

Disclosure of Intellectual Capital in Annual Reports: An Empirical Study of the Indian IT Corporations

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Abstract

At present, disclosure of IC information across the globe is done by very few leading corporations purely on a “voluntary” basis. Unfortunately, the omission of IC information may adversely influence the quality of decisions made by shareholders, or lead to material misstatements. This study attempts to provide an insight in to the “narrative” style of IC disclosures done by Indian corporations. Initially, a longitudinal study was carried out to analyze how Indian firms—Reliance Industries Limited, Balrampur Chini Mills, and Shree Cement Limited—measure and report their IC reports. In order to survey the recent IC disclosure scenario, we conducted another study of 16 Indian IT corporations in which the “content analysis” was done on their 2007 to 2009 annual reports. The results of this study confirmed that IC disclosure in these IT corporations is almost negligible and its disclosure had not received any preference from the mentors of these corporations. IC reports may initially be used for “internal” management purposes; but an “external” stakeholder-focus of IC report should be the ultimate goal.

Keywords: Intellectual Capital, Disclosure, Annual Reports, IT Corporations, Empirical Study, IC Reports

1. Introduction

Business dynamics of the 21st century are increasingly determined and driven by Intellectual Capital (IC) elements. The future drivers of any economy will no longer be capital, land or equipment, but the “people” and their “knowledge” reservoir. A knowledge-intensive corporation leverages their know-how, innovation and reputation to achieve success in the marketplace (Jose *et al.*, 2010) [1]. Market participants, practitioners and regulators alike argue that there is an important need for greater investigation and understanding of IC disclosure (or reporting) as the usefulness of financial information in explaining firm profitability continues to deteriorate. Bukh (2005) [2], for example, asserts that traditional disclosure mechanisms are not able to cope adequately with the disclosure requirements of new economy firms. He observed an increasing dissatisfaction with traditional financial disclosure and its ability to convey to investors the wealth-creation potential of firms. Despite growing interest and demand for IC information, prior research till date suggests a persistent and significant variation, both in the “quantity” and “quality” of information reported

by firms on this pivotal resource. As existing economic and business metrics track a declining proportion of the real economy, the deficiency and inconsistency in the disclosure of IC-related information is creating growing information “asymmetry” between “informed” and “uninformed” investors. This provides a fertile ground for informed investors to extract higher abnormal returns (Chiucchi *et al.*, 2008) [3]. Thus, IC is increasingly being recognized as having much greater significance in creating and maintaining competitive advantage and shareholder value. This clearly calls for a refreshed understanding of business principles, information disclosure, and decision-making processes.

The concept of IC measurement, management and disclosure is still relatively new. Accountants, business managers and policy makers have still to grapple with its concepts and detailed application. As expected, definition of IC varies substantially. According to Stewart (2002) [4]: “It has become standard to say that a corporations’ IC is the sum of its human capital (talent), structural capital (intellectual property, methodologies, software, documents, and other knowledge artifacts), and customer capital (client relationships).” One of the most

comprehensive definitions of IC is offered by the Chartered Institute of Management Accountants (CIMA, 2001) [5]: “The possession of knowledge and experience, professional knowledge and skill, good relationships, and technological capacities, which when applied will give organizations competitive advantage.”

An expert opine, IC is a combination of human capital—the brains, skills, insights, and potential of those in an organization—and structural capital—things like the capital wrapped up in customers, processes, databases, brands, and IT systems. It is the ability to transform knowledge and intangible assets into wealth creating resources, by multiplying human capital with structural capital. For instance, Sveiby (2004) [6] first proposed a classification for IC into three broad areas of intangibles, viz., Human capital, Structural capital and Customer capital—a classification that was later modified and extended by replacing customer capital by *relational capital*. Some examples of IC are shown in **Table 1**.

When there is a large disparity between a firm’s “market” value and “book” value, that difference is often attributed to “IC”. Market value is, of course, the corporation’s total shares outstanding times the stock market price of each. Book value is the excess of total assets over total liabilities. But what is the value of IC? Measuring the value of IC is difficult, but there are methods that can do it (Holmen 2005) [7]. As per a study conducted by Pike and Ross (2006) [8], they have categorized 12 different approaches to measuring IC, and another researcher has identified more than 30. The various forms of IC disclosure provide valuable information for investors as they help reduce uncertainty about future prospects and facilitate a more precise valuation of the corporations. However, financial reports fail to reflect such a wide-range of value-creating intangible assets, giving rise to increasing information asymmetry between firms and users, and creating inefficiencies in the resource allocation process within capital markets.

2. Literature Review on IC Disclosure Studies

The main IC disclosure studies were typically cross-sectional and country-specific, although some longitudinal studies have been reported too. Some of the leading IC disclosure studies, widely reported in the literature, were conducted in Australia, U K & Ireland, Sweden, Canada, Malaysia, Sri Lanka, New Zealand, Bangladesh and India. While most studies employed “content analysis” as the research methodology, other studies have used questionnaire surveys (Beattie 2007) [9]. Despite the fact that the importance of IC has increased in recent times, there are inadequate disclosures of IC in the financial statements of corporations (Bruggen *et. al.* 2009) [10].

Table 1. Components of intellectual capital.

Human Capital	Structural Capital	Customer Capital
Knowledge		Customer relations
Competence	Business processes	Customer Loyalty
Skills	Manuals/ policies	Repeat business...
Individual & Collective	Information systems	Relational Capital
Experiences	Research findings	Relations with vendors
Training	Trademarks	Investor trust and feedback...
Communities of practice...	Brands...	

