

Extent of Intellectual Capital Disclosure : Indian Evidence

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Abstract

The changing world economies are validated by a transition from manufacturing sector to a knowledge-based service sector. In this existing knowledge-based era, information, knowledge and information technologies are the dominating resources. The disclosure of information by corporations has received growing attention due to factors such as globalisation, integration of capital markets, improved mobility of money and goods, enhanced competition, and the expansion of information technology. Thus, the need of the hour is to identify the importance of disclosing the most valuable asset of the organisation, i.e., the Intellectual Capital. The current study focuses on examining the extent of Intellectual Capital Disclosure by top Indian companies for a period of six years using Content Analysis of the published documents of the selected companies. The results of the analysis fail to reveal much evidence of increasing trends of recording and reporting much Intellectual Capital-related information by the Indian companies.

Key Words

Intellectual Capital, Indian Companies, Human Capital, Internal Capital, External Capital, Content Analysis.

INTRODUCTION

The disclosure of information by corporations has received growing attention due to factors such as globalisation, integration of capital markets, improved mobility of money and goods, enhanced competition, and the expansion

of information technology (IT) and Internet (Bukh *et al.*, 2005). Intellectual Capital is at the core of an information break arising from the vagueness in forecasting future economic activity (Bontis, 2003). This ambiguity keeps investors and other information users of historical cost-based financial statements, in a regular search of information from other sources to improve their forecasts and decisions (Guthrie, 2001; Wyatt, 2008). Various research reports (e.g. AICPA, 1994; FASB, 2001) and academic studies (e.g. Cañibano *et al.*, 2000; Mouritsen *et al.*, 2001) have emphasized for greater disclosure of non-financial assets such as Intellectual Capital.

The relevant financial data for the readers of financial information is declining in recent years (Ely & Waymire, 1999). Rylander, Jacobsen and Roos (2000) argue that 'the goal of disclosure should be to provide relevant, reliable and timely information to those who need to know it so that they can make decisions concerning their dealings with the companies. Intellectual Capital Disclosure represents an approach that can be used to measure intangible assets and describe the results of a company's knowledge-based activities (Ismail, 2009). The significance of disclosure of intellectual capital, as a whole, in the various functions of the firms is increasing at fast pace. Initially, most of the firms started reporting intellectual capital for internal purposes which eventually resulted in publishing an external document for stakeholders (Bontis, 2003).

Bukh *et al.* (2005) stated that traditional disclosure mechanisms are not able to handle the disclosure requirements of the new firms adequately. It was observed that there is an increasing displeasure with recognized economic and financial disclosure and its capability to express the investors about the potential of the organisations in the creation of wealth. Although there is a growing interest for Intellectual Capital information among the stakeholders, hitherto the earlier researchers accentuated that there is a constant and momentous disparity in the quantity and quality of information being reported by the firms on this fundamental resource. This insufficiency and variation in the disclosure of intellectual capital related information is making an emergent information asymmetry between informed and uninformed investors. This provides a prolific ground for informed investors to pull out higher abnormal returns (Chiucci, 2008). Thus, the Intellectual Capital is increasingly being predicted as having much greater connotation in generating and preserving competitive advantage and shareholder worth. Disclosure of intellectual capital, whether in annual reports or through other communication channels, provides precious information for investors as it helps to reduce

ambiguity relating to future scenario, and facilitates a more accurate valuation of a firm (Bhasin, 2011).

The previous literature has validated that the practice of reporting and disclosing Intellectual Capital by the Indian companies is very less. Moreover, only sporadic studies are available in Indian context on this subject. The little disclosures that Indian companies make are mostly of qualitative nature. So, the current study attempts to measure the extent of Intellectual Capital Disclosure practices by 200 Indian companies for a period of six years i.e., 2010-2015 in terms of attribute-wise and component-wise disclosure by applying Intellectual Capital Disclosure framework given by Guthrie *et al.* (1999).

METHODOLOGY

The purpose of the present study is to examine the extent of Intellectual Capital Disclosure by Top 200 Indian companies, selected on the basis of their market capitalisation for a period of six years i.e., 2010-2015.

