications for maintaining the SAR’s leadership in the financial services sector; in particular, the contribution of service-based industries to national GDP is high – over 80% of GDP is service driven. Import and export trade is the largest individual industry, contributing over 20% to GDP in 2002. The next largest industries are financing and insurance at a little over 14% of GDP in 2002, and transport and storage at approximately 9% of GDP in 2002 (HKSAR, 2002-03).

Service-based industries were not always so dominant in Hong Kong. During the 1960s to 1980s there was a thriving manufacturing base. This has now been decimated with the migration north to Mainland China of over 90% of the manufacturing entities that previously operated in Hong Kong.

Although the focus of this study is on the firm level, there is also much evidence to support the assertion that intellectual capital is instrumental in driving national economic performance (Mouritsen, 1998; Burton-Jones, 1999; OECD, 1999, 2000; SKE, 2005; EC, 2006). This is probably because many nations have transformed themselves from having an industrial base to being a knowledge economy (Edvinsson and Malone, 1997; ICAEW, 1998; Guthrie et al., 1999; EC, 2006). In line with a shift in the type of businesses populating most developed economies, from capital intensive to knowledge intensive, it is expected
that companies in Asia will make greater efforts to report on their intellectual capital in much the same way as some companies in Europe have been doing.

**Aims of the research**

Therefore, the goal of this study is to further the understanding of when, and how, organisations voluntarily report their intellectual capital. The overall objective of this study is to apply some rigour to the investigation of the voluntary disclosure of intellectual capital by organisations in their annual reports – a topic that has generated much interest within the accounting profession, but for which scant empirical evidence exists (Marr *et al.*, 2003). Following on from this overall objective, this study has five aims. First, it sets out to review and synthesise the ICR literature that discusses how, and why, firms are reporting intellectual capital voluntarily in their annual reports. The review intends to elucidate important theoretical and empirical contributions relating to the identification and reporting of intellectual capital in annual reports. Understanding the state of play is an important step in identifying any gaps in the literature and establishing possible future paths for further analysis. Second, the study seeks to gather evidence in support of the construction of a classification schema, which can be applied in conducting research into the voluntary reporting of intellectual capital in company annual reports. Third, the study seeks to identify the voluntary disclosure of intellectual capital in the annual reports of a sample of listed companies, located in both Australia and Hong Kong. Fourth, the study aims to determine the role that company size plays in the voluntary reporting of intellectual capital in company annual reports. Finally, the study seeks to identify the policy implications of the research and avenues for future research into ICR.

This study will investigate the voluntary disclosure by companies of their intellectual capital attributes in annual reports, in both Australia and
Hong Kong. An earlier literature review by Guthrie and Petty (2000) had revealed annual reports to be an important communication tool. Thus, the annual report was chosen as the document for examining voluntary disclosure. When performing content analysis in corporate social, ethical and environmental reporting, the impact of size is commonly assessed (Gray et al., 1995a; Mathews, 1997). In line with the exploratory mission of this study, the effect that size has on voluntary disclosure practices is also assessed.

**Outline of the research monograph**

This chapter has briefly introduced the aims of this research. The remainder of this research monograph is structured as follows; chapter two outlines contemporary international developments in IC; chapter three provides a brief review of the academic literature associated with intellectual capital identification, measurement, reporting and management; chapter four outlines and discusses the research methods used in the project including country selection, content analysis, interview data collection and the sample years; chapter five outlines and discusses the content analysis results for Australian and Hong Kong annual reports; and chapter six summarises the research findings, details the limitations of the study and offers suggestions for further research.

**Endnote**

1 To date there has been too great a focus on intellectual assets – and to some extent an implied equivalence between intellectual assets and intellectual capital. Caddy (2000) considers the issue of another term in the intellectual capital equation, namely, intellectual liabilities. However, to date we have not developed a research instrument that could capture the reporting or non-reporting of intellectual liabilities or what is known as ‘negatives’ in the social and environmental literature.
Introduction

This chapter provides a brief overview of the growing endorsement by North American, European and Australasian agencies for public disclosure of extended performance information in the form of legislation, policy debates and national guidelines. These developments are investigated below from a national perspective.¹

The first focus is on regulated EPMR (Austria and Denmark) is examined, followed by the existence of voluntary reporting guidelines (Europe, Australia and Japan). The role that Management Commentary (MC)² plays in communicating performance measures to stakeholders is investigated. Finally, a summary and conclusion is offered.

Regulated intellectual capital

There are nations that have legislated the reporting of intellectual capital information. For example, in Austria, the Austrian University Act 2002 (Leitner, 2005) requires state universities to prepare and disclose ICR. The reports must be structured into human, structural and relational capital and include an obligatory set of performance measures for each category. The ICR ‘informs about the past development of the university as well as forecasts of performance outcomes’ (Schaffhauser-Linzatti, 2004, p.2). It is designed to provide an inventory of the intellectual capital that exists within the university and serves as an important link to the university’s budget system.

Besides providing stakeholders with detailed information, the Act asserts that ICR for Austrian universities should also serve as an
instrument for management control. In the course of the preparation of ICR, universities have to discuss the targets and strategy they set, they have to interpret indicators, and they therefore learn about their knowledge production process (Leitner, 2005).

The content of the universities’ ICR is explicitly defined by law (UG, 2002) and includes:

...the university’s activities, social goals and self-imposed objectives and strategies; its IC – broken into human, structural and relationship capital; and the processes set out in the performance agreement between the university and the Ministry, including the university’s outputs and impacts (Leitner et al., 2005, p.531).

The detailed structure and design of the University ICR (UICR) is regulated by an order of the Federal Minister of Education, Science and Culture. This order³ was issued on 15 February 2006. It specifies the quantitative indicators that relate to intellectual capital as well as the processes set out in the performance agreement. However, in its present form the UICR is mainly a statistical instrument which pretends to be applicable for management and control of the universities’ intangible assets and performance, but is not.

The Danish Ministry of Science, Technology and Innovation (DMSTI) has published guidelines for organisations illustrating the content, structure and format of Intellectual Capital Statements (ICS) (Mouritsen et al., 2003). The guidelines consist of two parts. The first informs organisations on how to prepare ICS. The second advises users on how to read and analyse the reports. The reporting categories are set within a strategic context and consider customer use value and an organisation’s knowledge narrative. The reporting model has been piloted by over 150 Danish organisations over a five-year period.

The Danish Guidelines (Mouritsen et al., 2003) were based on the experience of Danish companies. They state that the ICS is both a management tool that may be used to enhance value creation in organisations and a reporting device to communicate about knowledge
resources to internal and external stakeholders. The ICS consists of four elements that link users of the organisation’s goods or services with the organisation’s need for knowledge resources. The four elements express the organisation’s knowledge management. They are: knowledge narrative; management challenges; initiatives; and indicators.

The knowledge narrative expresses an organisation’s ambition to increase the value a user receives from the organisation’s goods or services. The management challenges highlight the knowledge resources that need to be strengthened through in-house development or through outsourcing. The initiatives are concerned with how to compose, develop and procure knowledge resources and how to monitor their extent and effects. The indicators make it possible to assess whether the initiatives have been launched and to evaluate if the management challenges have been met.

The Danish Financial Statements Act requires reporting on intellectual capital resources and environmental aspects in the management report if it is material to providing a ‘true and fair’ view of the company’s financial position (KPMG, 2005). Therefore, the Danish Financial Statements Act allows a description of the company’s knowledge resources to be put into an ICS that can be included as a supplementary report. When a supplementary report is used, the board of directors and the management are responsible for ensuring that the ICS provides a ‘true and fair view’. The information must be relevant, reliable and comply with fundamental statutory conditions.

Voluntary guidelines for intellectual capital

Currently there are several international and national guidelines which are voluntary for management and for the reporting of intellectual capital-type information. Several of these will be examined in more depth, including the various European projects, the Australian Guiding Principles on Extended Performance Management (EPM)

The European Commission has recently been particularly active in initiatives for measuring, managing and reporting on intellectual capital. There were three recent research projects:

The Meritum/E*Know-net (1999-2003) project led to the establishment of guidelines to assist companies in the development of their ability to identify, measure and control intangibles and to provide a guide for organisations willing to disclose information on the intangible determinants of their value creation capability. The MERITUM project, a European consortium comprising researchers from six European countries (Denmark, France, Finland, Norway, Spain and Sweden), developed the ‘Guidelines for the Management and Reporting on Intangibles’ (MERITUM, 2002).

These guidelines are based on best ICR practices observed among 80 European firms, validated through a Delphi study. The guidelines have both an internal and an external focus, and they are composed of two main parts: first, a model for intellectual capital management; and second, a set of recommendations on how to prepare ‘Intellectual Capital Reports’ (Guimón, 2003, pp.3-4). The guidelines classify intellectual capital into the categories of human capital, structural capital and relational capital. The guidelines also comprise three phases:

- Identification: after clearly articulating the ‘vision of the firm’, this phase consists in identifying the ‘critical intangibles’ required to attain the firm’s strategic objectives. Next, the stock of critical ‘intangible resources’ is identified, along with those intangibles the company lacks and those that have to be acquired or developed.

- Measurement: this phase involves defining specific financial and non-financial indicators to be used as a proxy measure of the different intangibles which were identified in phase 1. The
guidelines explain the desirable characteristics that these indicators should have and provide examples of good practice.

- Action: this phase entails the consolidation of the intangibles management system and its integration within the firm’s management routines. It is a learning process that involves monitoring and evaluating the effect that the different activities have on the firm’s intangible resources, critical intangibles and strategic objectives.

The guidelines describe how to prepare an ICR. First, the ‘vision of the firm’, that is, a narrative of the firm’s strategic objectives and critical intangibles, needs to be prepared. Second, the ‘summary of intangible resources and activities’, which represents a disclosure of the activities to be developed in order to attain the strategic objectives, must be written. And third, the ‘system of indicators’, which allows the reader to assess how well the company is doing in attaining its objectives, has to be developed. These guidelines recommend classifying the different intangible resources and activities, as well as their corresponding indicators, under the three categories which jointly comprise the intellectual capital of the firm.

The second EC project was the Policy-Making Reporting and Measurement Intangibles Skills Development Management (PRISM) research project. At the core of PRISM is the ‘value creation space’. This is where IC leadership faces the challenge of leveraging tangible and intangible assets over which ownership rights can be elaborated, along with the intangible competences and latent idle capabilities (i.e. the potential capital) (EC, 2006). Tangible assets include physical capital such as land and buildings, and plant, machinery and equipment. Intangible assets include packaged and codified assets such as software, brands, trademarks, licenses, and legal intellectual property rights (IPR) of scientific discoveries. Intangible competences embrace the organisational capital such as culture, networks and human capital, which is effectively leased for productive use from the individual knowledge
workers. Latent capabilities are what investors, in particular venture capitalists, are interested in.

The third EC project was to stimulate ICR in research-intensive Small and Medium-sized Enterprises (SMEs) (EC, 2006). This was known as the RICARDIS project and it adopted the MERITUM (2002) classification of intellectual capital. The objective of this project was to make a number of recommendations to research-intensive SMEs and private stakeholders, and to identify public policy options to stimulate research-intensive SMEs in Europe so as to develop an ICR culture.

At the centre of this assessment is a questioning of the quality of the decisions being made by management, which relate to the future business prospects. The IC statements are primarily about internal reporting, management and control of the business, but this internal focus is an essential prerequisite for management to communicate what they are doing to external audiences and becomes particularly important when the organisation is seeking finance from banks or equity from investors. Pundits argue that IC reports will improve an organisation’s internal processes for managing its overall resources, both tangible and intangible, and that they will provide a sound basis for improving the quality of the dialogue with financiers by explaining how the organisation is building the resources and capabilities necessary to succeed in the future. It is further hoped that the IC statements produced by SMEs will help to clarify the way in which competitive advantage is being built by providing a narrative which explains the business model being used. The EC (2006) states that for research-intensive SMEs, the ability to provide a credible IC picture of what is being done and why this will result in future success, is particularly important.

Other regulatory bodies have also been actively involved in setting guidelines. In Norway, for example, the Norwegian Association of Financial Analysts has developed a set of guidelines for the voluntary reporting of non-financial information. An acknowledgement that the present methods for reporting provide insufficient information compared
with the information needs of the firm’s stakeholders, and that value creation is insufficiently reported through the existing historical cost-based accounting models, was a catalyst for the development of the guidelines. The idea behind the project is to provide guidelines for the management and boards of companies wishing to report information above and beyond that required by law. As a result, it is expected that understanding among a firm’s stakeholders regarding the way in which a firm creates value will improve. Hopefully, this will lead to reduced volatility in the firm’s share price. The main message in the guidelines is that the firm should report externally the resources that are used for the internal management of the firm. Information and measures to be disclosed should relate to value-creating activities as they relate to customer capital, human capital, structural capital and innovation (Roos et al., 2005).

In Australia, the government has set up the Australian Government Consultative Committee on Knowledge Capital (AGCCKC) to:

*Produce a set of comprehensive knowledge capital standards whose application across the public and private sectors will contribute to the development of Australia as a competitive knowledge economy* (AGCCKC, 2004, p.2).