In a review of the current state of financial and external disclosure research, Parker (2007) [11] identified IC accounting as a major area for further research. However, most of the IC disclosure studies were cross-sectional and country-specific. Examples include studies in Australia (e.g. Guthrie and Petty; Sujan and Abeysekera), Ireland (Brennan), Italy (e.g. Bozzolan *et al.*), Malaysia (Goh and Lim), UK (e.g. Williams), and Canada (Bontis). Relatively very few longitudinal studies have been reported (e.g. Abeysekera and Guthrie). Moreover, some studies focused on the specific aspects of IC disclosure, such as human capital disclosure (e.g. Subbarao and Zeghal), while others conducted international comparative studies (e.g. Vergauwen and van Alem; Cerbioni and Parbonetti). Some IC disclosure studies have looked beyond annual reports to examine other communication channels, such as, analyst presentations.

Studies have also been conducted to explore IC related issues from the firm’s perspective. Chaminade and Roberts investigate the implementation of IC disclosure systems in Norway and Spain. Habersam and Piper employed case studies to explore the relevance and awareness of IC in hospitals. Studies that looked at possible determinants of voluntary IC disclosure include García-Meca *et al.* and Cerbioni and Parbonetti. Based on analyst presentation reports of listed Spanish corporations, García-Meca *et al.* found significant association between IC disclosure and size and type of disclosure meeting but not ownership diffusion, international listing status, industry type and profitability. Guthrie and Petty’s (2004, 2006) analysis of IC disclosure practices suggests that disclosure has been expressed in discursive rather than numerical terms and that little attempt has been made to translate the rhetoric into measures that enable performance of various forms of IC to be evaluated.

India presents an ideal case for the analysis of IC disclosures by the IT corporations because the economy has been undergoing rapid economic transformation in the financial services, tourism, IT sectors and the niche manufacturing gaining momentum. In the Indian-context, there has been very limited number of IC disclosure studies, as compared to its European counterparts. However, two recent studies are available on IC disclosure in

India using content analysis, which were done by Kamath (2008) [12], and Joshi *et al.* (2009) [13]. The foregoing discussion suggests that the literature on the determinants of IC disclosure in Indian-context is very limited and inconclusive. Thus, our study builds on the previous literature of IC disclosure practice and overall IC disclosure scenario in the Indian corporate sector, especially knowledge-based IT firms. The scope of the study has been confined to 16 corporations from the IT sector [14-29], and a content analysis was performed on their annual reports for two years, namely, 2007-2008 and 2008-2009 respectively.

3. Research Methodology Used

With the rise of the “knowledge economy,” the management of IC is becoming even more important and, therefore, it should be disclosed in the annual reports. In the knowledge-based economy, therefore, most of the organizations have realized that the true potential of creating value for their organizations lies in the measurement, valuation, and disclosure of their IC (Jing *et al.*, 2007) [30]. However, due to lack of “regional” research on IC disclosures in India, we decided to focus on a “longitudinal” study of IC reports published by the Indian pioneer firms. After some initial research on business and intangible resources in the Indian corporations, we found that three corporations had published their first IC reports in 1997, which were discontinued later on. These firms are: Balrampur Chini Mills Limited, Reliance Industries Limited, and Shree Cement Limited. After some initial difficulties, we collected copies of IC reports published by these firms. The aim was to study the idiosyncrasy of the reports built in the Indian subcontinent.

This research also aims at mapping the current state of IC-related disclosures in the Indian scenario. Accordingly, the sample-size of this study consists of 16 top IT-sector corporations. However, these corporations were primarily selected on the basis of their total income, as per the 2008 publication of “Dun and Bradstreet,” a premier survey agency of the country. The electronic copies of the annual reports for these selected corporations were obtained for two years, 2007-08 and 2008-09 from their respective corporate Websites. In the past, several research studies have been conducted in various countries, using the “content analysis” of annual reports, to analyze the IC disclosure practices. A list of IC related terms was searched within the annual reports yielding a significantly small number of instances in which IC disclosure took place. Therefore, an attempt has been made here to use the same technique (*i.e.*, content analysis) to analyze the extent of disclosure of IC by these IT corporations.

However, research in other countries revealed that disclosure practice stays well behind on a global scale, despite the perceived importance by corporate managers.

4. Development of Intellectual Capital Reports

Endeavors to reconstruct corporate annual reports to include IC indicators were spearheaded in the early 1990s by a small number of corporations, such as, the Swedish insurance corporations “Skandia and Celemi,” the Danish corporations “Ramboll and the “Dow Chemical Corporations”. In fact, all these pioneering corporations included various aspects of their IC in their 1994 annual reports. As per Cuganesan *et al.*, (2006) [31], “An IC Report (ICR) consists of three components: 1) vision of the organization and the values that it seeks to follow; the strategic objectives, competencies, critical intangibles or ‘dream tickets’ (intangible assets that a corporations cannot do without to achieve its objectives); 2) a summary of the IC (intangible assets, intellectual resources, intangible activities) and the efforts undertaken by the organization to nurture the IC; and 3) indicators or parameters that quantify the IC. Indicators, in fact, provide measurable quotients for the audience of the ICR to correctly estimate the value of an organization’s IC and its expected potential and payoff.”

The Skandia Navigator (1994) [32] incorporated a total of 30 key indicators in the various areas, which are monitored internally on a yearly basis. To give an example, the key indicators for “customer” focus include number of accounts, number of brokers and number of lost customers, “process” focus include number of accounts per employee and administrative costs per employee, “human” focus include personnel turnover, proportion of managers, proportion of female managers, and training and/or education costs per employee, and finally, “development/renewal” focus include satisfied employee index, marketing expense/customer, and share of training hours.