For scrutinizing the nature and extent of the Intellectual Capital in the annual reports of the selected companies Automated Content Analysis of annual reports has been conducted using NVIVO 11 software (QSR International). The reason behind choosing annual reports as a source of data collection was that, the annual report is the regularly published and widely circulated document. As validated by Lang and Lundholm (1993), the level of reporting in the annual reports is positively associated with the amount of information communicated by the corporation to the market and to its various stakeholders. Also, the annual reports offer a comparative analysis of the various policies of management across the reporting periods (Niemark, 1995; Guthrie *et al.*, 2004; Sujana and Abeysekera, 2007). Thus, it can act as a parameter to determine the outlook of a company towards corporate reporting, as what to report and what not to report is in the control of the company itself.

Further, the disclosure of Intellectual Capital has been examined through Content Analysis, a technique that involves reading each annual report and recording the preferred attributes on the coding sheet as per a pre-specified framework. For the current study, an existing framework of Intellectual Capital items given by Guthrie *et al.* (1999) has been used. This framework consists of three broad heads i.e.; Internal Structures or Organizational Capital, External Structures or Customer/Relational Capital and Employee Competence or Human Capital. These three heads consisted of nine, nine and six intellectual capital items, respectively (Table 1).

Table 1
List of Intellectual Capital Items

Internal Structures (Organisational Capital)	Patents
	Copyrights
	Trademarks
	Management Philosophy
	Management Process
	Corporate Culture
	Information System
	Networking System
	Financial Relations
External Structures (Customer/Relational Capital)	Brands
	Customers
	Customer Loyalty
	Company Names
	Distribution Channels
	Business Collaborations
	Licensing Agreements
	Favorable Contracts
	Franchising Agreements
Employee Competence (Human Capital)	Know-how
	Education
	Vocational Qualification
	Work-related Knowledge
	Work-related Competencies
	Entrepreneurial Spirit

Source : Guthrie *et al.* (1999)

Explanation of Various Intellectual Capital Items :

INTERNAL CAPITAL

Internal Capital is considered as the supportive infrastructure for Human Capital – it is the capital which remains in the factory or in the office premises even when the employees leave the office at the end of the day. These are generally created by the employees of an organisation and are, thus, normally

'owned' by the organisation. These assets help the firms to gain a competitive advantage over others. Internal Capital comprises the non-human storehouses of knowledge present in an organisation which include the organisational routines, dealings, systems, cultures, databases, organisational charts, process manuals, strategies, and anything whose value to the organisation is much higher than its actual physical value. A few of the Structural Capital components are legally protected by the companies and they become Intellectual Property that includes patents, trademarks and copyrights of the firms.

Guthrie's framework includes nine Internal Capital items which are discussed in detail below :

1. **Patents** : A patent is a government license that gives the possessor exclusive rights to a process, design or new invention for a chosen period of time. Applications for patents are usually handled by a government agency.
2. **Copyrights** : Copyright is a form of intellectual property which is a legal right formed by the judicial system (or law) of a country that grants the inventor of the original and unique work, the exclusive rights for its use and dissemination. It is, in most cases, only for a limited period of time.
3. **Trademarks** : A trademark is an identifiable sign, phrase, symbol, design, or expression which helps in the specific identification of products or services and legally differentiates it from other products or services.
4. **Management Philosophy** : "Management philosophy is the way leaders of an organisation think about the organisation and its stakeholders, both internal and external" (Guthrie *et al.*, 2003). It is a set of broad ideology or principles that shapes a firm's relationship with its stakeholders. It includes the set of objectives constructed by management of the firm. Management philosophy guides management processes.
5. **Management Process** : Management processes are management activities that support and facilitate achievement of corporate strategy. Management philosophy is converted into corporate strategy and is functionalised through management processes. Management processes include operational strategies and physical execution of these strategies. In addition to management process, this category also consists of policies and practices that are used by the management of an organisation in day-to-day business

activities and management decision-making.