As an initial step, the Australian Society of Knowledge Economics produced the ‘Australian Guiding Principles on Extended Performance Management’ (SKE, 2005). This comprised a set of guidelines designed to inspire Australian organisations to measure, organise and report their knowledge-intensive resources for performance. It is hoped that these voluntary guiding principles for extended performance management will:

*Provide a broad and balanced perspective on organisational health and wealth. They will help define the capacity an organisation has to create value in the future. They make visible the often overlooked...*
and taken for granted knowledge intensive organisational resources, thus creating new opportunities for management intervention and financial valuation (SKE, 2005, p.4).

The Australian Guiding Principles are a way of visualising the contribution that knowledge intensive resources make to the value creating processes of organisations, and can be used from two main perspectives. First, from an internal management perspective, EPM provides managers with a practical tool for gaining a better understanding of knowledge resource dynamics and business performance. Therefore, it represents a useful device for improving strategy formulation and resource allocation processes as well as for motivating employees. The focus is on the provision of a set of phases and steps for the management of knowledge intensive resources that can help managers in operationalising EPM.

Second, from an external reporting perspective, EPM can be used to provide information on knowledge resources and, therefore, to improve the decision-making process of stakeholders and focusing on the analysis of the structure of the report. The EPM report is made up of three different elements: strategic objectives, managerial efforts and indicators. Each element is defined in terms of the knowledge resource framework: relational capital, human capital and structural capital. Therefore, it is possible to differentiate strategic objectives related to relational capital, from those related to human capital and structural capital.

Since 2002, Japan has given particular attention to promoting the creation and exploitation of intellectual assets, which are expected to become a source of Japan’s national wealth (Johanson et al., 2006). The Interim Report by the sub-committee on Management and Intellectual Assets that was published in August 2005, states (p.5):

\[\text{…unless Japanese corporations make efforts to understand, manage and utilize intellectual assets and unless stakeholders properly}\]
assess such measures by the corporations, it would be difficult for our entire nation [Japan] to increase national wealth through the efficient allocation of resources and vitalisation and promotion of economy, namely to become a society where higher added value is realised.

The Ministry of Economy, Trade and Industry (METI) proposed a number of initiatives and guidelines. The last step in the process was the release of the ‘Guidelines for Disclosure of Intellectual Assets Based Management’ in October 2005. The focus of these recent guidelines is on the relevance of intellectual assets management of companies. METI’s view is that:

*Intellectual assets based management is a management itself rather than an aspect of management. It is a management method to enhance corporate value with an eye to many stakeholders. Based on the pursuit of interest, this method intends to make sustainable profits and growth through making the best use of the corporation’s own ability. In that context, this guideline would also be a great help in preparing and appreciating reports on CSR and sustainability reports (METI, 2005, p.1).*

The guidelines aim to help managers produce an intellectual assets based management report that provides a deeper understanding of how the combination and utilisation of intellectual assets create value. The intellectual assets based management report explains how the corporation recognises its own intellectual assets, how it uses them for differentiation and value creation, and pays special attention to the relevant stakeholders of the corporation.

The stated objectives of the intellectual assets based management report are:
top managers should inform business activities to produce sustainable profits and enhance corporate value to stakeholders in a story that is easy to understand; and

managers should share a sense of value with stakeholders.

The intellectual assets based management report is composed in two sections: the main body and the attachment. The main body of the report is composed in three sub-sections: general; from past to present; and from present to future.

The first sub-section introduces the strategic intent of the corporation and its management philosophy. This sub-section provides a general description of the business, and of the corporation’s competitive environment and main stakeholders. In the second and third sub-sections, the relationship between intellectual assets and the strategic intent of the corporation is considered using two complementary perspectives: an analysis of the corporation’s past and a look to its future. The analysis of the past is an assessment of how previous strategies and actions have influenced the assets and methods developed by the corporation and, therefore, provides a link between the strategic intent and intellectual assets in a backward looking perspective. The third sub-section – ‘from present to future’ – is based on the results of the analysis of the past and contains the future management policies i.e. the strategy of the corporation. The guidelines suggest that the policies may be described both in reference to risks and opportunities of the external environment, and in reference to the assets and methods of the corporation.

The guidelines are developed for the external reporting of the corporation’s intellectual assets based management. This is accomplished via the disclosure of narratives that explain the strategy, strengths and investments of the corporations, and via the disclosure of supporting indicators. The guidelines do not provide an optimal number of indicators, but it is stated that, on average, in order to support the story in the main body, five to ten indicators may be sufficient. Also, there is
no specific set of measures provided that can be considered valid for any corporation, although a table that lists possible indicators is provided at the end of the guidelines. Companies can choose among the list provided or use their own indicators.

**Intellectual capital and management commentary**

In Canada, the content of the Management Discussion and Analysis (MD&A) is mandated by the provincial securities regulatory bodies, collectively known as the Canadian Securities Administrators (CSA). In December 2003, the CSA issued new MD&A requirements applicable in all securities jurisdictions in Canada, contained within National Instrument (NI) 51-102 Continuous Disclosure Obligations. CSA Form 51-102FI, Part 1(a) describes MD&A as:

*...a narrative explanation, through the eyes of management, of how your company performed during the period covered by the financial statements, and of your company’s financial condition and future prospects.*

In the US, the Sarbanes-Oxley Act of 2002 (SOX) has been the single most important external influence on financial and non-financial reporting. SOX amends the U.S. Securities Exchange Act of 1934, and applies to publicly traded companies in the United States, including each of their divisions and all of their wholly-owned subsidiaries. SOX also applies to any non-US public multinational company whose securities are registered with the U.S. Securities and Exchange Commission (SEC). SOX largely focuses on the corporate governance and controllability of accounts and there is little which explicitly requires a formalised disclosure of intangibles. However, Section 409 requires issuers to disclose to the public, on an urgent basis, information on material changes in their financial condition or operations. These disclosures
are to be presented in terms that are easy to understand. This begins to suggest a requirement for reporting on intellectual capital resources (assets and capabilities), though the language is too broad for anyone yet to understand its full implications (Roos et al., 2005).

In June 2003, a revision of a EU directive on accounting\(^4\) on management reporting was issued (2003/51/EC – also known as ‘Modernisation Directive’). In this directive, it was suggested that member countries require that listed companies disclose comprehensive analyses of the balance between business processes, business results and current status in the annual reports for fiscal operating periods that start after 1 January 2005. The main disclosures are:

- non-financial information and indicators (KPI), including ‘information related to the environment and employees’, in addition to the financial statements, and in the scope needed to understand the business processes, results and current status; and

- possible future growth of corporations.

In more detail, the requirements for management-type reporting are set out in various legal instruments adopted by the EU. In particular the Fourth and Seventh Company Law Directives (the ‘Accounting Directives’), as updated by the Modernisation Directive and enhanced by the Transparency Directive. The Accounting Directive states:

\[
\text{To the extent necessary for the understanding of the company's development, performance or position, the analysis shall include both financial and, where appropriate, non-financial key performance indicators relevant to the particular business, including information relating to environmental and employee matters ... the annual report shall, where appropriate, include references to and additional explanations of the amounts reported in the annual accounts.}
\]
In December 2004, the EU issued the 2204/109/EC Directive (also known as ‘Transparency Directive’), which must be implemented by all Member States within two years. Under the directive, all security issuers will have to provide annual and half-yearly financial reports. These reports must include a management report prepared in accordance with the Accounting Directives. The half-yearly interim management report:

...shall include at least an indication of important events that have occurred during the first six months and their impact on the financial statements together with a description of the principal risks and uncertainties for the remaining six months of the financial year.

The requirement to prepare a business report was extended to all limited companies in 1986. This has evolved to the management reporting we see today, which is based on the legal requirements of the EU and is almost identical to the EU content mentioned previously.

The German tradition of management reporting goes back to 1931, when all public limited companies were required to prepare a business report. Additionally, German Law stipulated the formation of an accounting standard by the German Accounting Standard Board, which announced German Accounting Standard 15 (GAS15) on 25 February 2005. The Principles of disclosure standard of GAS15 are:

- significant risks and opportunities that decide future management are to be communicated;

- there should be a focus on sustainable value creation, credibility (consistent with financial information and other statements), clarity and transparency (historical consistency), integrity (all information users require is provided), and information on the management horizon of the top managers;
that the main factors that affect changes in the future value of a
corporation are disclosed and explained;

the disclosure of off-balance information is required. The disclosure
of intangible assets is also recommended; and

non-quantitative information is disclosed for at least the next two
fiscal years.

In the UK, reacting to the revision of the EU accounting directive,
the UK Department of Trade and Industry (DTI) proposed a compulsory
reporting requirement for UK listed organisations to introduce an
‘Operating and Financial Review’ (OFR) section in their annual reports
to provide a more strategic and forward looking perspective and place
a greater emphasis on the importance of so-called intangible, largely
human assets’ (CIPD, 2004). The final OFR regulation was passed
into law in March 2005, taking effect for financial years beginning on
or after 1 April 2005.

The DTI also originally specified that the UK Accounting Standard
Board (ASB) was responsible for the statutory requirements of the OFR.
Therefore, in May 2005, the ASB issued the Reporting Standard 1 (RS1),
a principle-based standard that specified the OFR.

In order to meet this statutory requirement, RS1 set out the key
elements of the disclosure framework. These included: an analysis of
the market; the competitive and regulatory environment; the entity
objectives and strategies; the development and performance of the
business both in the financial year under review and in the future; and,
the resources, principal risks, uncertainties and relationships that may
affect the entity’s long-term value. In relation to the resources, the OFR
should:
…set out the key strengths and resources, tangible and intangible, available to the business, which will assist in the pursuit of its objectives and, in particular, those items that are not reflected in the balance sheet. Depending on the nature of the business, these may include: corporate reputation and brand strength; natural resources; employees; research and development; intellectual capital; licenses, patents, copyright and trademarks… (Accounting Standards Board (UK), p.12).

The OFR should also include ‘details of particular matters’ such as: environmental matters; information of an entity’s employees; and social and community issues (RS1, p.12). The narrative in the OFR should be complemented with key performance indicators (KPI).

However, in November 2005 the government’s intention to remove the statutory requirements for the OFR was announced, and regulations to repeal the requirements came into effect in January 2006.

The decision to withdraw the statutory requirements for the OFR was made on the grounds that the central requirements of the EC Business Review are largely identical to those of the statutory OFR, and the Government has a general policy not to impose regulatory requirements on UK businesses over and above the relevant EU requirements.

As a consequence, the mandatory regulation of RS1 has been converted into a ‘Reporting Statement of Best Practice on the OFR’, which has a persuasive rather than a mandatory force. As a consequence, the statutory underpinning of OFR has been removed.

Summary

The above indicates several developments concerning various guidelines, frameworks and regulations relating to intellectual capital. The invisibility of intellectual capital has led to calls from regulators and
practitioners, as well as academics, for intellectual capital information to be disclosed in company annual reports via management commentary or in separate intellectual capital reports. This realisation is underscored by observers, who argue that organisations need to go beyond disclosing just financial performance metrics and also report non-financial indicators, so that a more balanced approach to performance can be found.

**Endnotes**

1 Others have analysed these extended performance reports developments from a theoretical or more critical perspective. For instance, see AAAJ special EAA section, Guthrie and Boedker, 2006; Gray, 2006; Johanson et al., 2006; and Mourtisen, 2006.

2 The Management Commentary (MC) is similar to the Management Discussion & Analysis (MD&A) in Canada, Management Reports (MR) in Europe, and Operating and Financial Review (OFR) in the UK. This analysis is undertaken as the contemporary MC standards include commentary about an entity’s performance which traditional financial statements do not, and include extended performance information such as non-financial measures in annual reports.


Introduction

This chapter synthesises the ICR literature and considers how, and why, firms voluntarily report intellectual capital in their annual report. The review elucidates important theoretical and empirical contributions relating to the identification and reporting of intellectual capital in company annual reports. Understanding the state of play is an important step in identifying any gaps in the literature and establishing possible paths for future progress.

This chapter provides an introduction to the limitations of current financial reporting practice. Secondly, it examines various theories of voluntary reporting, and then examines the related literature on intellectual capital management, measurement and valuation models. The chapter then reviews research activities undertaken in the field of intellectual capital reporting in various nations. Finally, it summarises the contributions made by the literature review and identifies how they relate to the purpose of this research monograph.

The limitations of traditional financial reporting

With the emergence of the knowledge-based economy and the string of recent corporate collapses, greater attention has been drawn to the ability of the traditional financial reporting framework to meet the needs of financial statement users (Byrnes and Henry, 2001; McNamee, 2001; Byrnes and Der Hovanesian, 2002; Byrnes et al., 2002; Fairlamb et al., 2002; Reed et al., 2002; Barsky et al., 2003; Boyle, 2003; Buffini, 2003; Collins, 2003; Sykes, 2003; Weber, 2003). The widening gap
between market and book values suggests that the traditional financial reporting framework presents an incomplete account of a firm’s value. An incomplete view provided by a company balance sheet is an important issue that needs to be resolved because it can lead to many problems such as misallocation of capital, under-investment in intellectual capital creating activities (Carroll and Tansey, 2000), higher cost of capital and insider trading (Leadbeater, 1999).

Brennan and Connell (2000) indicate that many of these differences in market and book values can be explained by the inclusion of intellectual capital items that are not recognised under the traditional financial reporting framework. With the important role that intellectual capital plays in creating a firm’s sustainable competitive advantage, information on a firm’s activities for integrating, creating, transferring and applying intellectual capital can provide users with a more forward-looking view of the firm. Information on intellectual capital enables information users to understand how the firm’s value is created or diminished, which allows them to better assess the future viability and the ‘true’ value of the firm.

