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Indra Abeysekera
Macquarie University, indraa@uow.edu.au

J. Guthrie
Macquarie University

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Keywords

Intellectual capital; developing nations; Sri Lanka; annual reports; content analysis

Disciplines

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HOW IS INTELLECTUAL CAPITAL BEING REPORTED IN A DEVELOPING NATION?

By

Indra Abeysekera
Director, Dynamic Accounting, Sydney, Australia
iabeysek@hotmail.com

and

James Guthrie
Professor of Management, Macquarie Graduate School of Management, Sydney, Australia
james.Guthrie@gsm.mq.edu.au

Name of institution the work originates from:

Macquarie Graduate School of Management, Sydney, Australia

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Correspondent's details:

Name: Indra Abeysekera
Postal address: PO Box 5, Eastwood, NSW 2122, Australia
Phone: +61 417 405 399
Email: iabeysek@hotmail.com

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HOW IS INTELLECTUAL CAPITAL BEING REPORTED IN A DEVELOPING NATION?

Abstract

To ascertain the status of intellectual capital reporting in a developing nation, this study examined annual reports of the top 30 companies in Sri Lanka. These were analysed using content analysis, and data were recorded in a theoretically backed coding framework with 45 intellectual capital items that were categorized into internal, external and human capital. The findings indicated that the most reported was external capital by frequency and human capital by line count. Only a small proportion of intellectual capital items reported were quantified.

Key words: Intellectual capital; developing nations; Sri Lanka; annual reports; content analysis.

1. INTRODUCTION

The knowledge-based firms are growing exponentially [Romer, 1998] and the demand for knowledge based products and services is growing in the global economy [King and Ranft, 2001]. Sveiby [1997] points out that even the traditional sectors are gradually including knowledge components in their products and services, which ultimately enhance the value of the firm. However, this increase in intellectual capital (IC) 'value' of the firm, beyond its traditional net asset value has resulted in an accounting 'vacuum', as traditional accounting methods prove unable to recognize it in statements of financial position. Although traditional accounting has ignored this value [Tissen, Andriessen and Deprez, 2000, p. 53], some argue that the market has factored it into their shareholders' equity which helps explain some of the differences between the net book value and the market price [Bassi, Lev, Low, McMurrer and Siesfeld, 2000].

Intellectual capital in firms has emerged due to forces that are constantly reshaping business which include globalisation, emerging technologies, changing customer demands, and changes in political and economic structures [Guthrie and Petty, 2000; Volberda, Baden-Fuller and van den Bosch, 2001]. These changes necessarily affect the way business is carried out for sustainable growth.

This decrease in geographical barriers for trade, lower transaction costs, and more freely available capital in the intangible economy, is affecting firms all over the world, including firms located in developing countries [Daley, 2001]. The firms in developing countries compete with firms in developed countries for survival and profitability, and they depend on intellectual capital as their sustainable advantage. Several studies have been carried out to

ascertain the status of intellectual capital reported by organisations located in developed economies. However, there have been few studies done to ascertain its status in a developing economy and therefore the ability of the companies in a developing country to compete in the globalised economy. As would be demonstrated in the literature review, the previous studies on intellectual capital reporting have been carried out in developed countries [Subbarao and Zeghal, 1997; Guthrie, Petty, Ferrier and Wells, 1999; Guthrie and Petty, 2000; Brennan, 2001; Olsson, 2001]. What is missing from the research is a detailed analysis of a developing nation and the reporting of IC amongst its largest firms.

Therefore, the objective of this paper is to report the status of intellectual capital reporting of sample large firms listed on the Colombo Stock Exchange [Sri Lanka, a developing country]. The study used content analysis to analyze annual reports of 30 companies selected by market capitalization. The results were entered into a coding framework and the data were interpreted by intellectual capital categories.

This paper is arranged in the following order. Section 2 outlines the literature relevant to this study; Section 3 offers reasons for selecting the developing nation Sri Lanka for the study, and discusses the research method and content analysis employed in the study; Section 4 outlines the results and compares them with findings in Australia in the discussion; and Section 5 offers a conclusion.