The ICR serves to make the organizational “intangible” resources “visible” and to measure them. The ICR could be prepared for the purpose of giving external partners’ relevant information ‘supplementary’ to the other parts of the annual report and/or for using it as an ‘ad-hoc’ management tool for the development of the organization. Although the primary target groups of the ICR are existing and potential customers and employees, it also catches the attention of capital investors, the press, and the university researcher community (Brennan 2001) [33]. Some leading European and a few Indian firms had in the past published two types of reports: the intellectual capital report and the financial report. Some firms, indeed, elaborate and publish the ICR separately as a “sup-

plement” to their financial report. However, both types of reports are complementary and seek to offer a more “holistic” view of the firm. The ICR is aimed at providing a ‘holistic’ picture of the firm on the basis of chosen strategies, actions taken and current challenges. Rather than focusing on financial resources in accounting reports, the ICR is focused on “softer” resources, such as, intellectual capital (CIMA 2001) [5]. In essence, it is a “supplement” to the financial accounts, as well as, a valuable strategic management tool.

4.1. The Birth of World’s First Intellectual Capital Report

The first ICR was born and made public in the year 1994. Its ‘father’ was Leif Edvinsson at Skandia, and its birth constituted a milestone in the field of IC measurement, management and disclosure. From that year onwards, many firms realized the strategic importance of measuring and disclosure IC but so far just a few firms decided to build it. Looking at Skandia’s first, and subsequent IC reports, this pioneer firm decided to assume the challenges of building IC reports without the existence of any IC “guidelines” put forward by any regulatory bodies and/or any other certifying agency.

Skandia’s first ICR was focused on “intellectual capital as a whole.” It addressed organizational hidden values, indicators for the future, a vision of the satisfied customer, the search for success factors, quality of the system, people and technology, competency, renewal and growth, the path forward, and a glossary of terms related to IC. The first IC report had 22 pages, and subsequent ones issued in 1995 and 1996 had 7 and 11 pages, respectively.

The first, 1994 report also described a “new” disclosure model called, the “Skandia Navigator”. As it is well-known, this famous tool was designed to describe and measure the IC of an organization. The Navigator models (1996) [34] visualize value components that make up IC, as well as, the method of managing them and disclosure on their development. It is designed to provide a balanced picture of the financial and IC (1995) [35]. Its greatest advantage is “the balanced total picture it provides of the operations” (Skandia, 1998) [36]. The focus on financial results, capital and monetary flows is complemented by a description of IC and its development. Indicators that specify both the level and change are highlighted. At Skandia, the IC ratios are grouped into four major focus areas viz., the customer, human, process, and renewal & development focus, as shown in **Table 2**.

The Skandia Navigator is not intended to “provide a specific value for the various components of its IC. Rather, the navigator is designed to provide a balanced

Table 2. Assigning Values to Skandia’s Intellectual Capital (Measurement Methodology).

	1997	1996	1995	1994*
<i>Financial Focus</i>				
Operating income (MSEK)**	104	86	85	75
Total operating income (MSEK)	398	373	351	226
Income/expense ratio after loan losses	1.35	1.30	1.32	1.49
Capital ratio (%)	12.90	14.95	24.48	25
<i>Customer Focus</i>				
Number of customers	197,000	157,000	126,000	38,000
<i>Human Focus</i>				
Average number of employees	218	200	163	130
Of whom, women (%)	56	49	45	42
<i>Process Focus</i>				
Payroll costs/administrative expenses (%)	49	46	42	38
<i>Renewal & Development Focus</i>				
Total assets (MSEK)	9100	8100	5600	3600
Share of new customers, 12 months (%)	25	25	232	N/a
Deposits and borrowing, general public (MSEK)	7600	6200	4300	1300
Lending and leasing (MSEK)	8500	7600	3700	3200
Net asset value of funds (MSEK)***	9900	7400	6300	4700

*Accounting-based indicators for 1994 have not been recalculated in accordance with the new Swedish Insurance Annual Accounts Act, which took effect on January 1, 1996. **MSEK = Million Swedish Krona ***Changed calculation methods for 1996 and 1997. (Source: Skandia, “Human Capital in Transformation,” Intellectual Capital Prototype Report—A Supplement to Skandia’s 1998 Annual Report.)

overview, as well as, a basis for the systematic management process that is essential for the creation a future value. The four focus areas of Skandia’s model are the same for the other parts of Skandia’s organizational, while the indicators vary from unit to unit.”

4.2. The Second Generation of Intellectual Capital Report

The second milestone in the ICR field happened in the year 1997. In that year, most of the pioneer firms published their first IC reports. Mainly these corporations were from Denmark, Sweden, Spain and India. The experience of the European IC reports is well covered in the literature: the Danish case (Danish Agency for Trade and Industry), the Norwegian case (Roberts), the Spanish case (Ordóñez de Pablos) and the Swedish case (Celemi; Sveiby).

However, we should not forget that there is a long way to march ahead to cover in the field of the IC report. It is necessary to design IC report “guidelines,” which are accepted and carried out by those firms that decide to

measure and report their IC or in a not-so-distant future may be enforced by regulatory bodies—as it is the case of physical and financial resources and certain intangible resources like goodwill and intellectual property (FASB 2001) [37].

5. Intellectual Capital Disclosure Scenario in India: A Longitudinal Study

Attracted by the lack of “regional” research on IC disclosures in India, we decided to focus on a “longitudinal” study of IC reports published by the pioneer Indian firms. After some initial research on business and intangible resources in the Indian corporations, we found that three private-sector corporations had published their first IC report in the year 1997. These firms are: Balrampur Chini Mills Limited, Reliance Industries Limited, and Shree Cement Limited. After some initial difficulties, we collected IC reports published by these firms. The aim was to study the “idiosyncrasy of the reports built in the Indian subcontinent.” Why did these firms decide to build this innovative report? The reason is that the IC report contributes to the management of intangible resources, and also provides the shareholders’ with a “holistic” picture of the organizational resources. Let us study the experience of three leading firms, which had taken the lead by providing IC-related disclosures, so as to learn some valuable lessons from them.