**Why disclosing intellectual capital is important**

Why do firms voluntarily report intellectual capital? It is useful to identify the different incentives for reporting and consider why some firms report while others do not. A discussion of these issues sheds some light on the recommendation that traditional financial reporting models should be extended to permit, and encourage, the disclosure of intellectual capital in company annual reports.

There are numerous incentives for firms to voluntarily report on their intellectual capital. The overriding incentive for most firms to voluntary report information is to ‘render the invisible visible’ (Cooper and Sherer, 1984) in line with the axiom ‘what gets measured gets managed’. This view is consistent with both stakeholder theory and legitimacy theory. Incentives to report can be classified into those relating to the external
environment that impact the firm and those that relate to internal firm activities (Guthrie et al., 1999). This is shown in Figure 3.1.

**Figure 3.1 Incentives to measure and report intellectual capital**

In terms of external incentives, there is growing evidence to suggest that both resource providers and other stakeholders respond favourably to organisations that report on their intellectual capital (Lev, 1999, 2001; Garcia-Ayuso, 2003). With access to intellectual capital reporting, resource providers have a better means of assessing a firm's value. This typically resolves some uncertainty about the firm, thereby improving the stock price (Edvinsson and Malone, 1997; Stewart, 1997). This is consistent with institutional theory and is discussed in greater detail later in this chapter. Further, there is evidence that other stakeholders generally hold the firm in higher regard because the additional information provided about, for example, human resources, as part of a broader ICR, conveys the sense that these human assets really matter to the firm (Bukh et al., 1999; Boedker et al., 2005). These findings are
consistent with stakeholder theory, which potentially can explain the voluntary disclosure of intellectual capital.

Reporting intellectual capital has the overall effect of enhancing the image and reputation of a firm among external interest groups. These findings are consistent with legitimacy theory, which is discussed below as having the potential to explain the voluntary disclosure of intellectual capital.

From an internal perspective, firms that have engaged in attempts to measure and report their intellectual capital typically identify the benefits as being increased operational efficiency, improved employee morale and motivation, and better resource allocation within the organisation (Bukh et al., 1999; Flamholtz and Main, 1999).

**Capital market effects**

It will nearly always be the case, particularly for listed entities, that the capital market will be ahead of annual reports in valuing a company. The information contained in annual reports is, in most instances, factored into the market price long before the reports are distributed by the company after the year end. However, the value of intangibles is not something that the capital market appears to have estimated terribly well (Lev and Mintz, 1999). Were it the case that the market capitalisation of a company was a reflection of its true worth, then there would not have been the number of instances where companies had been bought for amounts far in excess of their market capitalisation.

Part of the difficulty the market faces in valuing a firm lies in the fact that much of the value often rests in intellectual capital – something which is not formally measured and reported (Marr et al., 2003). Healy et al. (1999) found that increased disclosure levels led to an increase in the stock price. This result, and the work of Garcia-Ayuso (2003) and Lev (1999) suggest a positive correlation between intellectual capital disclosure and market capitalisation. Also, similar findings are proposed
in Johanson et al. (2001a; 2001b). Further, Hansson (1997) suggests that there is a significant abnormal return on shares in knowledge-intensive firms listed on the Stockholm stock exchange in the 1990s.

An important incentive for firms to voluntarily report on their intellectual capital, therefore, comes in the form of the benefits that are likely to accrue to the firm from enhancements in their market values and also from a lower cost of capital (Lev, 2001). Grojer and Johanson (1999) posit that disclosing information about intellectual capital would improve capital market efficiency by causing a reduction in the cost of capital as stock prices rise. Without intellectual capital information the capital market is, therefore, inefficient. Lev (1999) states that this inefficiency results in an ‘uncertainty premium’ that investors require in order to convince them to invest in a business that is opaque in respect of information on its intellectual capital. A direct consequence of this lack of transparency is an increased cost of capital, which leads to lower investment and growth (Lev, 1999). Retarded investment may have dramatic social consequences, manifested, for instance, in the form of inhibited growth in sectors such as health and general science that are increasingly important to ensuring a good quality of life in economies with ageing populations. In a situation like this it seems, therefore, that not reporting intellectual capital actually destroys value (Lev, 1999).

Garcia-Ayuso (2002) continued this theme by noting that the absence of intellectual capital information is likely to make stock prices more volatile. Such volatility creates uncertainty that increases the spread in bid versus ask prices (Boone and Raman, 1999). Significantly, in the light of recent high profile corporate accounting scandals (e.g. Enron, Worldcom, etc.), and the damage done to small investors in those companies, the information asymmetry due to the absence of intellectual capital information increases the opportunity for insider gains. Such gains effectively represent an appropriation of wealth by larger shareholders or by insiders who are more likely to be in the know
when it comes to the value of a company’s intellectual capital (Aboody and Lev, 2000).

Lev (1999, p.7) also makes a convincing argument in favour of companies disclosing information on their intellectual capital by stating that there is a need to restore relevance to accounting:

_When the reports are not informative, the information conveyed by them will be largely unrelated to capital market variables … The information conveyed by key financial variables in US corporate financial statements has become less relevant to the valuation of securities in capital markets. This, despite the constantly increasing demand for valuation-relevant information by investors, and the continuous efforts of policymakers (SEC, FASB) to improve the quality and reliability of financial information._

Further evidence witnesses the strong demand for, and use of, corporate intellectual capital information by fund managers and analysts, although there are considerable difficulties faced by market participants in satisfying these needs (Holland and Johanson, 2003). Holland and Johanson (2003) specifically examine the use of human capital information by capital market actors. They posit that participants in the capital markets lack the necessary understanding required to measure the potential for human capital to make a contribution to the firm. Further, even in cases where there is some understanding of the connection between human capital indicators and firm value, capital market actors may still be reluctant to invest because of uncertainty over the reliability of the indicators used to measure human capital. Holland and Johanson (2003) note that a further, and perhaps more difficult, hurdle to overcome relates to the expectations placed on the firm by the capital market and the mismatch in market and firm cultures. Specifically, although firms may change their reporting by adopting measures of intellectual capital,
the market may neither understand nor reward such adoption. It is unlikely that this issue is one that will be resolved quickly.

Following these earlier findings on the ramifications to the capital market of not having sufficient insight into intellectual capital, Garcia-Ayuso (2002) argues that current accounting regulations must be tightened by standard-setting bodies to avoid the inefficient valuation of companies and to ensure that full, relevant, disclosure of intellectual capital is made.

Investigating the extent to which companies currently voluntarily report on their intellectual capital could be instructive to policy makers in terms of providing them with an understanding of the reporting that some companies already observe, thereby establishing a potential framework for the drafting of policy prescriptions at some future point in time. The gap between advocates of ICR and that which is observable in practice is examined in this research.

**Theories related to voluntary reporting and annual reports**

There are several theories that might explain why companies choose to voluntarily report on their intellectual capital. These include legitimacy theory, institutional theory and stakeholder theory. The next sub-sections summarise these theories that help explain much of what is currently observable in practice.

**Legitimacy theory**

Legitimacy theory provides one framework for explaining why firms make voluntary disclosures to improve their external image and reputation. Suchman (1995, p.574) states that legitimacy theory is:
...a generalised perception or assumption that the actions of any entity are desirable, proper, or appropriate within some socially constructed system of norms, values, belief and definitions.

Companies that ignore calls for a change in behaviour or practice run the risk of creating a legitimacy gap (Sethi, 1979). One way for companies to address this issue, or to avoid creating a gap, is to disclose information (Dowling and Pfeffer, 1975). It is apparent that this is the motivation for disclosures made by several companies in Europe and is also a driving force behind the establishment of several national think-tanks set up to examine reporting models (DATI, 1998, 2000; Guthrie et al., 1999; MERITUM 2002; Boedker et al., 2005).

From a legitimacy theory perspective, a company would voluntarily report on its activities if management perceived that these particular activities were expected to be undertaken by the communities in which it operated. Legitimacy theory relies on the notion that there is a ‘social contract’ between the company and the society in which it operates. The social contract is used to represent the multitude of expectations that the society has as to how the organisation should conduct its operations. These societal expectations are not fixed, they change over time. This requires a company to be responsive to the environment in which it operates (Deegan, 2000).

Lindblom (1994) proposes that if an organisation perceives that its legitimacy is in question it can adopt a number of combative strategies. First, the organisation can seek to educate and inform its ‘relevant publics’ about actual changes in the organisation’s performance and activities. Second, it can seek to change the perceptions of the ‘relevant publics’ – but not change its actual behaviour. Third, it can seek to manipulate the perceptions of the ‘relevant publics’ by deflecting attention from the issue of concern to other related issues through an appeal to, for example, emotive symbols. Finally, the organisation might seek to change external expectations of its performance. According to Lindblom, a company
can use the public disclosure of information to implement each of the above strategies. Certainly, this is a perspective that many empirical studies of social and environmental reporting (SER) have adopted to explain voluntary disclosures.

In a legitimacy theory framework, organisations must continually appear to be operating in a manner that is consistent with societal values (Guthrie and Parker, 1989, 1990). This is often achieved through communication via company prepared reports. Lindblom (1994) suggests that organisations may use disclosures to demonstrate management’s concerns for societal values, or to divert community attention from the prevailing negative impact of the organisation’s activities. A number of prior studies have examined voluntary annual report disclosures and reviewed the reporting of social and environmental accounting (SEA) information as a method that organisations used to respond to public pressure (Guthrie and Parker, 1989, 1990; Patten, 1991, 1992; Deegan and Rankin, 1996; Walden and Schwartz, 1997; Neu et al., 1998).

A greater number of firms in Europe, in Sweden and Denmark in particular, may have embraced intellectual capital reporting because close proximity and lots of publicity has led some firms to play a game of ‘follow the leader’ and mimic the efforts of companies recognised as ‘best practice’ organisations. They may do this for any one of a variety of well-documented reasons, including a desire for legitimacy within a visible and connected business environment (Davis, 1991; Palmer et al., 1993; Haunschild, 1994). Pfeffer and Salancik (1978) highlight the importance of being perceived as legitimate by pointing out that organisational legitimacy is important in ensuring continued inflows of capital, labour and customers.

There are many different ways for a firm to legitimise its activities. Reporting on its intellectual capital is one of several options to focus attention on the firm and legitimise its status. Finite resources impose constraints, meaning that activities viewed by management as being high-
priority legitimisation activities are likely to be done first. The extent to which firms voluntarily report their intellectual capital information may be a proxy measure of how important firms consider intellectual capital as a means of establishing their status in the business community and with their relevant publics (Dowling and Pfeffer, 1975).

Content analysis can be used to measure the intellectual capital reporting of companies. Companies are more likely to report on their intellectual capital if they feel it will legitimise their status within certain groups. Companies rich in intellectual capital are more likely to have a need to do this as they cannot legitimise their status via the hard assets that are widely symbolic of traditional corporate success (Guthrie et al., 2003). The extent of intellectual capital reporting has most often been measured using content analysis (Guthrie et al., 1999; Brennan, 2001; Bozzolan et al., 2003). Thus legitimacy theory, intellectual capital reporting and content analysis are entwined.

**Institutional theory**

Size may determine to some extent which firms make voluntary disclosures of intellectual capital; larger firms have the resources to take initiatives that may possibly become core to future success (Guthrie and Petty, 2000). Large companies are better positioned to be industry leaders than other organisations. This phenomenon is well documented in the institutional theory literature, which explores why a population of organisations becomes more homogeneous over time (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Tolbert and Zucker, 1983).

Firms may anticipate the perceived, inevitable direction of mandatory reporting, and respond just ahead of the pack of firms that will follow. The incentive to do this is resource-based (Haunschild, 1994). Firms will do what they believe they must do in order that access to capital and continued support from the financial markets is given (Lev, 2001). This is consistent with a core dimension of resource dependency,
which suggests that larger and better-resourced entities will lead others because they are in a position to do so, and will be expected to do so. Ultimately, this further empowers them as they are seen to be model organisations that other organisations can efficiently follow (March and Olsen, 1976; Meyer and Rowan, 1977). A more pragmatic reason for taking a specific interest in large firms is that they are likely to possess more intellectual capital.

**Stakeholder theory**

Stakeholder theory also has the potential to explain voluntary intellectual capital disclosure practices. According to stakeholder theory, an organisation’s management is expected to perform activities according to the expectations of its stakeholders and to report on those activities to those stakeholders (Clarkson, 1995).

The theory suggests that all stakeholders have a right to be provided with information about how organisational activities impact upon them, even if they elect not to use the information, and even if they cannot directly play a constructive role in the success of the organisation (Deegan and Gordon, 1996). Stakeholder theory ascribes organisational accountability to organisations that extends beyond their economic or financial performance, and suggests that they will voluntarily report information about their intellectual capital beyond that required under a standard or law. The more critical the stakeholder resources are to the continued viability and success of the organisation, the greater the expectation that stakeholder demands will be addressed.

This theory can be tested using content analysis by identifying different information for different stakeholders. The stakeholder groups can be efficiently communicated with via the annual report (Lang and Lundholm, 1993). Content analysis can be used to test whether this means of communication includes intellectual capital. Are companies
responding as stakeholder theory might predict they would in offering a voluntary account of their intellectual capital?