2. LITERATURE REVIEW

Empirical research cites several limitations imposed by the traditional accounting system in reporting IC. For instance, the writing off of intellectual assets as expenses [Backhuijs, Holterman, Oudman, Overgoor and Zilstra, 1999; Lev, Sarath and Sougiannis, 1999] has

demonstrated that it leads to systematic under-valuation and relatively adverse liquidity of firms [Boone and Raman, 2001; Ronen, 2001]. These weaknesses are believed to be responsible for giving rise to part of the gap between market and the net book value. Although technology can change the approach to reporting information, it is unlikely to see major changes to accounting standards to recognise and report IC in financial statements [Brennan, 2001].¹ This offers a wider choice of reporting methods to firms and industries, and they can use their discretion in what to, when to, and where to report IC in annual reports.

Several definitions of IC take a strategic approach [Edvinsson and Sullivan, 1996; Klein, 1998, p. 1). For instance, according to the ASCPA and CMA [1999] definition, a higher valued asset is produced by formalising, capturing and leveraging intellectual material [ASCPA and CMA, 1999, p. 4]. The Society of Management Accountants of Canada [SMAC] offers an accounting-based definition as 'In balance sheet terms, intellectual assets are those knowledge-based items, which the company owns which will produce a future stream of benefits for the company' [IFAC, 1998, p. 12]. However, the SMAC definition conflicts with the assets definition of the International Accounting Standards Committee [IASC] and the Australian conceptual framework since SMAC defines assets using the criterion of ownership of the asset, and others define it using the criterion of control of the asset [CPA Australia, 2000, pp. 49-69; IAS38, 1998].

Most definitions of IC are based only on intellectual assets. They have ignored the possibility of the existence of intellectual liabilities in the constitution of IC. However, several authors have pointed to the existence of intellectual liabilities [Harvey and Lusch, 1999; Caddy, 2000]. Intellectual liabilities are those intangibles not recognised in the financial statements that decrease the value of the firm. The process issues comprise weak strategic planning

processes, inadequate R&D, antiquated manufacturing processes, and poor new product development processes. The human issues comprise high employee turnover, discrimination among employees, inadequate training and development, and inexperienced top management team. The information issues comprise lack of adequate information infrastructure and lack of analysis to turn data into information. Configuration issues comprise lack of flexibility in organisational structure, lack of intellectual property, and inadequate geographic location of plants and warehouses [Dzinkowski, 1999; Caddy, 2000]. Our study, therefore, has recognised the existence of intellectual liabilities in the constitution of IC.

IC reporting has not been defined in the literature. However, the CPA Australia accounting handbook defines general purpose financial reporting as a financial report intended to meet the information needs common to users who are unable to command the preparation of reports tailored so as to satisfy, specifically, all of their information needs [CPA Australia, 2000]. The lack of uniformed definitions in intellectual capital and intellectual capital reporting enable firms to define them in a manner that suit their reporting objectives.

The theoretical classification of IC in the literature can be classified into five major frameworks where the first three frameworks have a focus on assets: (i) structures holding intellectual assets [Sveiby, 1997, pp.93, 111-12, 165] and this framework focuses on intellectual assets; (ii) capital holding intellectual items [Edvinsson, 1997; Edvinsson and Malone, 1998; Roos, Roos, Dragonetti and Edvinsson, 1997; Edvinsson and Sullivan, 1996] and this discusses IC in relation to intellectual assets; (iii) assets representing IC [Brooking, 1996, pp. 13-15; 129; 1999, pp. 153-155] which focuses on intellectual assets; (iv) strategic root and measurement root [Roos et al., 1997, p.15] which focuses on the role of IC; and (v) a combination of assets and capital in representing IC [SMAC, 1998, p. 14; IFAC, 1998, p.7;

Dzinkowski, 2000] and this framework is an extension of the assets representing IC. This study adopted the last framework, which was a combination of assets and capital framework to measure and report IC. The availability of several competing frameworks enables firms to interpret intellectual capital either as capital only, assets only or both assets and liabilities.

Several studies have examined the status of IC of firms in Australia [Guthrie et al., 1999; Guthrie and Petty 2000], Ireland [Brennan, 2001], and in Sweden [Olsson, 2001] within annual reports. It has also been used to ascertain the comparative status of IC between a number of countries [Subbarao and Zeghal, 1997].