5.1. Balrampur Chini Mills Limited

The Balrampur Chini Mills Limited (visit www.chini.com) is one of India’s largest sugar corporations, with three factories in Uttar Pradesh. In addition to the core sugar business, the corporation also produces and sells molasses and alcohol.

In 1996-97 Annual Report the firm elaborates about the rationale of IC and intangible report as: “to provide share owner a different and broader perspective of the corporations, and the fundamentals that drive its business.” The Balrampur Model is specific to the corporations (1997-98) [38] as “it reflects our priorities, our method of working, our attitude and our people.” If successfully activated, this model becomes regenerative. The corporation states in its 1998-99 [39] report, “As we keep this intellectual capital wheel in motion, the Balrampur will always be a growing corporation.”

According to the firm, the five elements of IC are: credibility, efficiency, human, structural, and customer capital. Customer capital has a strategic importance for the firm. As it states, “This is the apex of Balrampur’s intellectual capital model. All the expertise built up on the manufacturing and marketing sides of the business is eventually judged on the ability of the corporations to

produce sugar of acceptable quality.” (2000-2001) [40]

Moreover, the corporation stresses the benefits of valuing brands. The ability to outperform the sugar industry average is a reflection of the considerable intellectual capital that it has built into its business—at the farm, factory and marketing levels (2000-2001). The Balrampur Chini Mills’ ICR constitutes an independent document to the annual report. These reports had 11 pages (1996-1997), 24 (1997-1998), 48 (1999-2000) and 40 (2000-2001), respectively.

5.2. Reliance Industries Limited

The Reliance Industries Limited (RIL) activities include exploration and production of oil and gas, refining and marketing, power, telecommunications, petrochemicals, textiles, financial services and insurance, and info-com initiatives. It has emerged as India’s most admired business house, for the third successive year in a TNS Mode survey for 2003. The Reliance’s employee skills are its competitive muscle. Its skills differentiate Reliance from its competitors—whether it be through the speedier implementation of a project or in its implementation at a cost which is significantly lower than that of the competition, or in the ability to extract more out of capital equipment, even when it ages. These skills are germinated in the Reliance culture (1998) [41].

The ICR of RIL (www.ril.com) aims to: “redress the imbalance between non-financial and financial data, in recognition of the belief that value of organizations will, in times to come, increasingly reside in their intangible assets.” (1998) The ICR is just focused on intellectual capital and addresses several key topics: the importance of the IC report itself, IC and value creation, human capital, structural capital, customer capital, and investor capital. However, it does not address the business model. It constitutes an independent document from the annual report with a total of 20 pages.

The firm recognizes that “the development and the use of human potential and a learning organization is Reliance’s bridge to continued success in the future.” It uses the term “customer capital” not “relational capital” as most firms do. In this area, variables that matter are market creation, quality of customers, customer retention and growth, market share and the quality factor. Regarding structural capital, the firm admits that it must develop an organizational capability covering “strategy, speed of decision processes, ability to raise funds and prioritization...Organizational ability covers system architecture, the business process (horizontal integration), people processes, as well as, education, learning and knowledge building.” Finally, investor capital was the growth engine of Reliance. In this section (1998), the firm discusses issues focused on institutional shareholding, return to

investors, stability in ownership, awareness initiatives, investor education and investor servicing.

5.3. Shree Cement Limited

The Shree Cement Limited (visit www.shreecementltd.com) is operating in the cement industry, which possesses two cement plants at Beawar, Rajasthan. It also has one of the few R&D centres in the Indian cement industry. It has a worldwide reputation for maximizing capacity utilization and low energy consumption level.

Shree Cement Limited's IC report is an independent document (having 28 pages) that constitutes a 'Supplement' to the Annual Report 2001 [42]. The firm understands that IC is "capturing our various experiences for organizational benefit, cross-pollinating our collective knowledge across various operational tiers, maximizing output with the minimum of resources, and doing things right the first time." The Corporations IC resides in its own employees. Thus, the firm has retained the majority of its members possessing valuable technical, financial and manufacturing skills.

Shree Cement Limited's drivers of excellence have an intangible nature. As it recognizes, they are: "an achievement-oriented culture, continuous innovation, widespread employee participation, sustained plant modernization, cross-functional information sharing, constructive dissatisfaction, personal pride in collective achievement, a family work culture, operational discipline, caring management, aggressive empowerment, reward and recognition system, workplace enthusiasm, mix of youth and experience, informal environment, spirit of "must do", and quality obsession." The ICR of the firm is in "narrative style" as it does not incorporate double-entry tables with indicators for its intellectual capital.

6. Peculiarities of Intellectual Capital Reports in India

There is a vast difference in the disclosure mechanisms and methodology followed by the Indian corporations. In this context, Dr. Kamath (2008) [12] lucidly concludes as: "Some firms have been considering IC as an inseparable part of their total assets and disclosed it in their annual reports as ICR using the standard disclosure models. And, others publish those reports as a supplement to their annual reports, and some others give the details of growth in their IC over the previous period in a separate section in their annual report." There is no doubt that in India, IC disclosure is still in its "evolutionary" stages and all the three means of disclosure are accepted. Moreover, we appreciate the growing awareness and attempts made by some leading IT corporations to disclose IC in their annual reports.

The Indian ICR does not focus on any business model, values, mission and vision, and/or knowledge management issues, as is the case with the European ICR. It presents information in a "narrative" style: it describes a firm's IC and analyses its components without focusing extensively on specific indicators that measure these components. This is a major distinctive feature of Indian ICR. In sharp contrast with the European Union ICR, Indian reports do not combine a "narrative" and "quantifying" style (Abeysekera 2007) [43]. All Indian ICR analyzed in this study constitute an "independent" document that "complement" the Annual Reports. However, their length is much larger than the European Union reports. It is clear that corporations in the European Union are way ahead of their counterparts elsewhere when it comes to the measurement, disclosure and management of their IC (Andriessen 2004) [44]. Finally, one of the firms in this study—Reliance Industries Limited—even created a specific term for investor relations (the investor capital) and provides an in-depth analysis of this capital.