**Related literature on intellectual capital management, measurement and reporting**

Taking these discussions on the theories of voluntary disclosure into account, and recognising that having a theoretical foundation is important, it is to be noted that the empirical investigation in this study is guided by the exhortations of Marr *et al.* (2003, p.456) who state:

... the field of intellectual capital could run into danger of losing credibility if researchers fail to produce more research that tests the theories put forward, rather than adding to the large body of literature of theoretical discussions.

Following Marr *et al.*’s counsel, and given that the field of intellectual capital investigation is still in its infancy, the research covered in this monograph is largely and unavoidably exploratory and is directed towards theory building rather than proving the merits of one existing theory over another.

This section updates a review of prior intellectual capital research valuation models (Guthrie and Petty, 2000), examining how companies actually construct a measure of, and/or report, better classifications and the information used in management decision making.

**Valuation models**

A key question for practitioners and researchers is how to reflect the market value of an organisation in its financial reports. Researchers, practitioners, accountants and management consulting firms have, to varying degrees, sought to contribute to the solution of this problem by proposing a range of accounting models and extended performance
management, measurement and reporting frameworks, which seek to value intellectual capital. Guthrie et al. (1999) and Guthrie and Ricceri (2002) explain that approaches to valuing intellectual capital have developed along two lines of thinking; known as the ‘stock’ and the ‘flow’ approaches.

The first approach, the ‘stock’ approach, is concerned with calculating the dollar value of intangibles. It provides a snapshot of stocks of intellectual capital and represents an attempt to fill the gap between market and book value by finding ways of determining the market assessment of the value of an organisation’s stock of intellectual capital. The second approach, the ‘flow’ approach, views intellectual capital as being concerned with identifying what knowledge resources drive value creation, rather than assigning a specific monetary value to the resources. This entails making visible the organisation’s ‘invisible’ sources of value creation and assessing how these resources are presently managed and how they perform. This approach is based on the notion that future financial performance is better predicted by non-financial rather than by financial indicators. It represents a way of reading the intellectual capital puzzle and provides useful insights into understanding how each piece, i.e. each intellectual capital attribute, contributes to an organisation’s performance.

Possibly the broadest review of existing intellectual capital frameworks to date is that done by Sveiby (2004). Martin (2004) summarises Sveiby’s work and categorises these intellectual capital frameworks into four categories. They are:

- Direct intellectual capital methods (DIC): These models are used to estimate the dollar value of intangible assets. They include the Technology Broker and Citation-Weighted Patents.

- Market capitalisation methods (MCM): These models calculate the difference between a company’s market capitalisation and its stockholder equity as the value of its intellectual capital. They include, among others, Investor Assigned Market Value and Tobin’s Q.
• Return on Assets (ROA): These models are used to compare the relative ROAs of different companies. They include, among others, Economic Value Added, Human Resource Accounting and the Value Chain Scoreboard.

• Scorecard methods (SC): These models report various indicators for the components of intellectual capital in scorecards. They include, among others, the Skandia Navigator, Intangible Asset Monitor and the Balanced Scorecard (BSC).

Three out of four of these categories for valuing intellectual capital are based on the ‘stock’ (Guthrie and Ricceri, 2002), or ‘value realisation’ (Roslender and Fincham, 2003, 2004) approach. Although this approach may be suitable for comparisons between companies, and possibly help fill the gap between market and book value:

...in the world of market imperfections and bounded rationality of human actions, $-valuations of intellectual capital may be subject to manipulations or opportunisms and at best only very rough estimation (Guthrie and Ricceri, 2002, p.7).

Such valuation models are likely to suffer similar limitations to those of traditional financial reporting, including problems with income smoothing, asset valuation and other forms of creative accounting. Roslender and Fincham (2003) support these critiques and argue that a main concern in relation to the ‘stock’ approach is that it relies on traditional accounting statements and suffers from the declining relevance of traditional accounting numbers.
Examining how companies actually construct a measure of and/or report on intellectual capital

The studies in this second category do not focus on computing intellectual capital. They examine how companies actually manage intellectual capital and how intellectual capital is reported. The methodology used in these studies mainly involves case studies and interviews to examine how companies manage and report intellectual capital. Bukh et al. (2001) and Mouritsen et al. (2001a) explored how 19 Danish firms developed their intellectual capital statements over a threyear period using three research methods: semi-annual interviews with each firm; researcher participation as observers and commentators; and annual surveys within the firms. Intellectual capital was classified, based on the classifications of Sveiby, Stewart and Edvinsson, into employees, internal structures and external structures. They sought to understand what intellectual capital was, how it was mobilised, how it was made to perform, and how it was situated in particular organisational settings. It should be noted that the methodology used may have influenced or shaped to some extent the ICS that the firms produced.

Based on the proposition that ICS are about knowledge-management activities, Carroll and Tansey (2000) discussed how their case study organisation, Intel, had been able to manage intellectual capital. Using the Skandia Value Scheme, they discussed how Intel had built each component of intellectual capital in terms of the strategy used, the metrics for each intellectual capital category and the criteria for the development of intellectual capital measures.

Caddy et al. (2001) undertook case studies of six Australasian organisations considered to be ‘best practice’ in managing intellectual capital. The premise of the study was that organisations needed to broaden their management strategies. They argued that:
...it may be just as important for organisations to develop techniques or procedures that search for and recover orphan knowledge as it is to develop procedures and techniques that facilitate knowledge creation and knowledge retention (p.386).

Orphan knowledge relates to questions such as: Do organisations ‘unlearn’ things or forget things and repeat past mistakes? Do some organisations unnecessarily duplicate equivalent activities within different areas of the organisation? If orphan knowledge exists, then organisations need to understand their potential for creating orphan knowledge. Therefore, it is not just about knowledge creation but also about the possible loss of intellectual liabilities.

Multiple case studies were conducted to explore how, and why, organisations were developing internal intellectual capital statements and management practices. They found that, even in organisations considered to be using current ‘best practice’ in managing intellectual capital, there was a medium to high potential for orphan knowledge to be created.

Also, prior research illustrates how companies such as technology organisations and companies that are considered to be using ‘best practice’ in managing intellectual capital, create value from managing their intellectual capital components. The studies in this third category show that the methodology used may influence empirics (Bukh et al., 2001; Mouritsen et al., 2001a). Based on the notion that ICS are about knowledge-management activities, it is likely that these statements of companies differ from one another because each company has its own strategy and organisational practices and therefore different indicators, depending upon these organisational practices.
Better classifications

The third category of studies is concerned with searching for a better classification of intellectual capital. Grojer (2001) compared and criticised IAS 38, the balanced scorecard (BSC) and the intellectual capital frameworks as being imperfect methods of classifying intangibles. Grojer (2001) suggested that, at the current stage of experimentation, the development of a classification for intangibles could be approached from a deductive or empirical angle.

Roslander and Fincham (2001) conclude that traditional financial reporting frameworks are not capable of accommodating intellectual capital. They review various frameworks and criticise the emphasis placed on the management of intellectual capital. They argue the case for adopting a critical perspective on accounting for intellectual capital and encourage the development of a ‘self-management’ approach in which all organisational members offer ‘self-accounts’ of their workplace experiences, particularly those relating to the process of intellectual capital formation and production. The content of these self accounts should be of interest to various stakeholders, since they will communicate how a company is performing from the perspective of those who contribute to that performance.

The information used in management decision making

The fourth category of studies looks at how management information is used in decision making. Several studies in this category (e.g. Holland, 2001; Johanson et al., 2001a) show that different companies have their own classification of intellectual capital and of information that they think is important in helping communicate their stories of knowledge-creation activities. Meer-Kooistra and Zijlstra (2001) argue that the content of an ICR should be determined by what caused changes in the various intellectual capital components. In order to develop the building
blocks of an ICR framework, they interviewed the management of three Dutch knowledge-intensive companies to gain their perspectives on how to identify, measure and report on intellectual capital. To explore the perspective of external users of information, four financial analysts were also asked to identify important intellectual capital indicators they required for decision making. Meer-Kooistra and Zijlstra (2001) reported that management stressed the intertwinement of the various intellectual capital components and considered the BSC a meaningful tool, but identified the need for proper procedures to develop these indicators. They developed a broad IC framework which included: the knowledge and experience embodied in people, either formalised or tacit; organisational systems and processes supporting intellectual capital creation; innovation and technology; and business relationships. Meer-Kooistra and Zijlstra (2001) indicated that practitioners considered these broad intellectual capital categories to be the most important and suggested that each company should develop its own specific content for their ICR within the same broad framework. They made no firm conclusions regarding intellectual capital theory but suggested that future research should focus on the similarities between these ideas.

**Intellectual capital reporting examined in various nations**

The substance or content of the disclosures made by organisations in their annual reports is an area of interest to many researchers. Several national studies have focused on what is being reported and attempt to capture and organise diverse empirical data. Studies using annual reporting data have attempted to capture the reporting of intellectual capital in Australia (Guthrie *et al.*, 1999; Guthrie and Petty, 2000), Canada (Bontis, 2003), Hong Kong (Petty, 2003), Ireland (Brennan, 2001), Sweden (Olsson, 2001), Italy (Bozzolan *et al.*, 2003), South Africa (April *et al.*, 2003) and Sri Lanka (Abeysekera and Guthrie, 2004a,
Recently, comparative studies of intellectual capital reporting practices between countries are emerging. For instance, Bozzolan, O’Regan and Ricceri (2004) consider intellectual capital reporting in Italy, Ireland and the UK, and Vandemaele et al. (2005) examine intellectual capital reporting in The Netherlands, Sweden and the UK.

Using the intangible asset monitor (IAM) framework, Guthrie et al. (1999) and Guthrie and Petty (2000) examined how companies reported their intellectual capital. They conducted a content analysis of the annual reports of the top 19 Australian companies (in terms of market capitalisation) and one Australian ‘best practice’ company in intellectual capital reporting to assess the extent to which intellectual capital was reported. They found little evidence of publicly-reported information on intellectual capital in Australia. Guthrie et al. (1999) also conducted a number of case studies to gain a richer and deeper understanding of how organisations identified, managed, measured and reported their intellectual capital. They reported that the key components of intellectual capital were poorly understood, inadequately identified, inefficiently managed, not reported within a consistent framework, and minimally reported.

Brennan (2001) replicated Guthrie et al. (1999) with a sample of Irish listed knowledge-based companies that had substantial intangible assets. However, Brennan (2001) reported that such assets were rarely referred to in annual reports and, when referred to, it was only in the most qualitative terms. Mouritsen et al. (2001b) analysed Skandia’s intellectual capital supplements to examine what Skandia had done, why it was done, and how it worked. The aims of this study were similar to those of Bukh et al. (2001) and Mouritsen et al. (2001a), but adopted a different methodology by focusing on the output of intellectual capital statements.

These studies (Guthrie et al., 1999; Guthrie and Petty, 2000; Brennan, 2001) all found that the sample companies reported IC. However, Guthrie and Petty (2000) indicated that the dearth of
Australian intellectual capital reporting may result from: (a) the lack of an established, and generally accepted, framework for reporting; (b) companies’ lack of, or lack of awareness of, mechanisms for assessing the change in their intellectual capital stocks; and (c) the view that the development of intellectual capital was an internal management issue and, therefore, outside the scope of the annual report.

In summary, these previous national and international studies indicated that international large organisations were disclosing IC information in annual reports, ICS and other media. The importance of this empirical work is that it indicates the diversity in disclosure, the nature of the disclosures and also, in some cases, the amount of disclosure, this indicates that management is interested in voluntarily providing IC information. A reason for this is that management understands that in the contemporary knowledge economy and global marketplace, knowledge and IC are key components for understanding the new factors of production and value creation, and these need to be managed to create organisational value and sustainable performance.

Therefore, the main focus of this research monograph is not on promoting or producing a new framework or guidelines, but on understanding what companies disclose in terms of IC information in their annual report. As can be seen in the results of other international studies reported above, many companies are already disclosing aspects of IC, even though not systematically and not in a form that makes the information useful i.e. quantified, with supporting narratives.

Summary

As indicated above, prior research has focused on several theories as to why firms voluntarily report information, mainly in the annual report. This research monograph extends these theoretical insights into the domain of reporting of IC items in annual reports. Specifically, it has identified the importance of annual reports in communicating
information on intellectual capital matters to a number of stakeholders. It also identifies that the current ICD in annual reports research literature has not to date reported any comparative studies from the Australasian region. Moreover, the role of company size has been an important variable in other voluntary disclosure literature, but is under-explored in ICD research.

ENDNOTE


## Introduction

This chapter outlines the methods used in collecting and analysing the data of this study. The methods used supported the collection and analysis of the intellectual capital information reported by a group of Australian and Hong Kong companies. This chapter is structured as follows. The next section briefly introduces the general economic context of, and recent developments in, the countries considered. The chapter then explains why the annual reports were chosen as a data source and how the annual reports examined were selected. The final section of the chapter explores the main issues relating to the use of content analysis when examining annual reports.

## Countries in the sample

Like most other first world nations, both Australia and Hong Kong have experienced a shift in GDP away from traditional commodities and manufacturing-based sectors towards a broader platform of economic value that branches into service industries and intangible based output (Tissen, Andriessen and Deprez, 1998). Australia and Hong Kong were chosen for this study partly because of the researchers’ familiarity with, and proximity to, each location, and partly because neither country has been the focus of a detailed investigation into ICR. Further, casual evidence suggested that no listed companies in either location had adopted any of the reporting frameworks in evidence in European countries and the US. This casual suspicion was worth confirming.
More significantly, the absence of formal reporting frameworks meant that voluntary disclosure practices could be studied in their pure form because the companies would have to innovate ways to communicate IC information if they truly thought that this was necessary and useful. An overview of the characteristics of each location is given below to help further explain why each country was deemed to be an interesting focus of study.