Researchers in Australia [Guthrie et al., 1999; Guthrie and Petty, 2000] have empirically examined Australian organisational practices in managing and reporting IC by: (1) reviewing the literature on government and professional policy pronouncements to identify organisations that are currently discussing IC; (2) undertaking a content analysis of the top Australian-listed companies by market capitalization; (3) reporting the results by content by frequency count. The research included a 'best practice' organisation as a benchmark to identify what companies are doing and what they could be doing, in reporting IC; (4) reporting a number of case studies to provide a greater understanding of how organisations identify, manage, measure and report IC. These authors claim that Australia was an excellent country for such analyses as it is undergoing transformation with increasing emphasis of new sectors such as financial services, tourism, information technology and niche manufacturing, and with a relative decline in its strong areas of agriculture and mining. The Australian economy has experienced a faster economic growth during the 1990s than most other OECD countries and has increased its rate of productivity growth. The authors used the framework developed by Sveiby [1997] and categorized intangibles into internal structure, external structure and

employee competence. Their study had the following several conclusions for Australia: first, the key components of IC were poorly understood, inadequately identified, inefficiently managed and inconsistently reported. The companies did not have a consistent framework to report on IC; second, the entrepreneurial spirit was the most frequently reported attribute; third, reporting external capital [ExtC] was more in favour with companies. This is in the light of the emphasis in recent years on rationalizing distribution channels, reconfiguring firm value chains and re-assessing customer value through exercises such as customer profitability analysis. They identified that most of the IC information reported was on ExtC (40%). Human capital [HumC] (30%) and internal capital [IntC] (30%) were evenly distributed. It is also consistent with global competition, especially in financial services and retail sectors where competing for market share has become a priority; fourth, even the Australian 'best practice' enterprise requires a comprehensive management framework for IC, especially for collecting and reporting IC information; fifth, Australian companies did not compare favourably with several European counterparts when assessing their ability to manage, develop, support, measure and report IC; sixth, few Australian enterprises appeared to have taken a conceptual approach to reporting IC. They often stated claim in the Annual Report that human resources represent the most important resource of the firm but this was not supported by IC elements reported and measured in the remaining sections of the annual report; and sixth, evidence from the study suggested that there is a gap between recognising the importance of IC and the steps taken by the public policy to recognise IC by Australian enterprises.

Subbarao and Zeghal [1997] analysed annual reports of a sample of publicly-traded corporations in six countries [USA, Canada, Germany, UK, Japan and South Korea] to make an international comparison in human resource disclosure. A total sample of 120 corporate annual reports of listed enterprises were analysed, 20 reports from each of the six countries,

with 10 from the manufacturing and 10 from the financial services sector. However, the study was descriptive and had less justification in its sample identification and for its geographical comparison. They analysed the frequency and word count of human resource information by five broad categories. They were: information on training (training); information related to the contribution of human resources to increase the value of the corporation (value-added); diversity of the workforce as a responsible corporate group (equity issues); information related to employment relations (employee relations); and compensation of executives and employees (compensation). Their study revealed the following seven conclusions for the six-country comparison: first, the benefits and pensions were the most frequently disclosed information but employees' benefits were statutorily required to be reported in most countries studied; second, the value added by human resources to a corporation was the least frequently reported. The authors believe that this was either because corporations found it difficult to measure or felt that value-added information was unimportant; third, employees featured for their special contributions and the directors' committee of human resources ranked fifteenth and eighteenth by frequency of disclosure respectively; fourth, the overall information on union activity was low; fifth, when information was analysed by country, firms in Japan and South Korea have not reported profit-sharing information in their annual reports. The US corporations on the other hand have reported information on sharing of profits, as both stocks and stock option; sixth, in Europe, the frequency of disclosure of the number of people employed was high compared to those in annual reports in North America and Asia; finally, when information was analysed by country, especially, corporations in Europe reported more while firms in Asia reported less, about employee compensation.