7. Study of IC Disclosures Done by the IT Corporations in India

In the knowledge economy, most of the organizations have realized that the true potential of creating value for their organization lies in the measurement, valuation and disclosure of their IC. Therefore, measurement and disclosure of IC is no more a choice but imperative for the IC driven firm's performance. Nielsen *et al.*, (2006) [45] very forcefully asserts: "Annual reports are an ideal place to apply an IC framework because they allow us to compare IC positions and trends across different corporations, industries and countries. They are an instrument for communicating issues comprehensively and concisely, and they are produced regularly, so they can be used to analyze management attitudes and policies across reporting periods."

One objective of the present study was "to survey the prevailing practices of IC disclosure by the information-technology (IT) sector in India." The sample size of this study consists of 16 IT corporations of India. They were primarily selected on the basis of their total income as per the 2008 publication of "Dun and Bradstreet," a premier survey agency of the country. The annual reports of the selected corporations were obtained directly from the Websites of these corporations, and the annual reports for two years (2008 & 2009) were examined.

The "content analysis" of annual reports involves codification of qualitative and quantitative information into pre-defined categories in order to derive patterns in the presentation and reporting of information (Joshi *et al.*, 2010) [46]. Moreover, the coding process involved reading the annual report of each corporations and coding the

information according to pre-defined categories of IC. Over the last decade, content analysis has been used by several leading researchers to study the IC performance and reporting (Beattie 2006) [9]. Therefore, as part of the present study, “content analysis” has been used to analyze the extent of IC disclosure by the IT corporations. By looking at the disclosure of terminology within their annual reports, one can examine the extent to which Indian corporations publicly document the presence (or importance) of IC. In identifying corporations disclosing IC, a list of related “IC-terminology” was compiled. Subsequently, a survey and review of several IC books and articles was conducted. According to Bontis (2003) [47], “The panel of researchers from the World Congress on Intellectual Capital finalized the list of IC items into a collection of 39 terms that encompassed much of the IC literature.” The list used by Bontis was considered comprehensive for this type of research on knowledge-based information-technology corporations. The final list of IC terms is shown in **Table 3**. Each of these terms was “electronically” searched individually in the annual reports to find out the presence or absence of the said terms, and count of how many times. By and large, most IC terms were disclosed only once in each annual report, and there was lack of consistency about the terms disclosed. Results were tabulated on the basis of the number of corporations disclosing these terms in their annual reports. Corporations-wise analysis, along with testing the degree of variance, has also been undertaken. The content-wise analysis has been shown in **Table 4**, corporations-wise analysis in **Table 5**, and the variation in

Table 3. The intellectual capital--39 search terms.

	Employee efficiency	Intellectual property
Corporations reputation	Employee skill	Intellectual resources
Competitive intelligence	Employee value	KM
Corporate learning	Knowledge assets	Expert networks
Corporate university	Expert teams	Knowledge management
Cultural diversity	Knowledge sharing	Human assets
Customer capital	Knowledge stock	Human capital
Customer knowledge	Management quality	Human value
Economic Value added	IC	Organizational culture
Employee expertise	Information systems	Organizational learning
Employee know-how	Relational capital	Intellectual assets
Employee knowledge	Intellectual capital	Structural capital
Employee productivity	Intellectual material	Superior knowledge

(Source: Bontis, Nick, “Intellectual Capital Disclosure in Canadian Corporations,” *Journal of Human Resource Costing and Accounting*, 2003, page 7).

Table 4. Content-wise analysis of intellectual capital terms disclosure.

S. No.	Items of Intellectual Capital	No. of Corporations Disclosing
1.	Business Knowledge	1
2.	Corporations reputation	Nil
3.	Competitive intelligence	Nil
4.	Corporate learning	Nil
5.	Corporate university	Nil
6.	Cultural diversity	Nil
7.	Customer capital	Nil
8.	Customer knowledge	Nil
9.	Economic Value added	3
10.	Employee expertise	Nil
11.	Employee know-how	Nil
12.	Employee knowledge	Nil
13.	Employee productivity	1
14.	Employee efficiency	Nil
15.	Employee skill	1
16.	Employee value	1
17.	Knowledge assets	1
18.	Expert teams	Nil
19.	Knowledge sharing	3
20.	Knowledge stock	Nil
21.	Management quality	1
22.	IC	Nil
23.	Information systems	8
24.	Relational capital	Nil
25.	Intellectual capital	2
26.	Intellectual material	Nil
27.	Intellectual property	15
28.	Intellectual resources	Nil
29.	KM	1
30.	Expert networks	Nil
31.	Knowledge management	5
32.	Human assets	Nil
33.	Human capital	6
34.	Human value	1
35.	Organizational culture	2
36.	Organizational learning	1
37.	Intellectual assets	1
38.	Structural capital	Nil
39.	Superior knowledge	Nil

(Source: Compiled by the author from the Annual Reports of Corporations for the year 2007-2008 and 2008-2009).

disclosure has been presented in **Table 6**.