6. **Corporate Culture** : Corporate culture refers to the employees' shared beliefs and philosophy, attitudes, values, expectations and modes of behaviour that symbolize the firm. Schein (1985) explains corporate culture as "...a pattern of basic assumptions – invented, discovered, or developed by a given group, as it learns to cope with its problems of external adaptation and internal integration – that has worked well enough to be considered valuable and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems." It is a type of behaviour that is encouraged by an organisation.
7. **Information System** : Information systems are labour-intensive or technology-based systems that enable to administer, share and distribute knowledge and information. Information systems assist execution of management processes. Information systems include systems that change data into information that stores and manages information, disseminate information and enable communication within the firm and between the firm and outside parties.
8. **Network System** : Network systems are hardware, software and communication systems that enable information systems to operate.
9. **Financial Relations** : Financial relations are relationships between firm and its financiers (i.e., lenders and investors). It refers to the contracts of the nature of alliances and joint ventures. It includes the terms and conditions of these contracts or responsibilities under these contracts.

EXTERNAL CAPITAL

External Capital or Customer / Relational capital represents the relationship that a company shares with its customers, suppliers, trade associations and other stakeholders. External/Relational capital refers to the firm's relationships or network of acquaintances and their satisfaction with and loyalty to the company. It includes knowledge of market channels, customer and supplier associations, industry relations and a sound understanding of the impacts of government-public policy. The value of these assets is determined by the company's reputation or image (MERITUM guidelines, 2002). It is considered to be the most widely disclosed information of the intellectual capital by the company in its annual reports.

Guthrie's framework includes nine Customer Capital items which are discussed in detail below :

1. **Brand** : "A Brand is a name, term, sign, symbol, or design, or a combination of them, intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors" (Kotler, 1998). A brand name can be registered as a trademark and contain ® in superscript at the end of the brand name or claim rights for the brand name without registering it by including ™ at the end of the brand name. Even though, probably a brand name can be considered as Intellectual Property, yet it is separately classified due to its value creation ability different from other types of Intellectual Property.
2. **Customers** : Customers include information representing the significance of end-customers to the firm. This category captures a firm's customer base including firm's customers who are intermediaries in the distribution network (e.g., wholesale customers such as retailers). It includes the policies, strategies and systems for attracting new customers and the promotional activities including advertising other than those relating to brands. Customers' category also includes the market research aimed at identifying the wants or needs of potential customers.
3. **Customer Loyalty** : Customer loyalty reflects the building and maintaining an on-going bond with the existing customers, their retention and ensuring their constant satisfaction with the firm. It is the foundation stone of customer relationships and loyalty. The emphasis here is not attracting new customers but on retaining the existing ones. It takes into consideration a long-term perspective in relation to customers/clients.
4. **Company Names** : It refers to the names of the subsidiary companies or the associated companies. "Associate firm is an entity, including an unincorporated entity such as a partnership, over which the investor has significant influence and that is neither a subsidiary nor an interest in a joint venture" (Paragraph 2 of IAS 28-Investment in Associate). "A Subsidiary is an entity, including an unincorporated entity such as a partnership that is controlled by another entity" (Paragraph 4 of IAS 27-Consolidated and separate financial statements).