The diverse reporting between countries found by Subbarao and Zeghal [1997] on human resource information was consistent with previous corporate social reporting where the

amount of disclosure varied significantly between countries [e.g. Guthrie and Parker, 1990; Gray et al., 1995].

Olsson [2001] examined the annual reports of the largest Swedish firms in the stock market. The study ascertained the HumC aspect of IC reporting by analysing the contents of annual reports based on five criteria: education and development; equality; recruitment; selection of employees; and CEOs' comments about personnel. It excluded information about the companies stock, balance sheet and income statement, pictures and information about the board, auditing report, holding companies, cash flow analysis, proposal for the distribution of profits, the cover pages, addresses and phone numbers, principles for valuation and accounting paragraphs, and definitions of key ratios. However, no reasons were given for their exclusion. It found that in 1998 none of the 18 companies reported more than 7% of human resources information of total information in annual reports and they were deficient in the quality or the extent of the material disclosed. It argued that in the real world the importance of having more transparency of HumC is absent [Olsson, 2001].

Brennan [2001] carried out a similar empirical study in Ireland using technology and people-oriented firms. The author analysed annual reports of 11 public firms and 10 private firms. The study showed that external capital is the most frequently reported category. Although the author used a framework similar to Guthrie et al. [1999] to codify data using content analysis of annual reports, and have reported results similar to the Australian study, the two studies had methodological differences.

As reported above, a number of studies have previously employed the coding framework as a basis to study the frequency of intellectual capital reporting amongst Australian companies

[Guthrie et al., 1999; Guthrie and Petty, 2000; Brennan, 2001]. However, this study expanded the framework because it had a major focus on ‘human capital’ since Sri Lanka has a high adult literacy rate as a developing nation. The framework had 45 intellectual capital items in total, including 10 internal capital items, 10 external capital items and 25 human capital items. This will now be explained in more detail in Section 3 below. Also, this study focuses on firms located in a developing nation, Sri Lanka, and the next section outlines the reasons for its selection.

3. RESEARCH METHOD

Sri Lanka is a lower middle income, developing country, with a population of 18.8 million. However, its adult literacy rate is 92%, being significantly above the world average of 77% and the developing world average of 70% [UNDP Sri Lanka, 1998]. Its GNP for 1998 was US\$15.4 billion with a GNP per capita of US\$823. The rate of GDP growth in real terms for 1998 was 4.7%. The GDP is primarily driven by the services sector (53.1%) followed by agriculture (21.2%) and manufacturing (16.9%) [Central Bank of Sri Lanka, 1999, pp. 1 and 23].

A number of factors recommended Sri Lanka as a potential country. First, because of its high adult literacy rate (i.e. high level of intellectual capital) it was interesting to find out to what extent Sri Lankan companies emphasize that valuable resource and recognize its ability to add value to their organisations. Second, as Sri Lanka is a developing country, the findings of this study can act as a benchmark for future studies of intellectual capital reporting in other developing countries. Third, the government of Sri Lanka has recently acknowledged the necessity to strengthen the legal framework on intellectual property in the context of the knowledge economy to encourage creation and registration of intellectual property.²

The current study seeks to examine the status of IC reporting in the largest companies (by market capitalisation) listed on the Colombo Stock Exchange. Since there are no accounting standards or laws necessitating the reporting of intellectual capital, any such reporting is voluntary. Large companies were chosen because past research in ‘voluntary’ social and environmental reporting [Guthrie and Mathews, 1985; Andrew, Gul, Guthrie and Teoh, 1989; Gray, Kouhy and Lavers, 1995a, p. 62] has indicated that companies initiate such voluntary reporting for legitimacy reasons.

As demonstrated in the literature review above, several IC reporting studies have used annual reports and applied content analysis to examine reporting of IC. The next section outlines the research method in general, and content analysis in particular, as applied in this study.