Findings of Study and Analysis of Results

Table 4 indicates that only 18 (46%) items, out of the total list of 39 IC-terms, were disclosed in the annual reports of the 16 Indian IT corporations. Most of the IC-terms (viz., business knowledge, employee productivity, employee skill and value, knowledge assets, management quality, KM, human value, organizational learning, and intellectual assets) were disclosed only “once” in the annual reports, and there was utmost “lack of consistency” across-time about the terms disclosed. Our findings are very much similar to the findings of other studies done in the past. Surprisingly, the most popular term disclosed in this study was “intellectual property rights (IPR),” which represents such intangibles as patents, brands valuations, and the outcomes of R&D in-

vestment. This is quite obvious due to the vital role played by the “intangible assets (or IC)” in the case of knowledge-intensive IT corporations. However, this term has a very specific legal connotation from an accounting and legal perspectives. Therefore, the term “intellectual property” (IC term No. 27) had the maximum (93%) disclosure done by all the 16 IT corporations, followed by the 50% disclosure of the term “information systems” (IC term No. 23). This was not surprising due to the nature of knowledge-based IT corporations under study.

Unfortunately, the term “intellectual capital (IC),” was specifically disclosed by just 2 out of the 16 corporations, namely, Moser Baer India Limited, and Patni Computer System Limited. A closer examination of both these corporations clearly revealed that the presence of “IC” term was generally used in the “management discussion & analysis (MD&A)” section of the annual reports. It is very strange, there is no evidence at all in any of the firm’s identified, that an actual IC statement/report was developed, or that any other IC metrics were being published. Moreover, our survey and subsequent analysis of the IC disclosure practices suggests that disclosure has been vaguely expressed in very “discursive,” rather than “numerical” terms, and that little or no attempt has been made to translate the rhetoric into measures that enable performance of various forms of IC to be evaluated.

For instance, Moser Baer India Limited [14] declared in its annual report, under the MD&A section, for the year 2007-08 as: “Quality of our human resources charts the success and growth potential of our business. The Corporations has managed to keep attrition rates well in control by imbibing a sense of ownership and pride, and strong HR initiatives geared to nurturing latent talent, and unlocking the power of IC. The Corporations continues to drive organization development and also build management resources for a multi-business enterprise.” Recently, Moser Baer had stated in its 2008-09 annual report, as follows: “Your corporations continuously benchmarks HR policies and practices with the best in industry and carries out necessary improvements to attract and retain best talent and build intellectual capital.” Similarly, another IT corporation, Patni Computer Systems Limited [15] makes a “casual” mention of its IC in its annual report for the year 2007-08 as under: “The global sourcing market has matured from those days when India was considered to be a source of ‘low-cost manpower’. Today, it has earned the distinction of being a ‘preferred destination for intellectual capital’ that accelerates the trend—globalization of services. Going ahead, Indian corporations are bracing up for the challenge of providing end-to-end business domain-focused solutions, leveraging intellectual property (IP) in form of solution accelerators, frameworks and service delivery technologies.”

Table 5. Corporations-wise analysis of intellectual capital terms, count of disclosures.

S. No.	Name of Corporations	Terms of IC Disclosure (Count of Item)	Total No. of IC Terms Disclosed
1	Infosys Technologies Limited	1(1), 9(6), 16(2), 17(2), 19(1), 21(1), 23(8), 27(15), 29(3), 31(7), 33(6), 36(1), 37(1)	13
2	Moser Baer India Limited	25(1), 27(1), 33(4), 34(1), 35(1)	05
3	Patni Computer Systems Limited	23(1), 25(1), 27(10)	03
4	Tata Consultancy Services Limited	9(2), 23(1), 27(5), 31(5), 33(1)	05
5	Wipro Limited	27(5)	01
6	HCL Infosystems Limited	23(1)	01
7	Mphasis Limited	23(2), 27(2), 35(1)	03
8	CMC Limited	19(1), 27(1)	02
9	Polaris Software Lab Limited	15(1), 23(1), 27(14)	03
10	Siemens Information System Limited	23(2), 27(1)	02
11	Financial Technologies (India) Limited	23(2), 25(1), 27(3)	03
12	I-Flex Solutions Limited	27(1), 31(2), 33(2)	03
13	Satyam Computer Services Limited	27(1)	01
14	Tech Mahindra Limited	27(4)	01
15	HCL Technologies Limited	27(3), 33(1)	02
16	Larsen & Toubro Infotech Limited	9(2), 13(2), 19(1), 27(4), 31(1), 33(1)	06

(Source: Compiled by the author from the Annual Reports of Corporations for the year 2007-2008 and 2008-2009).

Table 6. Variation in item-wise disclosure.

Number of Items Covered	2007 to 2009	
	No. of Disclosing Corporations	
0 - 3	7	
3 - 6	6	
6 - 9	1	
9 - 12	0	
12 - 15	1	
Mean Disclosure	3.9	
Standard Deviation	3.12	
Coefficient of Variation	80%	

(Source: Compiled by the author from the Annual Reports of Corporations for the year 2007-2008 and 2008-2009).

The term “knowledge management (KM)” (IC term No. 31 & 29), which is supposed to occupy a place of prominence in the knowledge-based IT corporations of India, was disclosed by a meager 6 (37%) corporations. However, most of the terms relating to the employees (except employee productivity, skill, value), and customers could not find any deserving place in the annual reports of the selected corporations. The most important constituents of IC—relational capital, structural capital and customer capital—did not figure even once in any of the annual reports of the corporations under study.

Table 5 very clearly highlights that Infosys Technologies Limited, a corporations acclaimed widely by the international community and the media too, had disclosed the maximum number (13) of IC-related items from the total list of 39 items. It is worth mentioning here that Infosys was the first Indian corporations to win the ‘Most Admired Knowledge Enterprise in Asia’ award in the year 2002. However, it is surprising to note that this corporation did not make any mention of term “IC” in its annual reports for the years 2007 to 2009. Perhaps, Infosys is the only IT-corporations in India, which has been regularly disclosing its “Intangible Assets Score Sheet,” as a measure of intangible assets (or IC), as shown in Appendix 1. For example, the corporation in its 2008-09 annual report makes the following remarks: “We published models for valuing two of our most important intangible assets—human resources and the “Infosys” brand. This score sheet is broadly adopted from the intangible asset score sheet provided in the book titled, ‘The New Organizational Wealth,’ written by Dr. Karl-Erik Sveiby, and published by Barrett-Koehler Publishers Inc., San Francisco. We believe such representation of intangible assets provides a tool to our investors for evaluating our market-worthiness.”