5. **Distribution Channels** : Distribution channels are the set of inter-dependent organisations and other mechanisms involved in the process of making a firm's product or service available to the market (Kotler, 1998). They move resources and goods from the suppliers to the firm and from the firm to consumers. This category includes reference to firm's relationship with its distribution channel members and improvement of such relationships. It also comprises the network of suppliers and distributors, including names of channel members and the types of distributors/suppliers.
6. **Business Collaborations** : "A Business Collaboration is a close, mostly long-term relationship which enables partners to chase opportunities together that they may not have been able to pursue independently" (Unerman *et al.*, 2007). These associations may allow access to technology, information, know-how and other capabilities and provide synergistic benefits to the collaborating companies. Types of business collaborations include mergers and acquisitions, obtaining a stake in an associate firm, strategic alliances, joint ventures and Public Private Partnerships.
7. **Licensing Agreements** : A Licensing agreement is a contractual agreement in which one party i.e. the licensor, authorises another party i.e. the licensee, to use or sell an Intellectual Property belonging to the licensor. Such agreements are subject to certain terms and conditions. The consideration for such agreements is an initial fee or a royalty. It includes the objectives and details of the agreements.
8. **Favourable Contracts** : "Favourable contracts are special contracts formed with government or other businesses which provide the firm with an advantage that is not available to others, for example by being the successful bidder in a tender or selected by the counter party due to the special position of the firm" (Brooking, 1996). It also includes the renewal and renegotiation of such contracts.
9. **Franchising Agreements** : A Franchise agreement is a contractual agreement whereby one party i.e. franchisor authorises another party i.e. franchisee to use an established method of doing business and a brand name for a fee or commission based on the output produced i.e. the sales revenue or profits by the franchisee using

the said method or brand. The franchisor normally provides the franchisee with various tangible and intangible resources such as raw materials, products, advertising, training, and other services.

HUMAN CAPITAL

Human capital or employee competence is one of the most important intellectual capital components. It represents the individual knowledge stock of an organisation as available with its employees (Bontis *et al.*, 2001). Human capital is the knowledge, skill and capability of individual employees providing solutions to customers (Bassi, 1997). It is the firm's combined potential to pull out the best solutions from the knowledge of its people. Human capital is an important source of innovation for a firm (Plott & Humphrey, 1996; Malhotra, 2001; Morey *et al.*, 2002; Shermon, 2016). Roos *et al.* (1997) argues that employees create Intellectual Capital through their competence, their attitude and their intellectual dexterity. The ability of an individual includes his skills, knowledge and education. The employees are not considered to be owned by the organisation despite of the fact that they are the most important asset of the organisation. Bontis (1996, 2001) describes Human Capital as "the firm's capability to get the best solutions of its problems from the knowledge of its individuals/employees". In simple words, it can be said that Human Capital; which includes the collective knowledge stock, competency, experience, skills and talents of people within an organisation is the major and the most vital intangible asset in an organisation.

Guthrie's framework includes six Human Capital items which are discussed in detail as follows :

1. **Know-how** : Know-how means practical knowledge on how to accomplish something. It is the implicit knowledge, which is often difficult to transfer to another person by means of writing it down or verbalizing it. In the context of Human Capital, know-how means the implicit knowledge and competence of all employees of the organisation, whether; it is the management and the board of directors or the other qualified staff. More disclosure about the implicit knowledge of the employees helps it to gain the interest of the investors towards the company as greater disclosure is an indication about the quality and ability of its employees.
2. **Education** : Educational or professional qualifications of all employees including board of directors indicate the appropriateness of individuals for significant jobs. It is an indication of skilful and

competent people in a company. It is very important characteristic for a long-term success and survival of a company. Disclosure of information regarding educational qualification of employees is an indication to the investors about a higher calibre of the staff and better hiring policies.

3. **Vocational Qualification** : Vocational qualification means professional knowledge and skills imparted to employees for better job performance. Its disclosure is again an indication to the stakeholders investing in the company about the appropriateness/good abilities of employees and staff. Higher the practical knowledge imparted to the employees better will be their capability of handling their routine as well as extreme situation.
4. **Work-related Knowledge** : Work-related knowledge implies imparting the knowledge to the employees regarding handling critical and emergency situations through case studies and also developing in them risk taking capacities.
5. **Work-related Competencies** : Similar to work-related knowledge, work-related competencies implies imparting practical knowledge and skills/attributes or behaviour for a specific job to the employees to measure an individual's effectiveness about various experiences for problem solving and handling critical situations and also developing in them risk taking capacity by making them more thoughtful. More disclosure of this attribute indicates more faith in risk taking capabilities of the employees, which further helps investors in taking effective investment decisions.
6. **Entrepreneurial Spirit** : Entrepreneurial spirit implies developing self-confidence in employees to carry out planned challenges or risk by utilizing their innovative minds and proficient skills and lead the organization towards triumph. This attribute contributes towards value-creation in business and hence, wealth creation for investors.