**Australia**

There is certainly evidence in the Australian economy that points to the need for better information on IC. Australia, like many first world nations, has come to grips with structural economic changes that have encouraged a move away from the manufacturing and commodities sectors towards service industries and the value-enhanced high-end production of items that require intellectual capital inputs, such as in the field of medical technology. In Australia, this transformation has been more pronounced than in many other countries since Australia’s economy has traditionally rested on the commodities and resources sectors. Manufacturing was never a huge part of the Australian economic fabric and, in recent years, has waned almost completely (ABS, 2006). 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 in the latter part of that decade. This period saw changes to the economy that were unprecedented in Australian history. Tourism and education became dominant sectors and Australia embraced the vision of becoming a high technology society by pouring large sums of money into research. This helped Australia become a world leader in the fields of bio-technology, financial services, insurance products, software development and training and development. 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.

The significance of this shift is illustrated by the fact that in 1980, eight of the top ten companies were in mining or resource-based industries, but by 1987 only four of the top ten were in these traditional industries. By 2005 this number had fallen to two. The general trend away from fixed-asset and capital-intensive industries towards service-based industry is also evident for the remaining companies in the top 20 (Guthrie et al., 1999). This shift towards service companies, coupled with the researchers’ knowledge of the local market, made Australia a logical choice for initial investigation.

**Hong Kong**

Research was also conducted using Hong Kong data. The issue of how to manage IC is a particularly important one for Hong Kong and there are unique challenges relating to the management of intellectual capital in the Special Administrative Region (SAR). Not least of these challenges is the often lamented fact that Asian organisations generally have a poor record of harnessing tacit knowledge and sharing it across an organisation, thereby strongly reducing the effectiveness of their human capital (Petty and Thompson, 1999).

However, the SAR’s position as a regional hub in Asia for the financial services industry lends itself to knowledge-intensive ventures and makes it a place of unique interest to intellectual capital researchers. The uniqueness of the setting and the anticipated challenges and obstacles to the implementation of intellectual capital reporting enriches the potential for interesting and meaningful findings. A better understanding of how to report IC has broad implications for maintaining the SAR’s leadership in the financial services sector in particular.
Intellectual capital reporting media

To date, many of the empirical studies on intellectual capital reporting have focused on national studies of annual report disclosures (see chapter two). The overwhelming majority of social and environmental reporting studies draw conclusions solely from annual reports (Wiseman, 1982; Freeman and Jaggi, 1986; Cowen et al., 1987; Guthrie and Parker, 1989, 1990; Roberts, 1992; Neu et al., 1998). There are many who warn against assuming social and environmental information is only contained within the annual report, or, similarly, studying only those disclosures in the annual report (e.g. Gray, 1994). Other sources of disclosure include independently produced reports (Gray, 1994), the Internet (Adams and Frost, 2004), stand-alone environmental reports, advertising and sponsorship (Campbell et al., 2003), and house magazines and press notices (Gray et al., 1995a). In fact, according to Gray, Kouhy and Lavers (1995a) all forms of data reaching the public domain can be considered to be part of the accountability discharge activity of an organisation.

The annual report is certainly useful to investigate the communication of SER information to the public. Gray et al., (1995a) explain that the mandatory nature of annual reports means that they are consistently available, regularly prepared and permanent, allowing comparisons across years and companies, as well as easy access (Tilt, 2001). Neu et al., (1998) suggest that because annual reports are required by legislation, and are produced on a regular basis by all companies, their credibility is enhanced. Gray et al. (1995b, p.83) regard the annual report as the ‘most important document in terms of the organisation’s construction of its own social imagery’, as do Petty and Guthrie (2000) who believe annual reports are used by companies to establish their image with various external and internal stakeholders. These attributes of annual reports make it important to include them in a study of ICR. However, it would be an error to limit a study of ICR to annual report disclosures alone. Annual reports have attracted criticism for their lack of reliability
and usefulness for evaluating a company’s social and environmental performance (Ahmed, 1990; Milne and Adler, 1999; and Unerman, 2000; Zeghal and Ahmed, 1990). There has also been an unprecedented increase in the publication of stand-alone reports which understandably include much more SER than the annual report of the same period (Unerman, 2000; Frost, 2001). The Internet is increasingly being used by companies to disclose a diverse range of information, including social and environmental information (Adams and Frost, 2004). Campbell et al., (2003) found that other mediums for social disclosure, particularly the Internet, provided greater volumes and detail in some cases. With these findings, it is not surprising that academics are calling for the ‘further exploration of the burgeoning media of disclosure, particularly internet based’ (Parker, 2005). O’Donovan (1999) believes that further exploration of stand-alone reports specifically is needed.

However, annual reports are the main instrument used for observing the incidence of voluntary reporting in this study and formed the source of the raw data. Similar to Bozzolan et al. (2003), annual reports were used because of their use as a reporting mechanism by which managers of companies signal important issues, thus making them a highly useful source of data. Important issues are featured, reported and discussed and less important items are absent or relegated to low-profile sections of the report (Gibson and Guthrie, 1995). Furthermore, the information that companies choose to include, or omit, from their annual reports communicates a significant message to external constituencies. The Corporate Social Responsibility (CSR) literature has, since the 1970s, been concerned with how organisations interact with society at large via annual reports and other mechanisms for reporting (Gray, 2006). In this literature, the corporate annual report is viewed as a means by which corporations seek to establish an image in the public sphere. Previous research on annual reports has taken a similar perspective, emphasising the role of the annual report in constructing and presenting a ‘reality’ of corporate life (Hines, 1988) and seeking to promote the news and
interests of the organisation by providing a ‘snapshot’ of the mindset of corporate management (Gray, Kouhy and Lavers, 1995a). 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.

It seems that a balance needs to be reached between relying solely on the annual report and investigating every public disclosure made by an organisation. As there were few stand-alone ICRs, and a cursory examination of the Internet indicated similar information to that contained in the annual reports, it was decided to stay with this medium only, while acknowledging that this is an area that requires future investigation.

In this study, the annual report of each company is viewed as a barometer of interest by management in their IC and as an external validation of their commitment to its development within their organisation.

The annual reports that were analysed in this study used the criterion of size, as measured by market capitalisation. The study considered the top 50 Australian companies by market capitalisation as at 31 December 2002. At the same time, the top 100 Hong Kong company reports were examined. Initially, 50 Hong Kong companies were going to be used in the study to directly match against the 50 Australian companies. However, research resources extended to permit the collection of data for an additional 50 companies in Hong Kong. As the greater sample size increases the robustness of the result in terms of its external validity, the additional data was analysed and used in the study.

**Content analysis**

As a technique for gathering data, content analysis involves codifying both qualitative and quantitative information into pre-defined categories in order to track patterns in the presentation and reporting
of information. This methodology seeks to determine the manifest content of written or other published communications by means of systematic and reliable analysis (Guthrie et al., 2004). Content analysis is an established method of studying annual reports and has been widely used in the corporate social, ethical and environmental reporting fields of accounting research.

The substance or content of the disclosures made by firms in their annual reports is an area of interest to many researchers. A ‘content analysis’ method of reading and capturing intellectual capital in annual reports was developed and used for the Organisation for Economic Co-operation and Development (OECD) in 1999 (Guthrie et al., 1999). Several subsequent studies have adopted this research method to capture and organise diverse empirical data.

The content analysis in this study involved reading the annual report of each company and coding the information contained therein in accordance with a selected framework of intellectual capital elements. The process was not an easy one. Problems of inter-coder reliability needed to be addressed. Further, the coding system needed to exhibit representational faithfulness and ensure that the items coded were reliable measures of the construct being examined. The IC framework used in this study contained eighteen elements across three intellectual capital categories: internal capital; external capital; and human capital. It was a modified version of Guthrie and Petty’s (2000) intellectual capital framework which was derived from Sveiby (1997), and integrated several professional pronouncements on intellectual capital (IFAC, 1998; SMAC, 1998).

Internal capital elements include intellectual property and infrastructure assets. External capital elements include brands, customers and business collaborations. Human capital includes elements related to employees’ characteristics, such as education and training which are the principal generators of revenue. For the purpose of analysis, in the internal capital category the number of elements was reduced
by recording measures of ‘patents’, ‘copyrights’, and ‘trademarks’ as ‘intellectual property’; ‘know-how’ and ‘work-related competences’ as ‘work-related knowledge’; elements such as ‘favourable contracts’, ‘customer loyalty’ and ‘vocational qualification’ were considered as information related to these elements and were included respectively within ‘business collaboration’. These elements are shown in Table 4.1. Each of these eighteen elements is explained in more detail in Appendix A.

**Table 4.1 Selected elements of the intellectual capital framework**

<table>
<thead>
<tr>
<th>Internal Capital</th>
<th>External Capital</th>
<th>Human Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Information/networking systems</td>
<td>11. Distribution channels</td>
<td>18. Entrepreneurial spirit</td>
</tr>
<tr>
<td></td>
<td>13. Licensing agreements</td>
<td></td>
</tr>
</tbody>
</table>

The content analysis involved reading the annual reports and recording items related to each element on a coding sheet. A numerical coding scheme was employed for each element. For each company, a value of zero was used to indicate that the element did not appear in the annual report. Discursive forms were recorded. In addition, for each item a total count was kept and this was recorded as ‘incidence’. Only voluntary disclosure was recorded; information relating to intellectual
capital that was reported to meet disclosure requirements of accounting standards was excluded from the data set.

Disclosure was initially analysed by the level of disclosure by each of the eighteen attributes; the level of disclosure by category (internal capital, external capital, human capital); and the overall level of disclosure. Total disclosure levels were recorded for each company as well as for the sample overall.

The size effect

The empirical literature provides strong evidence of a size effect on the extent of non-financial disclosure (Healy and Palepu, 1994; Hackston and Milne, 1996; Robb et al., 2001). Some proposed measures of size are: market capitalisation; sales; total assets; and number of employees. These measures are meaningful even if a strong correlation exists between them. In this research monograph, market capitalisation is used. As demonstrated in the social and environmental disclosure literature, a strong association between size and level of disclosure is expected. The size variable could have been dealt with in several ways. With the data set in hand, the most logical way to model size was to characterise companies as large or small by a split at the median. Large companies were those whose market capital scored above the median; small companies were those whose market capital scored below the median. In the overall analysis using the total data set, this split resulted in an equal number of companies falling into the large and small groups. Multiple regression analysis was used in order to assess the effect of size on the amount and content of the information reported.
Summary

This section has outlined the methods used in collecting and analysing the data in both stages of the study. The study is focused on the analysis of voluntary IC items in the annual reports. The study involved the decision making regarding the data source of the information (annual reports), the means by which companies were selected for analysis (top companies by market capitalisation in both countries), and the main coding rules used for the analysis of the information (content analysis issues).
Introduction

This chapter highlights the main findings related to the analysis of IC items in the annual reports of sample listed companies located in both Australia and Hong Kong. The role played by size in determining the amount and the content of the intellectual capital information reported is also analysed. The chapter is structured as follows. The first section highlights, at an overall level, the main results of the Australian and Hong Kong reporting practices. The subsequent sections focus on the results at category and element level respectively for the Australian and Hong Kong data set, and then consider the effect of size on the level of intellectual capital reporting for the two countries considered in the study. The final section summarises the findings of the empirical analysis highlighting their theoretical and practical implications.

The Australian and Hong Kong data set: an overall view

An analysis of the IC disclosure practice of companies in Australia and Hong Kong revealed three key results. First, there continues to be a gap between rhetoric and reality with regard to measuring, valuing and reporting IC. Second, and perhaps most significantly, nearly 90% of IC information disclosed is expressed in discursive rather than numerical terms. Thus, what is lacking is an attempt to translate the rhetoric into measures that would enable performance in managing the human and
external elements of the firm to be assessed, and therefore improved, in a systematic way. The other 10% of the information disclosed included number or dollar measures associated with IC information, illustrations of which are provided below:


We are committed to developing and sustaining the new ANZ culture. It is showing in the commitment and engagement of our people. This year in our annual staff survey 78% of the staff indicated they are satisfied working with ANZ and 71% would recommend ANZ as a place to work. Three years ago only 52% of our staff said they were satisfied working with ANZ (Australian and New Zealand Banking Group, 2002).

These numbers can be seen as attempts to provide IC metrics. The low presence of a quantitative expression of IC items seems to confirm the widely-held view that, when companies provide voluntary information in annual reports, it is without full knowledge of the financial substance of such items.

The third key finding is that the reporting of IC is inconsistent and varies in nature between different companies and countries. The descriptive statistics presented in Table 5.1 provide the beginnings of an attempt to construct a picture of the reporting practices of the companies in the sample.
Table 5.1 Descriptive statistics for the Australian and Hong Kong data sets for 2002

<table>
<thead>
<tr>
<th></th>
<th>Hong Kong</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of sample companies</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Average number of items reported per company</td>
<td>13.2</td>
<td>31.6</td>
</tr>
<tr>
<td>Minimum number of items reported for any one company</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Maximum number of items reported for any one company</td>
<td>29</td>
<td>105</td>
</tr>
</tbody>
</table>

Note: ‘Items’ refers to the count of each element as it appeared in an annual report. Therefore, 105 items means there were 105 observations concerning IC elements in one annual report.