The annual reports of the top 30 Companies listed on the Colombo Stock Exchange were subjected to a content analysis (*see below*).³ Annual reports were chosen as the sources of data because they represent the corporate concern in a comprehensive and compact manner. Further, they are regularly produced and offer a summary of management’s intentions and priorities for that period [Niemark, 1995, pp. 100-101]. Content analysis of annual reports has been carried out in several previous social and environmental accounting and intellectual capital studies [Abbott and Monsen, 1979; Andrew et al., 1989; Choon, Smith and Taylor, 2000; Guthrie and Mathews, 1985; Guthrie et al., 1999; Olsson, 2001; Subbarao and Zeghal, 1997] demonstrating that it is a rigorously tested research instrument for such studies. The present study analysed the content of the annual reports and codified the qualitative and quantitative information. However, this study ignored the information required to report by either accounting standards in Sri Lanka (e.g. ex goodwill recognised due to an acquisition of

a product or/and service or/and entity) or by Sri Lankan law. This is because such information is reported to meet mandatory requirements and therefore does not represent management thoughts and priorities on intellectual capital. For example, accounting standards of Sri Lanka requires firms to recognise intellectual capital included in purchased goodwill [SLAS, 1999]. The company law require that certain employee benefits provided by firms such as superannuation contributions should be disclosed in their annual reports [*Companies Act 1982*].

The framework adopted by the CPA Australia and CMA Canada and International Federation of Accountants was used to record the codified information. Brooking [1996] published the initial version of this framework that has since undergone revision [ASCPA and CMA, 1999, p.14; International Federation of Accountants, 1998, p.7; Dzinkowski, 1999; 2000]. The modified framework has three major categories of intellectual capital: internal capital (represented by intellectual property and infrastructure assets); external capital; and human capital. The present modifications have been made to enable intellectual capital attributes to be identified in more detail, at the firm level. The modifications were made to examine IC reporting differences in the following areas: equity issues; human capital relations; human capital measurement; and training and development, for two reasons. First, Sri Lanka has a relatively a high adult literacy rate as a developing nation. Second, the recent amendments to intellectual property act was amended to encourage people to generate ideas and to drive the economy towards a knowledge-based economy and that may have an impact on the human capital reporting differences of IC.

Both intellectual assets and intellectual liabilities were codified, since together they represent intellectual capital. The total score for a given intellectual capital item represents the

frequency or line count of intellectual capital. The frequency provides the intensity (density) of a given intellectual capital item while the line count indicates the space allocated for a given intellectual item (volume). The frequency was determined by the number of times an intellectual capital item was described, whether qualitatively or quantitatively. The line count method of measuring data was chosen for two reasons. First, it is more appropriate rather than the word count method for drawing inferences from narrative statements, such as characterized annual reports. Second, the line count method makes the quantification of charts, tables and photographs easier, by simply converting them into equivalent lines.

The annual report was analysed to find out how different sections in the annual report communicate intellectual capital. Eight sections were discerned: (1) Vision, Mission and Goals; (2) Chairman's section; (3) Directors' section; (4) Operations; (5) Financial statements; (6) Audit report; (7) Cover, inner cover and outer cover; and (8) Sundry section containing information not covered by the other sections. The data were codified to identify how the different sections of the annual report differed in their communication. Narratives, charts, tables and figures were examined as units of communication.

Words and pictures manifest in different ways. As pictures are self-evident and simple, no special training is required to read them [Sless, 1981, p. 74]. On the other hand, according to the Conceptual Dependency Theory, sentences represent meanings that are acquired and stored in episodic form rather than in hierarchical form [Schank and Abelson, 1977, p. 222] because they are intensive, comprehensive, rich, and the observer attempts to capture the full picture [Zukier, 1986, pp. 473-476]. Words are associated with thinking and are an intellectual activity. Pictures are associated with seeing and are sensory and the observer

simply absorbs the information [Sless, 1981, p.74]. Therefore, it is not easy to reach conclusions on the differential reporting impact of frequency and line count in this study.

The data recorded in the coding framework were reviewed after a time interval to ensure that it was coded objectively and consistently. The report was analysed then by numbers (numerically) and monetary numbers (fiscally) as units of communications and noted in which section of the annual report they were recorded. The report ignored line count in codifying quantitative information because it is meaningless to apply such a measure to numbers and monetary values.