Based on the “content analysis” of this study, Larsen & Toubro Infotech Limited disclosed the second-highest 6 out of 18 (33%) IC-terms, which were followed up by Tata Consultancy Services and Moser Baer India Limited, respectively, both with a disclosure score of 5 out of 18 IC-terms. However, we are surprised to note that Patni Computers Limited, Mphasis Limited, I-Flex Solutions Limited, Polaris Software Lab Limited and Financial Technologies (India) Limited, by far comprising the largest segment of the IT corporations having 6 corporations from the sample size of 16 corporations, disclosed just 3 out of 18 IC-related terms in their annual reports for the period of study. Rest of the 7 corporations, forming a big chunk of our study, disclosed in the range of just 1 to 2 terms, as far as the disclosure of IC-terms are concerned. For example, CMC Limited, Siemens Information System Limited and HCL Technologies Limited disclosed just 2 items, while only 1 item was disclosed by Wipro Limited, HCL Infosystems Limited, Satyam Computer Services Limited, and Tech Mahindra Limited. It is also important to note that the disclosed IC items have been shown at widely “scattered-places” in the annual reports, and there appears to be an utmost “lack of consistency” across-time regarding the terms disclosed. The “mean” disclosure, as shown in **Table 6**, comes to be as low as 3.9 items. There is a variation of 3.12 items, on average, as suggested by the value of “standard deviation”. The “coefficient of variation” comes to be as high as 80%, which indicates a significant variation in item-wise disclosure in the annual reports of the corporations.

However, there is no “specific” disclosure of IC as a special part or content of the annual report, despite its very high relevance in the knowledge-intensive IT industries.

Mr. Nandan Nilekani, CEO, President and MD of Infosys Technologies [16] remarked: “At Infosys, we are effectively transforming enterprise knowledge into wealth-creating ideas, products and solutions. We are building portfolios of intellectual capital (IC) and intangible assets, which will enable them to out-perform their competitors in the future. We consider KM as a powerful medium for creating sustainable networks of people across intra-organizational boundaries. It also provides a symbolism for aligning individual initiative and creativity with organizational growth.” Thus, Infosys has been duly recognized for its organizational learning and for transforming enterprise knowledge into shareholder value. It is worth mentioning here that Infosys is regularly disclosing in its annual report details about the “Intangible Assets Score-Sheet,” as developed by Dr. Seveiby, human resources accounting, brand valuation, etc.

Similarly, Mr. Sambuddha Deb, Chief Quality Officer, Wipro Technologies [17], observed: “Our knowledge management initiative continues to be one of the most strategic initiatives and our knowledge portal, “Knet,” provides an effective and efficient means of capturing knowledge, both tacit and explicit across the organization, distilling it through a review process and making it available in a form which is ready to use. Our conscious and significant investment in the KM initiative is providing an important edge that the business needs.” No doubt, comprehensive IC disclosures would not only help in retaining the competitive advantage in the long-run, when other firms start emulating such pioneering practices, but it would also prove as an added information available, which can also be used to measure the link between the performance, growth and stability of the firm with its IC.

Based on the results of the present research study, the following broad generalizations can be made: 1) IC disclosure is very much an academic discussion; 2) There is no evidence at all that IC disclosure has generated any traction for Indian corporations; 3) IC reports published by the Indian corporations is almost negligible; and 4) IC disclosure has not received any priority from the mentors of the Indian corporations. Obviously, using the language of IC is an important antecedent to developing IC reports, but Indian corporate sector seems to be significantly behind its Scandinavian and other counterparts. We are hopeful that as the field of IC gains momentum, disclosure of IC evidence would also gradually increase. However, the average number (3.9) of items reported by the Indian IT-sector corporations is very low, which suggests that there is neither awareness nor any interest to record and report IC variables by these corporations. Even the

few items which were just reported were expressed in “discursive” rather than in “numerical” terms. Moreover, it has also been found that there exists no clear-cut pattern or system of IC disclosure in the annual reports. The disclosure was not uniform and no evidence of its well-defined measurement basis (except for the Infosys “Intangible Score-Card”) was found in the annual reports. It is very surprising to note that the Information Technology corporations, which are most dominating group in the knowledge sector, have failed to report IC in their annual reports. Undoubtedly, Indian corporations are far lagging behind in the field of measurement, management and disclosure of IC, as compared to the Scandinavian and/or European corporations. Thus, there is an urgent need to highlight the importance of IC disclosure to these knowledge-based IT firms and encourage them to provide “voluntary” IC disclosures.

Surprisingly, our findings are very similar in comparison to the various other studies on the same subject (viz., Bontis, 2003, Brennan, 2000, Ordonez de Pablos, 2002, Kamath, 2008 etc.), which also signify very low level of IC disclosures. For instance, as per the OECD (1999) [48] research report, “corporations in the Europe are way ahead of their counterparts elsewhere when it comes to the measurement, disclosure and management of their IC.” While there is some evidence that Australian enterprises are engaging in the process of identifying their stock of IC, overall Australian corporations do not compare favorably with their overseas counterparts in their ability to manage, develop, support, measure and report their IC (Bruggen *et al.*, 2009) [10]. Similarly, Bontis (2003) [47] concludes: “There is no evidence at all that IC disclosure has garnered any traction for the Canadian corporations. Only a small percentage of Canadian corporations (68 out of 10,000) even used the terms in their annual reports. Obviously, using the language of IC is an important antecedent to developing IC statements, but Canada seems to be significantly behind its Scandinavian counterparts.”