While all companies, except one Australian company, reported on some aspect of their intellectual capital, the extent of reporting varied greatly. Further, the type of element reported for each individual company appeared to be fairly randomly distributed, and there was no obvious pattern or trend in the data set.

In Australia, WMC Ltd was the company most active in reporting IC, with 105 items and 11 of the 18 elements reported. This company’s annual report contained significant discussion of IC elements such as management processes and management philosophy. As the WMC annual report affirms:

*Our focus on sustainability is clear. Our continued licence to operate, and therefore our future, is determined by the quality of relationship that we have with employees, communities and the environment. This is the fundamental business case to ensure high quality performance* (WMC, 2002).
With regard to the reporting of IC, the same annual report continues by stating:

_We aim to be objective, open and honest when discussing these matters, as our public reporting helps us maintain our licence to operate_ (WMC, 2002).

The second most active firm in terms of IC incidence was National Australia Bank, with 72 reported items across 13 elements. National Australia Bank gave great attention to customer service and satisfaction. This was evidenced by the development of its own customer relationship management system, which it emphasised as a point of competitive difference. National Australia Bank was also recognised as the top company in Australia in reporting social, environmental and other information to stakeholders (Reputex, 2002).

However, only one annual report, that of the Fosters Group, specifically mentioned intellectual capital as a concept. This report referred to the process of leveraging IC in both wine making and brand management, stating that:

_… the division continues to leverage that [IC] by expanding its extra sourcing practices: partnering external wine growers and wine production facilities, while using its own well-known skills and expertise to manage production and marketing. In both the US and Australia, extra sourcing is extending the use of BBWE’s intellectual capital, keeping costs and capital investment down and increasing the range of its brands_ (Fosters Group, 2002).

The only Australian company annual report that did not mention any IC elements was Harvey Norman, in the retail sector. Surprisingly, this report did not contain any extra information other than that required by regulation, and therefore no voluntary reporting was found.
The Harvey Norman report can be best described as an old-fashioned ‘black letter’ report, similar in many ways to some of the Hong Kong reports.

Most of the Hong Kong reports revealed little IC information either discursively or numerically. Casual reference was made to employees by some companies. The following references are typical:

_I take the opportunity to express my gratitude to our staff and shareholders for their continued support during the year_ (Hong Kong Fortune Limited, 2002).

_On behalf of the Board of Directors, I would like to extend my sincere appreciation to the management and all of our staff for their hard work during the year_ (Lippo China Resources Limited, 2002).

While the incidence of reporting by Australian companies in the above sample 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 IC to an external audience. However, this commitment is qualified by an inability to report IC in a consistent, quantitative manner, and is thus largely limited to discursive reporting. For Hong Kong companies, the commitment is less evident than for Australian companies.

**Descriptive statistics at category and element level for the Australian data set**

The total amount of IC reporting was examined to determine whether there was a particular focus on any one category. Figure 5.1 shows the breakdown of incidence reporting in terms of intellectual capital category.
The internal capital and external capital categories were found to account for the majority (90%) of the IC reported. By comparison, the human capital category was significantly less reported (10%). Reporting of external capital seemed to be favoured across companies and, of the three categories, external capital accounted for almost half of the observed reporting practices (49%). This skewing towards reporting external capital elements is unsurprising in the light of increased global competition, particularly in the financial services and retail sectors, as a result of which markets are being increasingly segmented and fractured, and vying for market share is a priority.

Looking at the reporting within the three categories, as indicated in Table 5.2, it was found that, for internal capital, the two elements of ‘management philosophy’ and ‘management processes’ accounted for over 70% of items reported within this category. In the external capital category, both ‘business collaborations’ and ‘brands’ accounted for over 50% of items within this category. In the human capital category, on the other hand, the two elements of ‘employee’ and ‘work-related knowledge’ accounted for nearly 70% of the items identified within this category.
Table 5.2 Australian intellectual capital elements most reported per category

<table>
<thead>
<tr>
<th>Category</th>
<th>Element</th>
<th>Individual category disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal capital</td>
<td>Management philosophy</td>
<td>39.4%</td>
</tr>
<tr>
<td></td>
<td>Management processes</td>
<td>32.7%</td>
</tr>
<tr>
<td>External capital</td>
<td>Business collaborations</td>
<td>32.9%</td>
</tr>
<tr>
<td></td>
<td>Brands</td>
<td>18.9%</td>
</tr>
<tr>
<td>Human capital</td>
<td>Employees</td>
<td>46.3%</td>
</tr>
<tr>
<td></td>
<td>Work-related knowledge</td>
<td>22.6%</td>
</tr>
</tbody>
</table>

The absence of systematic disclosure of IC in Australia may be due to 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 IC but do not have, or are not aware of, mechanisms for assessing changes. Some companies may view the development of IC as an internal management issue and therefore outside the scope of the annual report (Guthrie et al., 1999).

This study also examined the incidence of reporting at an individual element level. As illustrated in Table 5.3, the three elements most disclosed were management philosophy (257 items/16.2%), business collaborations with other partners (252 items/15.9%) and the management process (213 items/13.5%). The three least reported elements were education (3 items/0.2%), financial relations (5 items/0.3%), and customer satisfaction (14 items/0.8%). Surprisingly, although only six companies reported information on customer satisfaction, most of them provided quantitative measurements for this element. However, once again there was no discernable pattern as to the reporting of the least common elements across the industry groups.
Table 5.3 Australian most and least reported intellectual capital elements

<table>
<thead>
<tr>
<th>Most reported elements</th>
<th>Overall IC disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management philosophy</td>
<td>16.2%</td>
</tr>
<tr>
<td>Business collaborations</td>
<td>15.9%</td>
</tr>
<tr>
<td>Management processes</td>
<td>13.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Least reported elements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>0.2%</td>
</tr>
<tr>
<td>Financial relations</td>
<td>0.3%</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

The most frequently reported element was ‘management philosophy’ (257 items), with only four firms not reporting this in their annual report. Management philosophy refers to the way in which managers translate the mission of the company into more ‘tangible’ objectives. As expected, this element scored highly across the board, as nearly all firms had either a mission statement or some other formal expression of the future strategy of the company and its relationship with its stakeholders. For instance, the WMC annual report states that the company:

… is committed to protecting and enhancing shareholder value and adopting benchmark governance policies and practices. This includes ensuring regulatory requirements are met and ethical standards maintained. We manage resources responsibly, and maintain a high level of transparency in reporting to shareholders and stakeholders (WMC, 2002).
Only five companies did not mention ‘business collaborations’. The importance placed on reporting business collaborations is not surprising, as alliances and other forms of collaborative arrangements are a common way of conducting business and implementing growth strategies. For instance, Telstra’s annual report mentioned that:

On 5 March 2002 we and Foxtel announced an agreement … [which] will enable us to bundle Foxtel’s pay-TV service with telephone and Internet services and charge customers for them on a single Telstra bill (Telstra, 2002).

The third most reported element was ‘management processes’ (205 items). This is an internal capital element covering policies, procedures, re-engineering and other processes, and quality certifications associated with the firm. Only six firms in the sample did not report management processes. National Australia Bank placed great value on this element:

[We] are proud of our Customer Relationship Management System, which is the product of 15 years of development and refinement. It is a highly focused system that is designed to provide staff with the most complete understanding of customer needs (National Australia Bank, 2002).

Apart from Harvey Norman, which, as noted, had no IC voluntary disclosure, there was no other Australian firm that did not report at least one of the three most disclosed elements described above.

Descriptive statistics at category and element level for the Hong Kong data set

The disclosure of IC information of Hong Kong companies was split much more equally between the three categories (Figure 5.2). However, the incidence of IC relating to external capital was again the
most common, representing 37% of the total. Internal capital disclosure stood at 28% of the total, making it the least common, while total human capital incidence accounted for 35%.

Figure 5.2 Category emphasis in Hong Kong companies

Examine IC disclosure items within the three categories (see Table 5.4) reveals that for internal capital the two elements of ‘information/networking systems’ and ‘management philosophy’ accounted for more than 50% of the items. Hong Kong companies’ practices are different from the Australian practices considered in the previous section. While there is a common focus on ‘management philosophy’ (which ranks first in the Australian study), the main focus of Hong Kong companies is on the development and the use of communication tools.

In the external capital category the two elements ‘distribution channels’ and ‘business collaborations’ account for almost 40% of total items disclosed in this category. The focus on business collaborations is common to the Australian evidence where this element ranked first. In the Hong Kong companies there is also a focus on distribution channels. This is often addressed in reports with a vague and somewhat ambiguous revelation similar to the following:
I wish to thank all of our customers, licensors, suppliers and other business associates for their continued support and partnership, and my colleagues for their dedication and hard work (Playmates Toys Holdings Limited, 2002).

In the human capital category the two elements of ‘employees’ and ‘work-related knowledge’ account for nearly 70% of the total incidence reported for this category. This follows similar disclosure patterns as that of the Australian companies (see Table 5.2), both in terms of content and amount (percentage).

Table 5.4 Hong Kong intellectual capital elements most reported per category

<table>
<thead>
<tr>
<th>Category</th>
<th>Element</th>
<th>Individual category disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal capital</td>
<td>Information/networking systems</td>
<td>30.4%</td>
</tr>
<tr>
<td></td>
<td>Management philosophy</td>
<td>21.0%</td>
</tr>
<tr>
<td>External capital</td>
<td>Distribution channels</td>
<td>20.3%</td>
</tr>
<tr>
<td></td>
<td>Business collaborations</td>
<td>19.1%</td>
</tr>
<tr>
<td>Human capital</td>
<td>Employees</td>
<td>42.6%</td>
</tr>
<tr>
<td></td>
<td>Work-related knowledge</td>
<td>24.7%</td>
</tr>
</tbody>
</table>

As illustrated for the individual element level, Tables 5.5 reports the most and the least disclosed elements. The most reported elements by Hong Kong companies are related to the human capital category. Often these disclosures are self-congratulatory and seem misdirected. For instance, rather than take the opportunity to pat employees on the back for a job well done, one company, Playmates Toys Holdings Limited, sings the praises of its Chairman and a majority shareholder in a year
in which revenues declined by more than 42% and the company went from an operating profit to an operating loss:

_The Group’s high level of productivity is attributable to his guiding management principles of creativity, flexibility and simplicity_ (Playmates Toys Holdings Limited, 2002).

What is surprising is that none of the most reported elements are related to the external capital category, which was the most disclosed by Australian companies. This is probably due to the fact that, as highlighted above, the Hong Kong companies’ disclosure in the internal capital category is split much more equally between the three categories.

**Table 5.5 Hong Kong most and least reported intellectual capital elements**

<table>
<thead>
<tr>
<th>Most reported elements</th>
<th>Overall IC disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>15.3%</td>
</tr>
<tr>
<td>Work-related knowledge</td>
<td>8.6%</td>
</tr>
<tr>
<td>Information/networking systems</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Least reported elements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual property</td>
<td>0.9%</td>
</tr>
<tr>
<td>Licensing agreements</td>
<td>1.2%</td>
</tr>
<tr>
<td>Financial relations</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

As indicated above in Table 5.5 the three least reported elements were ‘intellectual property’, ‘licensing agreements’ and ‘financial relations’. It should be noted that ‘financial relations’ ranked second in the least reported elements by Australian companies.
**Size effect**

This section presents the findings of the regression model with size, measured by market capitalisation, as an independent variable and level of disclosure as the dependent variable. As highlighted in the previous section, company size is a factor that may explain different reporting behaviours. Descriptive statistics for the Australian and Hong Kong data are given in Tables 5.6 and 5.7. Means, or average scores, were calculated for the overall frequency of disclosure of IC for large and small companies in separate groups. Mean scores were also calculated for each of the three disclosure sub-categories (internal, external and human capital) by large and small company grouping. Table 5.6 shows that, on average, large Australian companies have a higher level of disclosure (mean = 37.7) than small companies (mean = 25.4). This observation holds for the Australian sample as a whole and also for each of the three categories.

*Table 5.6 Descriptive statistics on size – Australian companies*

<table>
<thead>
<tr>
<th></th>
<th>Overall Index</th>
<th>Internal Capital</th>
<th>External Capital</th>
<th>Human Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>St. Dev.</td>
<td>Mean</td>
</tr>
<tr>
<td>Large Companies</td>
<td>25</td>
<td>37.7</td>
<td>4.6</td>
<td>14.8</td>
</tr>
<tr>
<td>Small Companies</td>
<td>25</td>
<td>25.4</td>
<td>2.2</td>
<td>11.2</td>
</tr>
</tbody>
</table>

*Note:* ‘N’ is the number of companies in the sample; ‘Mean’ is the average; ‘St. Dev.’ indicates the Standard deviation of the mean.
Table 5.7 shows that, on average, large companies in Hong Kong have the same behaviour as their Australian counterparts, in that they are characterised by a higher level of disclosure (mean = 14.6) compared to small companies (mean = 11.8). Once again, this observation holds for the sample as a whole and also for each of the three categories.