FINDINGS & DISCUSSIONS

For the purpose of analysis, each and every item as per the Gutheie's framework (1999) was entered in the NVIVO 11 software and the results as per the frequency of occurrences of the word count of each item along with its synonyms and steamed words (i.e.; word ending with 'ing' or 'ed') were noted on

a coding sheet. Later on, an excel sheet of the results was prepared and its descriptive statistics were analysed.

Descriptive Analysis

After determining the total frequency scores of the Intellectual Capital Disclosure and its respective components, descriptive analysis of the various frequencies was conducted. The results of the analysis are presented in Table 2.

Table 2
Descriptive Statistics of Intellectual Capital Disclosure (Year-Wise)

Descrip- tives	2010				2011				2012			
	SC	HC	RC	Total	SC	HC	RC	Total	SC	HC	RC	Total
Sum	485	4901	17979	23365	531	4871	18842	24244	613	4960	20529	25852
Mean	2.42	24.50	89.89	116.82	2.65	24.35	94.21	121.22	3.06	24.80	102.64	129.26
Maximum	15	66	291	334	32	95	340	365	25	92	387	372
Minimum	0	0	0	19	0	0	0	28	0	0	0	23
Standard Deviation	3.32	13.36	65.92	68.61	3.97	14.20	63.35	65.41	4.20	14.35	70.88	72.45

Table 2
Descriptive Statistics of Intellectual Capital Disclosure (Year-Wise)

Descrip- tives	2013				2014				2015			
	SC	HC	RC	Total	SC	HC	RC	Total	SC	HC	RC	Total
Sum	721	5245	21911	27877	707	4925	23553	29021	543	4962	23389	29074
Mean	3.60	26.22	109.55	139.38	3.53	24.62	117.76	145.10	2.71	24.81	116.94	145.37
Maximum	92	95	329	380	27	67	431	383	20	68	343	369
Minimum	0	0	8	23	0	0	1	24	0	0	1	23
Standard Deviation	7.61	15.71	70.76	75.80	4.81	13.85	78.28	78.73	4.10	13.48	74.41	76.14

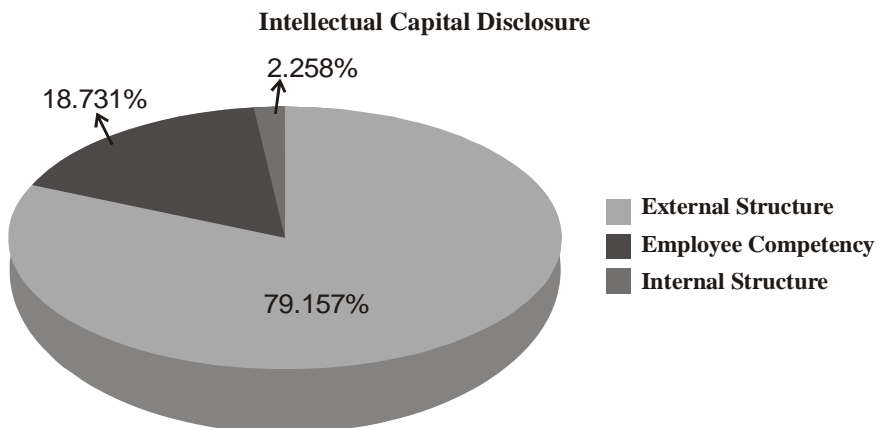
Source : Computed through E-views

Table 2 depicts the results of descriptive statistics of the total Intellectual Capital disclosure along with its three components, namely, Structural Capital (SC), Human Capital (HC) and Relational Capital (RC) for the study period. The total disclosure of Intellectual Capital seems to have increased over a period of six years from a total disclosure of 23365 units in year 2010 to 29074 units in the year 2015. This implies that there is an improvement in the intellectual

capital disclosure practices of the Indian companies over the study period and the Indian companies have taken an active interest in reporting its intangibles like intellectual capital. Further, it can be seen that the maximum mean disclosure of Intellectual Capital for the year 2015 was 145.37 units while the lowest mean disclosure (116.82 units) have been seen in the year 2010. The maximum value of Intellectual Capital disclosure for year 2010 was observed to be 334 while the minimum value was 19. Similarly, for year 2015 the maximum intellectual capital disclosure has been observed to be 369 and minimum of 23 only.