8. Conclusions and Recommendations

Intellectual capital can be a source of competitive advantage for businesses and stimulate innovation that leads to wealth generation (Marr *et al.*, 2003) [49]. The measurement and disclosure of IC is relatively new, with only a smattering of pioneering corporations using the “newer” measures. It is still too early to be making predictions about whether or not a model or system for measuring IC will be successfully articulated and integrated into the existing management and financial disclosure system. A careful examination of the history of IC clearly indicates that there is a long way to move ahead in this field.

This brief review of the measurement and disclosure of IC terrain highlights the case for “re-engineering” the traditional accounting and management disclosure processes (Daniel 2004) [50]. If efforts are not made towards incorporating the value of intangibles into a “formalized” disclosure framework then, for many public and private sector organizations, the management’s disclosure in the financial statements will become increasingly irrelevant as a tool supporting meaningful decision-making (Cuganesan *et al.* 2006) [31]. There is overwhelming evidence, as per Bernard *et al.* (2003) [51], in support of the notion that there are several benefits to managing, measuring and disclosing IC in the annual reports. Many firms across the EU are already publishing IC statements on a voluntary basis. They see it as a way of increasing “transparency” and explaining their view of the corporation’s business model to the market. While separate IC statements may be appealing to users of information, especially individual shareholders, they may place an “unwelcome burden” on corporations already facing greater demands for transparency.

Much of what has been done to date in the field of researching IC has an intuitive appeal, but is this enough to attract and convince the critical mass of supporters (particularly within the accounting profession) whose support is very much needed for the change to take place? Both the CIMA and CICA, leading accounting bodies, have supported the IC disclosure initiatives of their FASB cousins. No doubt, some progress has already been made in this direction by the publication of IC guidelines developed by the Danish Agency of Trade and Industry (2000, 2001) [52], the Meritum Project (2002) [53], the 3R Model (Ordóñez de Pablos, 2001, 2002) [54, 55], etc. Based on best practices observed in more than 100 European Union corporations, the Meritum projects have resulted in “guidelines” on how to report IC. Although the guidelines vary slightly in content and terminology, the underlying ideas are the same.

Leading IT corporations in India that were applying IC measures have found that it gives them better understanding of the “drivers of value” and is improving management and growth of these vital assets. Both, Wipro Technologies and Infosys Technologies corporations have been recognized for their organizational learning and for transforming enterprise knowledge into shareholder value. Unfortunately, IC disclosure in the Indian IT firms, for the period of study, is seen to be almost negligible and partial, in tune with the developed countries. Only a small number of the total firms studied actually reported IC-related terms. Moreover, the disclosure of IC was not at all uniform, and there is lack of evidence regarding the usage of the measurement, management techniques, and tools by these firms. Thus, there is an urgent need to highlight the importance of IC disclosure to these kno-

wledge-based IT firms and encourage them to provide voluntary IC disclosures. A brief summary of the present research study reveals the following aspects:

- The “key” components of IC are poorly understood, inadequately identified, inefficiently managed, and are not reported within a consistent framework.
- The findings of over 20 international research studies reflect the ‘exploratory’ nature of the IC disclosure work, and the fact that we are at an ‘embryonic’ stage of investigation.
- The extent of disclosure is generally ‘minimum’ but the types of IC that tend to be most often reported include human resources, technology and intellectual property rights, and organizational and workplace structure.
- A review of industry clusters within the study suggests that no individual industry is significantly ahead of any other in its IC disclosure practices.
- By and large, most corporations’ representatives believe that the management of IC is an important factor in determining future corporations’ success and facing competitiveness. However, few executives are able to identify initiatives within their organization that are designed to assist in managing IC.
- IC disclosures made by the Indian IT firms is very “negligible, partial, and descriptive, lack of consistency in reporting etc.,” in sharp contrast with the developed countries. A very small number of the total firms studied actually reported IC-related terms, disclosure was not uniform, and there is lack of evidence regarding the usage of the measurement, management techniques, and tools by these firms.

So far, published guidelines represent good initiatives undertaken by the academics based on the experience of some pioneer firms in developed countries that build the IC report. They provide practical guidelines on how to measure and report IC. However, firms are not enforced to follow these guidelines, and therefore, they just offer an orientation. The development of a set of homogeneous norms, principles, indicators and structure is a high priority in the IC report agenda. The following recommendations are made.

- Even though, IC has a very strong impact on the drivers of future earnings, but unfortunately, it is largely ignored in the financial disclosure. We strongly recommend that corporations must create a culture that emphasizes the importance of IC in achieving business advantage.
- Those corporations that are concerned with their relationship with the capital markets are to develop ‘strategic’ and ‘tactical’ initiatives that provide for ‘voluntary’ IC disclosures.
- The IC reports may initially be used for “internal”

management purposes but an “external” stakeholder focus report should be the long-term ultimate goal.

- The professional accounting bodies, at the global level, should join hands to develop an internationally accepted valuation system, and standardized and harmonized approaches for disclosure of IC.
- The regulatory bodies should establish “key” parameters for the disclosure of IC in a similar fashion, as have been defined for disclosure of Corporate Governance (CG), as per Clause 49 of the Securities Exchange Board of India (SEBI) in order to make a beginning in the field.
- To adopt “voluntary” IC disclosure practices, especially for Indian IT firms in the knowledge-sector, where competitiveness of the firms are determined by their intangible assets.

Indeed, the whole field of IC disclosure is still relatively ‘new’ and very slowly evolving. Therefore, accountants, business managers, and policy makers have all to grapple with its concepts, philosophy, and detailed methodologies for IC applications. Real-life corporate experience suggests that rushing into the details of IC measurement before understanding the fundamentals is going to prove counter-productive. Now, we feel the time is ripe for international professional bodies to develop that understanding and to develop new measures that will guide them more clearly to a prosperous future.

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