**Table 5.7  Descriptive statistics on size – Hong Kong companies**

<table>
<thead>
<tr>
<th></th>
<th>Overall Index</th>
<th>Internal Capital</th>
<th>External Capital</th>
<th>Human Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>St. Dev.</td>
<td>Mean</td>
</tr>
<tr>
<td>Large Companies</td>
<td>50</td>
<td>14.6</td>
<td>5.99</td>
<td>4.04</td>
</tr>
<tr>
<td>Small Companies</td>
<td>50</td>
<td>11.8</td>
<td>4.6</td>
<td>3.3</td>
</tr>
</tbody>
</table>

**Note:** ‘N’ is the number of companies in the sample; ‘Mean’ is the average; ‘St. Dev.’ indicates the Standard deviation of the mean.

The t-test for the means in the Australian study shows that the difference between the means of the small and large companies is significant only in relation to the overall index (p=0.022) and the external capital category (p=0.025). Also, the results of the t-test for the means in the Hong Kong study show that there is a significant difference between small and large companies on the overall index (p=0.01). In both t-tests, the means were normally distributed. The difference with regard to internal capital is also significant, though at a lower level of significance (p=0.08). The difference for external capital is also significant (p=0.02), as is the difference for human capital (p=0.07).
The Australian study findings on size agree with the findings of the Hong Kong study. Within the Australian study, a regression model was used in order to assess the significance of the size variable in explaining differences in IC disclosure. The model used size as the independent variable and level of disclosure as the dependent variable. The results show that size is a significant variable in explaining the different levels of intellectual capital reporting even if the explanatory power of size is low (R-squared=0.10). This result suggests that, as in the voluntary disclosure literature, other variables (i.e. industry, ownership structure, profitability) as well as other size measures (i.e. turnover, total assets, etc.) may be used in order to arrive at a better explanation of different reporting behaviours.

Summary

The results show that on average Australian companies disclose more IC information than Hong Kong companies. However, in both countries, it was revealed that nearly every item of IC involved the attribute being expressed in discursive rather than numerical terms. What is lacking by these companies is an attempt to translate the rhetoric of IC into measures that enable a firm’s performance in managing human and relational attributes to be assessed.

An examination of disclosures reveals, for the Australian sample, that internal and external capital categories accounted for the majority (90 per cent) of the intellectual capital reported. The human capital category was, by comparison, significantly less reported (10%); in contrast, the external capital category accounted for almost half of the observed reporting practices (49%). This result is slightly different for the Hong Kong study, where the information disclosed was much more evenly distributed across the three IC categories. In all the studies, it was shown that the external capital category is the category with the highest disclosure. Interestingly, Hong Kong companies are disclosing,
in percentage terms, more information on human capital than Australian companies.

This study has both practical and theoretical implications. From a practical point of view, it provides a static overview of the patterns in IC disclosure for the Australian and Hong Kong companies. Further, it provides comparative insights into IC disclosure in Australasian countries, by comparing the findings from Australia and Hong Kong. Finally, from a practical point of view, the study may be of interest to regulators and standard-setting bodies as they seek to set policies on mandatory disclosure, especially in respect to non-financial disclosure. The results of this study confirm that what is lacking is a common accepted framework for IC disclosure, as there is no obvious pattern or trend in the data set.

From a theoretical point of view, as indicated in the social and environmental literature, size is also found to be a significant factor in determining the overall level of voluntary ICR by listed companies in Australia and Hong Kong. Large companies are found to have a higher level of disclosure than small companies. This observation holds for disclosure as a whole and also for the external capital category in both countries. The finding that at an overall level size is a significant determinant of voluntary IC disclosure is consistent with the finding of other ICR empirical studies (Bozzolan et al., 2003; Guthrie et al., 2006). It suggests that larger companies will continue to lead the way in the reporting of IC, because it is large companies that are reporting such information now.
6 CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Introduction

This chapter outlines the general conclusions to the study. It also suggests several implications for policy settings, identifies a number of the study’s limitations, and offers some possible future research directions.

General conclusions

There is evidence that some companies in both Australia and Hong Kong are voluntarily disclosing some IC information. The pattern of observed ICR in both countries indicates that whilst all elements of the framework have been voluntarily disclosed, there is no discernible logic surrounding why and when companies engage in ICR.

There is significant variation in ICR across individual companies, across the range of elements disclosed, and across each country. The results are consistent with those found by researchers doing other studies of ICR within other nations. The varied international ICR practices indicate a policy vacuum concerning international reporting standardisation.

There is significant evidence to support the contention that larger companies are likely to more actively report on their IC. This observation holds true for both Australian and Hong Kong companies. The relationship between other firm variables and evidence of ICR should be investigated in an effort to build an explanatory and predictive model of disclosure. Variables that would likely be of interest in this
regard include industry, ownership structure, longevity, quality of management and executive team. In addition to examining the main effects of these variables on ICR, the interaction between them should also be examined.

Finally, the monograph recommendations raise awareness of the importance of the reporting of IC and the need to facilitate international standardisation.

**Implications for policy setting**

The focus of this study is on voluntary reporting behaviour by companies. Many companies elect to make voluntary disclosures because they recognise that at some level there is value in the information being disclosed. Policy makers and bodies that can influence policy development have also noted the demand by users of reports for IC information (OECD, 1999). Based on this, it is likely that at some stage regulatory institutions may make it mandatory for the disclosure of IC information.

The number of calls in recent years from the academic community for increased disclosure is an indication of the relationship between policy and research in relation to reporting and disclosure in financial reports. Is it desirable that research dictates policy, or is it the case that policy makers drive research into policy setting by establishing policies that are then tested? Familiar patterns for policy development are observable in other disciplines. Often, it is what happens in practice that is observed by theoreticians who formalise and structure the events academically, thereby providing the rigour favoured by policy makers before prescribing action. Occasionally in business, the reverse is the case and theory leads the way with policy resulting from an identifiable theory-to-practice progression.
In the field of ICR, development is happening, for the most part, at a practical level and the practice is then being studied and modelled by researchers. When practice leads policy there are various issues that need to be agreed. For instance, should policy be prescriptive or normative? If guidelines are promulgated, will they proscribe certain types of reporting? And, if they do, what means of enforceability will be at the disposal of the watchdog organisation given responsibility for overseeing adherence to policy? Presumably, given the dissimilarities in organisation type and structure, considerable fluidity and flexibility would have to be built into any policy arrangements to accommodate a wide scope of annual reporting.

Conducting some preliminary research that investigates policy implications is one way forward. Another is to implement various policies on a trial basis and assess their usefulness within certain confined geographic centres. Either approach would provide a sound means of identifying potential policy benefits.

Questions as to who funds policy development and how often policy reviews are required will further complicate the process. The fragmented nature of initial efforts to report IC and the absence of broad agreement on the metrics that should be used to measure IC seem destined to frustrate attempts to establish policy.

While this research monograph argues that IC information can enhance transparency in corporate reporting, various challenges lie ahead. Co-operation among researchers, practitioners, various industry associations and institutions, and the accounting profession is necessary for establishing a consensus of what IC is and for encouraging organisations to experiment in ways to manage, measure and report IC. The format used to report is also a major challenge that offers plenty of scope for future research. While key challenges are being researched, ICR is in the spotlight and greater transparency is expected. The reliability and auditability of reported information is an important issue that needs to be considered in parallel.
The data suggest that there is significant and varied international practice and guidelines concerning extended performance management and that the policy vacuum has resulted in a lack of standardisation of reporting. To counter this, the profession should become actively involved in stimulating EPM within organisations by raising awareness of its importance in the knowledge economy, improving management and reporting competencies, promoting the use of extended performance management and accounts, and helping facilitate standardisation within the EC and internationally.

A stakeholder taskforce should be established – this could be coordinated by the profession. The role of the taskforce would be to:

- facilitate the participation of interested stakeholders;
- help finance research on the management and disclosure of intangibles; and
- encourage the development of voluntary guidelines and reporting systems.

The taskforce could consider what policies and initiatives are necessary to promote an awareness of, and developments in, extended performance management, measurement and reporting (EPMMR). The focus of the policy initiatives should be at four levels: international, national, intergovernmental and organisational. Furthermore, standardisation and diffusion/dissemination of EPMMR can be achieved with the co-operation of other organisations such as the OECD, EC and UN. The promotion of EPMMR could be linked to funding and taxation policy initiatives.

The taskforce could oversee various activities including raising awareness of EPMMR and promoting its adoption by business groups and the public sector.
Action is required to increase awareness about the importance of IC management and reporting. The taskforce could, therefore, involve professional bodies and work to initiate pilot actions aimed at promoting such awareness.

**Limitations**

This study and the results reported are subject to several limitations. These limitations mostly relate to the choice of research methods used. Content analysis involves the application of judgement in deciding whether an item belongs in a content category. Though every effort was made to ensure the reliability of the coding process and to minimise error, there remains the possibility that errors have been made.

Further, content analysis is a static tool that conveys what is happening at a particular point in time. It is not adept at casting light on underlying processes, nor does it reveal much about strategy 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 (Guthrie et al., 2004).

The sampling process also means that the companies included in the study were large in relative terms in each of the markets examined. It may be the case that smaller listed companies exhibit reporting practices quite different to those revealed in the course of this investigation. Further, the study casts no light on the importance of IC to privately held companies and the extent to which such companies provide IC information in documentation and reports given to third parties.

Also, the study looks to the annual report as a meaningful signalling device – one that is viewed as important and useful for communicating issues considered relevant by the sample company to an external audience. Though there is plenty of research evidence to suggest this
is a fair platform, it is possible that the firms themselves do not view voluntary disclosure in the annual report as significant.

**Future research directions**

Acknowledging that the IC discipline lies in practice is an important reminder of the need for researchers to keep their work focused and relevant (Petty and Guthrie, 2000). Business researchers and practitioners alike often bemoan the lack of correspondence between the work of researchers and the needs of business. In many disciplines there has been a move away from research that is of practical use and significance. This move has been lamented by a number of distinguished researchers in accounting (Kaplan, 1989; Foster and Young, 1997; Shields, 1997). Being part of a research movement that is embryonic affords a perfect opportunity to bridge this gap from the outset.

The biggest challenge by far is establishing a consensus about the need to report, what to report, and how to report it. One extension to the current study would involve expanding the information set to smaller and less accessible enterprises, for instance SMEs. This would offer a basis for comparing the behaviour of large listed entities with much smaller and less established companies.

In addition, even though speculation is offered as to why firms are predisposed to voluntarily report IC, the study is unable to provide definite answers about what is driving the reporting process. An improved understanding of the process drivers is the key to managing the reporting process and predicting the information that users of such reports might find useful. Further work needs to be done in the area of understanding what information is actually sought by decision makers. Simply reporting information that is not relevant to a particular decision context serves no purpose.

There is anecdotal support for the idea that companies voluntarily report IC for a number of reasons that relate to better communication,
improved efficiency, the legitimisation of firm activities, the desire to be viewed as an innovator, and the development of an acceptable corporate identity. However, none of these motivations has been advanced by practitioners on a uniform or widespread basis and none has been satisfactorily tested empirically.

It is also generally held by the research community that a firm reporting IC is more attractive to the capital market. A next possible step is to look at how capital markets value IC in the absence of reports that disclose IC attributes. It would also be interesting to refer to the capital markets in seeking a better understanding of the type of information they would like and whether such information must appear in audited form in order for the information to be trusted and used. Without an audit will the information still hold decision value for analysts? What kind of assurance would be given and how might this be expressed? Both survey research and experimental research using company analysts could play a role in investigating these issues.

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. For instance, comments made in the director’s report tend to carry more authority and credibility than comments made elsewhere.

Further empirical evidence of best-practice models of ICR would serve to inform developments in financial reporting and analysis, and is also likely to sponsor corporate policy initiatives aimed at sustaining levels of international competitiveness amongst firms that rely upon their intellectual assets for their ultimate success.
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ANTA – see Australian National Training Authority


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CIPD – see Chartered Institute of Personnel and Development


DATI – see Danish Agency for Trade and Industry


EC – see European Commission


GRI – see Global Reporting Initiative


IASC – see International Accounting Standards Committee

ICAEW – see Institute of Chartered Accountants in England and Wales

IFAC – see International Federation of Accountants


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METI – see Ministry of Economy, Trade and Industry, Japan


OECD – see Organisation for Economic Co-operation and Development


Petty, R. (2003), ‘The correlation between the voluntary disclosure of intellectual capital indicators and financial success’, working paper presented to the Citigroup Global Consumer and Investment Bank conference, Hong Kong, August.


PJC – see Parliamentary Joint Committee


SKE – see Society for Knowledge Economics

SMAC – see Society of Management Accountants of Canada


WCED – see World Commission for Environment and Development


Table A  Selected elements of the intellectual capital framework

<table>
<thead>
<tr>
<th>Internal Capital</th>
<th>External Capital</th>
<th>Human Capital</th>
</tr>
</thead>
<tbody>
<tr>
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Internal Capital

Internal capital includes intellectual property as well as infrastructure assets owned/used by an organisation. The latter may consist of: systems and processes used in day-to-day activities; values that guide the behaviour of individuals and/or the entire organisation; and innovation projects
that have been undertaken, possibly leading to future developments. Elements of this category can be developed internally or acquired.

**Intellectual Property**

Intellectual property includes patents, copyrights and trademarks. Each of these elements is described below:

- A patent is an exclusive property right granted by the state to an inventor for a limited period that excludes others from copying, making or selling that person’s invention during the specified time period. The invention should be registered in the public domain or be disclosed and therefore is not a secret. A patent is a ‘keep off’ sign to others from the inventor (Brooking, 1996) but protecting inventions worldwide can be time consuming and expensive. Trade secrets are a viable alternative to patents because patents can be ‘invented around’ at an affordable cost (Brooking, 1996). However, trade secrets are viable only if technology can be kept as a secret after a product is released to the public. Where the innovator firm has access to complementary assets unique to the innovation, the firm can charge a premium for the value they add to the innovation (Edvinsson and Sullivan, 1996).