This study classified IC items into three categories, namely, internal, external, and human capital. Internal capital is the knowledge that has been captured or institutionalised within the structure, processes, and culture of the firm [Guthrie and Petty, 2000]. Internal capital includes items such as patents, trademarks, copyrights, management philosophy, corporate culture, management processes, information systems and financial relations. External capital is the perception of value obtained by a customer from doing business with a supplier of goods and/or services [Guthrie and Petty, 2000]. External capital includes items such as brands, market share, customer satisfaction and loyalty, business collaborations, franchising and licensing agreements. Human capital is the knowledge and know-how that can be converted into value [Edvinsson and Sullivan, 1996]. Human capital comprises know-how, education, vocational qualifications, training programs, union activity, compensation plans, and shares and options schemes.

The different IC categories and different IC items within an IC category can have different reporting implications. In comparison to previous studies, this study analysed IC in detail by

breaking it down to more IC items (45) to ascertain the reporting differences of IC at a most basic level. The results of the study are presented and discussed by IC items under each IC category as outlined in the next section.

4. RESULTS

This research found that human capital is the second most reported category by frequency. It used fewer narratives to report human capital compared to external capital, which was the most reported category by frequency. However, in this study the most reported category by line count was human capital. This is because firms in Sri Lanka have used more space to report on employee relations by featuring employees mostly by photographs.

Most intellectual capital reported was in qualitative form (i.e. anything that is non-numerical or non-fiscal; for example, narrative, chart, table, photograph) than in quantitative form (i.e. numerical and fiscal).

Findings in Sri Lanka revealed a paradoxical situation in reporting of intellectual capital category by frequency and line count. Many have reported human capital as the most important asset they have for sustainability in firms [Stewart, 1997, p. 140; Miller, DuPont, Jeffrey, Mahon, Payer and Starr, 1999] but previous literature argues few practice it [Olsson, 2001]. For instance, the research findings as shown in Table 1 highlight that human capital by line count was the most important but was the second most important by frequency count.

(TABLE 1 ABOUT HERE)

The most unusual feature of Sri Lankan annual reports compared with Australian counterparts on human capital is the featuring of employees mostly in photographs followed by narratives. This is followed by disclosure on value-added information by employees. Training programs and the entrepreneurial spirit (i.e. the opportunity-seeking, innovativeness, proactive and reactive abilities of employees) is also reported in descending order. This contrasts with findings in Australia by Guthrie et al. [1999], who reported that the 'entrepreneurial spirit' was the most frequently reported item. Value-added details of employees were significant by frequency count with Sri Lankan companies compared to their Australian counterparts.

Regarding external capital, company reputation was the most frequently stated item. This is acceptable since companies in the sample were highly regarded in Sri Lanka. Brand names and market share were the next most important items. Internal capital was the least reported category. Although technological processes were seen as the most important item, it could have been over-emphasized due to the 'year 2000' issue. Management processes were the second most important item. Information on trademarks was absent and little was reported on intellectual property. It is interesting to note that, whilst Sri Lankan companies place great emphasis on intellectual capital, not a single annual report explicitly mentioned intellectual capital. Also, none of the annual reports examined had any exclusive section to report intellectual capital. They have covered a wide range of intellectual capital items located under different headings in their annual reports. Highlighting intellectual capital as a separate section can draw the attention of stakeholders to contemplate the need to report intellectual capital, and reporting it in an ad-hoc manner can be a tactic adopted by firms to divert attention of regulators to systematise reporting of intellectual capital.

Firms have employed several units of communication to report their intellectual capital. Primarily, information about intellectual capital was reported in narrative form (Table 2). The charts, tables and photographs were primarily used to communicate information on human capital. Narrative is an effective tool for sense-making [Weick, 1995, pp. 128-129]. People learn best from stories [Brown and Duguid, 2000] and previous research has shown that a convincing narrative is the most effective way to communicate knowledge. Description of knowledge is similar to description of a story in terms of sequencing, suggesting there is a meaningful link between the two [Davenport and Prusak, 1998, p. 81].

(TABLE 2 ABOUT HERE)

The low level of quantification of intellectual capital information reported as shown in Table 3, was not surprising for three reasons: first, there is no single agreed method to quantify intellectual capital information at present and any quantification can give rise to inaccurate meaning; second, only a few people possess the knowledge to quantify such information; third, research done in the areas of environmental and social accounting has revealed that most of the information presented is not quantified.