The Table reveals the descriptive statistics of all the three intellectual capital components. It has been observed that the maximum Intellectual Capital disclosure was in case of Relational Capital with a total disclosure of 126203 units. Further, the analysis of the variation in the Relational Capital indicated that there is a great improvement in the disclosure practices of relational capital over a period of six years with a disclosure of 17979 units in the year 2010 to 23389 units in the year 2015. The standard deviation for all the years depicted that there was a lot of variation in the disclosure of Relational Capital with maximum disclosure of 431 in year 2014 and minimum disclosure of 1 in the same year. Further, digging in details about the descriptive statistics proved that the least disclosed Intellectual Capital category is Structural/Organisational Capital with a total disclosure of 3600 units and mean disclosure varying from 2.45 units to 3.60 units over a period of six years. It was observed that the total disclosure of structural capital over the study period did not show much variation. Similarly, in case of Human Capital the variation in the total disclosure score was not much depicting with a low level of standard deviation. The mean disclosure of

Figure 1 : Extent of Intellectual Capital Disclosure



human capital also varies from 24.355 units of disclosure to 24.810 units. The maximum disclosure to Human capital was seen in the year 2013 with 5245 units while the minimum in the year 2011 with 4871 units.

Thereafter, the extent of Intellectual Capital disclosure in each category was examined with the help of a pie chart (Figure 1). It was observed that the nature & extent of disclosures of Intellectual Capital was more inclined towards External Capital (Customer/Relational Capital) with 79.04% of total disclosure. This means that the companies are more interested in disclosing those intellectual capital items which are related to its relations with its customers, suppliers, trade associations and other external stakeholders. Thus, more information disclosure about the external stakeholders will help the investors to gain more trust in the company and will, in turn, increase the investments in the companies. It is pertinent to mention that the least disclosure of Intellectual Capital was seen in case of the Internal Structures (or Structural/Organisational Capital) with only 2.258% of the total IC disclosure.

Attribute-wise Disclosure of Intellectual Capital

Table 3 represents the attribute-wise disclosure of Intellectual Capital by Indian companies along with the mean disclosure over a period of six years. It had been seen that the most disclosed attribute is the 'Customers' with 52195 units of disclosure out of the total disclosure of 160772 units of Intellectual Capital, followed by 'Favourable Contracts' with 34648 units of disclosure. The least disclosed Intellectual Capital attribute was 'Financial Relations' with mere 15 units of disclosure out of 160772 units of total intellectual capital disclosure. 'Management Philosophy' and 'Corporate Culture' showed just 54 & 64 units of disclosure, respectively.

Internal Structures (or Organisational Capital)

Attribute-wise disclosure of Internal Structure shows that "Trademarks" with a total disclosure of 999 units and a mean disclosure of 166.5 units is the highest disclosed component. The disclosure scores of this attribute showed a considerable increase over the period of the study. The standard deviation of 31.1 shows a higher variation in its disclosure scores. The second most disclosed attribute was 'Patents' with a total disclosure of 841 units and a mean disclosure of 140.16 units. Table 3 reveals that the disclosure of patents improved in the first three years i.e. from 110 units of disclosure in 2010 to 191 units of disclosure in 2013, while it showed a decline in the later years. The standard deviation of

33.52 units reveals a variation in the disclosure scores of patents. The next most disclosed components were 'Management Process', 'Information System' and 'Networking System' with a total disclosure scores of 585 units, 479 units and 380 units, respectively. The variation in the disclosure scores of 'Information System' and 'Networking System' was also very low, moreover, a decline in the disclosure scores has been noticed in case of these two attributes over a period of six years.