- The symbol ™ stands for a non-registered trademark and ® symbolises a registered trademark. TM states that the owner believes he or she is the only one using the trademark but since it is not registered the owner may or may not have the legal right to stop others from using it. A registered mark is associated with a firm or its products. A trademark can be a name, logo, picture or a combination of all three. This intellectual line item also includes service marks. The service mark distinguishes one service company from another (Brooking, 1996).
Copyright, as trademark, may or may not be legally protected. The © symbol must be used in some overseas countries to get legal protection, although it is not compulsory in Australia. This is a legal protection offered to an idea expressed in some tangible form such as published or recorded works; the protection is not for the idea itself. It can be sold, distributed or licensed to generate wealth (Brooking, 1996).

An example from annual reports in the sample:

*Amcor Flexible Europe recently announced the first commercial application of Amcor FlexCan™ - a new unique stand-up flexible container, which is easy to open and recluse* (Amcor, Annual Report, 2002).

Management philosophy

Management philosophy is the way in which leaders in an organisation think about the organisation and its employees. Their management philosophy has a substantial effect on the organisational culture (Brooking, 1996) and mission statements can have either a positive or negative impact on performance depending on whether employees remember, understand, show commitment, or promote shared values.

An example from annual reports in the sample:

*We have a very comprehensive approach to ‘doing the right thing’ in the eyes of our peers, customers, shareholders, the community, regulators and the law. We believe that doing the right thing creates a positive work environment and great customer experiences, builds our reputation and relationships and help us to reduce risk* (Westpac, Annual Report, 2002).
Corporate culture

Corporate culture includes values, rites and rituals that are recognised and shared by employees. It is created by management and reflects the values of the firm. Different types of corporate culture include: ‘work hard and play hard’; ‘high risk and high reward’; ‘family-based’; ‘process-based’; ‘team-based’; etc (Brooking, 1996).

Management and leadership play a critical role in creating a culture that facilitates the creation and sharing of knowledge (Miller et al., 1999).

An example from annual reports in the sample:

*The Macquarie culture is represented by the way in which we act and work together. The values to which we aspire can be summarised in six principles: integrity; client commitment; strive for profitability; fulfilment of our people; teamwork; highest standards* (Macquarie Bank, Annual Report, 2002).

Management processes

Management processes incorporate any activity, but not technological activity, that contributes to the creation of organisational capital (Roos et al., 1997). These are management mechanisms put in place to turn philosophy into practice and implement best practice. There can be several mechanisms such as policies, procedures, processes and staff suggestion boxes (Brooking, 1996).

This element includes information related to the employment of standards of quality as required for ISO certifications, as these standards support the development of knowledge transfer among employees (Cohen and van Ewyk, 1998).
An example from annual reports in the sample:

*Business cells are being benchmarked against good performers in similar businesses, both inside and outside the CSR group. People are being individually assessed against key performance measures (CSR, Annual Report, 2002).*

**Information and networking systems**

These are both manual and technology-based systems in place to maintain management, share and disseminate information and to network people with others to gain access to information. Businesses are expected to become increasingly reliant on information systems to capture and report transactions and also to track, build and share the collective knowledge of the organisation.

An example from annual reports in the sample:

*The implementation of the Bunnings back office systems across the whole network has been successful. Further efficiencies will arise from adopting the Bunnings point of sale system in all Australian stores by November 2002. At the completion of this rollout, all Australian retail stores will be operating on the one technology platform (Wesfarmers, Annual Report, 2002).*

**Financial relations**

These are favourable relationships the organisation has with investors, banks and other financiers (Brooking, 1996).
Examples from annual reports in the sample:

*The government has facilitated the implementation of this restructuring by assisting in the funding of redundancy costs to displaced employees* (Wesfarmers, Annual Report, 2002).

*The Nine Network and Macquarie Bank were key supporters of the fund, which will finance various Nine film and television drama projects* (Publishing and Broadcasting Limited, Annual Report, 2002).

**External Capital**

External capital encapsulates the relationship with different external stakeholders (customers, partners and retailers, suppliers, etc.); it consists of several elements including customer, distribution channels, business collaboration, licensing agreements, *etc.* The organisation can effect the course of the relationship but cannot control it directly. The tenuous nature of the supplier-firm-customer nexus complicates the measurement process. Hence, economic value of these relationships is at present not determined by any general accepted definition and measurement system (Guthrie and Petty, 2001). The management of the relationship with different stakeholders is a critical factor in building a favourable environment in which to exploit the value creating potential of the organisation.

**Brands**

Brands are powerful reminders to customers to buy the products and services of one organisation in preference to those of another. They can include service brands that promote quality, reliability, *etc.*, or corporate brands that promote the value in the market place of a particular organisation’s reputation (Brooking, 1996). Brands are increasingly
recognised as the source of extraordinary profits (Daley, 2001) and an interview survey suggests they tend to increase the shareholder value relative to the industry (Court and Leiter, 1999).

An example from the annual reports in the sample:

*By December 2002 all Hardwarehouses stores in Australia and New Zealand will carry the Bunnings name. All BBC traditional stores will have been rebranded while the “Benchmark” brand will continue in New Zealand* (Wesfarmers, Annual Report, 2002).

**Customers**

This encapsulates the extent of market share held in relation to the total market share for a product or service. The increase in sales or volume in absolute terms does not indicate the increase in market share or number of customers. Although high market share does not guarantee greater profitability, it enables firms to create certain profitable opportunities that are not available to low market share firms (Ailawadi et al., 1999).

An example from annual reports in the sample:

*With assets of $55 billion and 2.6 million customers, we are placed between the four majors and the country’s smaller regional banking groups and enjoy considerable strategic freedom for our future plans* (St George, Annual Report, 2002).

**Customer satisfaction**

Customer satisfaction is the customers’ after-purchase judgement or evaluation of a specific product or service. The benefits are associated
with increased market share, economic returns, profitability, customer loyalty and less reliance upon price-based competition (Stank et al., 1997). Customer satisfaction is related to customer loyalty (Johanson et al., 1999). Customer loyalty leads to repeat business as a percentage of the customer base (Brooking, 1996). This line item includes both customer satisfaction and customer loyalty.

An example from the annual reports in the sample:


**Company names**

Company names encapsulate the image of the firm as it is perceived by stakeholders. The resource-based view states that a firm’s reputation is a resource that leads to competitive advantage. A definition of reputation is that it’s the evaluation of a firm by its stakeholders in relation to their effect, esteem and knowledge. Both theoretical and empirical evidence suggest that positive evaluation presented in the media is a resource and it increases the performance of firms (Deephouse, 2000).

An example from the annual reports in the sample:

*At the end of October our achievements were further recognised with Westpac rated number one among the top 100 companies in Australia in the Good Reputation Index for 2002* (Westpac Bank, Annual Report, 2002).

**Distribution channels**

Distribution channels are the mechanisms of getting products and services into the market (Brooking, 1996). Distribution channels are one
of the key elements for creating value in most firms. The relationship between manufacturers and distributors should be interdependent to create value to both parties (Giroud, 2000).

An example from the annual reports in the sample:

More recently this trend led to the introduction of Westfield’s signature entertainment and lifestyle offer – The Street, which integrates state-of-the-art cinemas with cafes, restaurants and lifestyle retailers. The Street has been a critical factor in attracting customers to the centres ‘after hours’, allowing them to browse for books and music, enjoy a meal or movie and shop at other retail outlets in the centre (Westfield, Annual Report, 2001).

Business collaborations

This is the collaboration with other business partners (Brooking, 1996). Alliances can be equity or non-equity based (Chan et al., 1997). An analysis of intangible resources indicates that firms enter into co-operation agreements to establish medium and long-term relations to obtain technology and exchange information (Fernandez et al., 2000) and by pooling their resources firms can take advantage of synergy (Chetty and Holm, 2000).

An example from the sample annual reports:

Our focus since August 2001 has been on gaining the full benefits of the merger between Brambles Industries Limited and the support service businesses of GKN plc. The merger produced a high-quality portfolio of businesses with strong growth records, experienced management teams and exciting potential (Brambles, Annual Report, 2002).
Licensing agreements

Licensing agreements are wide-ranging agreements giving a party the right to sell products, services or technology to other parties as per the conditions set out in the agreement (Brooking, 1996). They include both licensing and cross-licensing agreements. Cross licensing provides firms who are active in Research and Development with protection against inadvertent infringement and the right to use licensee’s patents (Grindley and Teece, 1998).

Generally, licensing requires zero equity, only part of the business function is transferred to the recipient, the recipient has limited control over day-to-day activities, individual enterprises have limited common characteristics, and there is a direct, simple relationship between the entrant and the recipient’s sales or production facilities (Clegg and Cross, 2000).

An example from the annual reports in the sample:

*The Lloyd’s reform processed markedly during 2002 with the implementation of the franchise model and a series of ancillary changes designed to speed up the modernisation of the market including the structure, accounting practices, and overall performance* (QBE Insurance Group, Annual Report, 2002).

**Human Capital**

This refers to an individual’s education, skills competencies, etc. The characteristics of human resources are critical in determining the knowledge creation capacity of organisations as well as the quality and length of their relationships with external stakeholders.
Appendix A

Employees

Some argue that employees are the most important assets of an organisation because knowledge and expertise lie within them (Lank, 1997; Dzinkowski, 1999) and therefore the success of knowledge strategy depends on the people in the firm. This element concerns employee characteristics that can be grouped into several dimensions:

- personal data: employee numbers, gender, and average age; and
- economic contribution: value added per expert, revenue per non-administrative staff.

An example from annual reports in the sample:

ARG employs over 1000 staff. About 850 are located in Western Australia where ARG operates on more than 5,000 kilometres of standard and narrow gauge track (Wesfarmers, Annual Report, 2002).

Education

Education encapsulates the education received from a formal establishment such as a school. This refers to the general education a person has received (Brooking, 1996). It also represents the exposure to new knowledge, concepts and ideas in a structured way with the purpose of increasing knowledge or modifying attitudes and beliefs. It contains any information discussed other than that shown as measurements in growth/renewal ratios: average education level.
An example from annual reports in the sample:

*The agribusiness division’s long term future was highlighted by our recruitment this year of 32 young people with farming background and agricultural qualifications* (National Bank, Annual Report, 2002).

**Training**

Training refers to programmes to foster worker participation and incorporates achievements associated with training programmes (GRI, 2002).

An example from annual reports in the sample:

*That’s why we have developed a unique workshop and interactive learning experience called ‘Financial First Steps’ to give our new recruits and young staff greater confidence in money matters* (Westpac Bank, Annual Report, 2002).

**Work-related knowledge**

Work-related knowledge refers to the amount of knowledge an employee possesses about a particular topic. It could be a straightforward activity (e.g. raising an invoice) or a complex activity (e.g. designing aeroplane wings). It also could be tacit, for example, tea tasting by a tea taster (Brooking, 1996). This line item also includes work-related knowledge that is acquired during the job in terms of tacit, explicit and implicit knowledge. Tacit knowledge exists with the person but is extremely difficult to explain or write down. Explicit knowledge can be easily written down in books, manuals, procedures and so forth. Implicit knowledge is hidden in the work procedures and methods, and corporate culture (Brooking, 1996).
An example from annual reports in the sample:

*The team offered a well balanced mix of financial, technical, marketing, operational and strategic management capabilities that proved invaluable in a year when global steel prices were at, or about, historic lows* (BHP Billiton, Annual Report, 2002).

**Entrepreneurial spirit**

Entrepreneurial spirit incorporates the concepts of innovativeness, proactive and reactive abilities, and the ability to change. Innovativeness is the ability to build on previous knowledge and generate new knowledge (Roos et al., 1997).

An example from annual reports in the sample:

*Our business model is based on building profitable sales volumes to achieve sustainable growth in earnings and improved returns on funds invested. We will accomplish this by growing the commercial premium component of our portfolio, based around our core premium brands. To support this approach, we have implemented a demand-driven business model. This enables us to match production to customer demand* (Southcorp, Annual Report, 2002).
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Intellectual Capital Reporting: Lessons from Hong Kong and Australia

As nations move away from traditional manufacturing economies to knowledge intensive economies, the debate on how to account or report the ‘values’ of intangible assets has re-emerged.

‘Knowledge-based’ industries need to find a way of communicating their intellectual capital to their stakeholders and the capital markets. A firm’s intellectual capital includes ‘new’ intangibles, such as staff competences and customer relationships, which generally do not meet the balance sheet recognition criteria for intangible assets.

In the absence of balance sheet recognition, how can firms’ performance in managing their intellectual capital be assessed? This report aims to address this question by furthering the understanding of when, and how, organisations voluntarily report their intellectual capital.

The report firstly reviews contemporary developments in, and frameworks for, intellectual capital reporting, including the role of management commentary. The report then explores the existing literature on why, and how, firms disclose their intellectual capital.

This study investigates the voluntary intellectual capital disclosure of companies in Australia and Hong Kong, where intellectual capital reporting is purely voluntary. The authors consider the need for some level of international standardisation and the implications for policy setting. They recognise that further research is required to establish a consensus between business about the need to report, what to report, and how to report it.

EAN 9781904574279