(TABLE 3 ABOUT HERE)

When companies communicated numbers, they were displayed in charts or were included in narratives. The monetary values were displayed using charts and tables. It seems that the companies used them to give prominence to human capital through some generalization of information.

The Sundry section of the annual report contained nearly one half of the intellectual capital information by line count and one-third by frequency (Table 4). The most notable category in that section of the annual report was human capital. The Chairman's section had a bias towards external capital. The Directors' section had a bias towards internal capital by frequency and human capital by line count. A combination of the Chairman's and Directors sections showed a bias towards external capital.

Some authors argue that the location of disclosure in the annual report helps to formulate a view of the commitment to the development of intellectual capital [Guthrie and Petty, 2000]. However, others tend to think it is not easy to find a unique, single reason as to why a particular location is preferred for reporting given information [Gray, Kouhy and Lavers, 1995b].

(TABLE 4 ABOUT HERE)

5. CONCLUSION

In summary, the objective of this paper was to report the status of intellectual capital reporting of sample large firms listed on the Colombo Stock Exchange (Sri Lanka, a developing country). The study analysed annual reports of 30 companies selected by market capitalization. The results indicated that Sri Lankan companies are active in intellectual capital reporting (when compared to developing nations) despite not explicitly using the term 'intellectual capital' in any report examined in the study. Most of the intellectual capital is reported in the Sundry section of the report. The low quantification of intellectual capital is expected, since there are few widely accepted methodologies available to quantify them at this stage.

The findings of this study are interesting since the most reported category by line count was human capital. Further research is needed; for instance, a series of case study interviews should provide insight into how firms treat human capital against what is being reported externally in annual reports. Also, the addition of case study interviews to the present empirical analysis could enable one to increase the external validity of findings and to obtain a more in-depth view of how firms manage intellectual capital. This study was limited by the sample size (30 companies) selected by market capitalization and a bigger sample size can increase the internal validity of results. Although the study was based on the assumption that bigger companies set standards in voluntary reporting, it needs to be validated by carrying out similar studies with medium-size and small-size firms. Further, this study reported the status of intellectual capital reporting by examining annual reporting pertaining to one year but a longitudinal study can help to establish the trends in reporting practices. It would also be interesting to examine whether a similar reporting practice exists in other developing nations by replicating this study.

Table 1**Reporting by intellectual capital category**

	1998/1999 frequency	1998/1999 line count
External capital	702	2,984
Human capital	596	3,260
Internal capital	412	1,684
Total	1,710	7,928

Table 2**Intellectual capital reported by units of communication**

	1998/1999 frequency	1998/1999 line count
Chart	39	293
Table	23	366
Photograph	219	2,276
Narrative	1,429	4,993

Table 3**Quantification of intellectual capital**

	1998/1999 frequency
Numbers	57
Monetary values	104

Table 4**Intellectual capital reported by sections in the annual report**

	1998/1999 frequency	1998/1999 line count
Vision, mission and goals	56	112
Chairman	242	764
Directors	292	1121
Operational	370	905
Financial	84	260
Audit	7	32
Cover	45	94
Sundry	614	4640

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¹ BSC and EVA are two techniques available for reporting IC. Each technique has its strengths and weaknesses and they cannot be treated as comprehensive techniques.

² In 2000, Sri Lanka passed amendments to the Intellectual Property Act of 1978. Although the intellectual property is protected by the *Code of Intellectual Property Act 1979*, the lack of respect and enforcement of intellectual property rights is cited as a reason for international firms showing reluctance to locate their facilities in Sri Lanka [USAID, 1998, pp.7-8]. The lack of respect and poor enforcement may have hindered the inflow of knowledge-based skills and technology, encouragement to produce and implement ideas, and invitations into international markets to increase the market share of firms in Sri Lanka.

³ Companies in Sri Lanka have a year-end of either 31 December or 31 March. Reports dated 31 December 1998 and if otherwise, 31 March 1999 were chosen for the study because under section 144 of the *Companies Act 1982* of Sri Lanka.