The least disclosed attribute of the Internal Structures was the 'Financial Relations' with mere 15 units of disclosure. However, the components 'Management Philosophy' and 'Corporate Culture' showed disclosures of 54 units and 64 units, respectively. There was no variation in the disclosure scores of these items during the period of the study.

External Structures (or Customer/Relational Capital)

Moving on to the External Structures, it can be seen from the Table 3 that the most disclosed attribute is the 'Customers' followed by the 'Favourable Contracts', whereas the least disclosed Customer Capital attributes are the 'Customer Loyalty' and 'Distribution Channels'. In case of 'Customers' the total disclosure score came out to be 52196 units with a mean disclosure of 8699.1 units. As per Table 3, a lot of improvement has been witnessed in the disclosure scores of 'Customers' from 6654 units in the year 2010 to 10370 units in the year 2015. The standard deviation of 1615.8 proves a lot of variation in the disclosure scores of 'Customers' over a period of six years. The second most disclosed attribute is the 'Favourable Contracts' with a disclosure of 34648 units of disclosure while the mean disclosure is 5774.6 units. Standard deviation in case of this attribute was relatively low i.e. 168.35 proving a relatively low variation in the disclosure scores of 'Favourable Contracts' over a period of six years. The next most disclosed attributes under this head were 'Brands' and 'Company Names' with a total disclosure scores of 17225 units and 13210 units, respectively. In both the cases improvement can be seen in the disclosure scores over the study period, not much deviation has been witnessed in the disclosure scores of these attributes.

The least disclosed Customer Capital attributes was 'Customer Loyalty' with mere 85 units of disclosure and mean disclosure as low as 14.16 units. The components 'Distribution Channels' and 'Franchising Agreements' are showing total disclosures of 151 units and 859 units along with standard deviation of 8.68 and 16.27 respectively.

Employee Competency (or Human Capital)

In case of Employee Competency or the Human Capital, the most reported attribute is the 'Education' with a total disclosure of 12403 and a mean disclosure of 2067.1. The details about the disclosure scores for 'Education' are depicting an improvement over the study period i. e. 1901 units in the year 2010 to 2170 units in the year 2015. The second most disclosed attribute of Human Capital was the 'Work-related Knowledge' with a disclosure score of 9839 followed by 'Know-how' with a disclosure of 3607 units. The 'Work-related Knowledge' witnessed an improvement in the first 4 years but, a decline in the next two years i.e. 2014 & 2015. The standard deviation in the disclosure scores was observed to be 115.37. In case of 'Know-how' a decline in the disclosure scores can be seen over the study period with a relatively low standard deviation in the scores.

The component 'Vocational Qualification' shows a total disclosure of 750 units and mean disclosure of 125 units. The least reported attribute was observed to be the 'Entrepreneurial Spirit' with mere 61 units of total disclosures and a mean disclosure of 10.16 units. The standard deviation observed in the disclosure scores of these attributes over the years was quite low.

Component-wise Disclosure of Intellectual Capital

After checking the Attribute-wise disclosure of Intellectual Capital, component-wise disclosure was checked. It was observed that out of the three components of Intellectual Capital, i.e., Human Capital, Customer Capital and Structural Capital, the disclosure of Customer/Relational Capital in the annual reports of the Indian companies was the highest. Table 4 reveals that the total disclosure of intellectual capital was 160772 units out of which maximum disclosure was observed in Customer capital category with a total disclosure score of 127173 followed by the Human Capital with a score of 29999 and the least disclosed intellectual capital component has been the structural or the organisational capital with a total disclosure of only 3600 units. Further analysis of the results (year-wise) indicated that the disclosure of Human Capital remain almost consistent over a period of six years with 4951 units of disclosure in year 2010 to 4962 units of disclosure in the year 2015. The trend was authenticated by a relatively low standard deviation of 165.29, whereas, an improvement was observed in case of Customer Capital disclosure from a score of 17979 disclosures in 2010 to 23389 in the year 2015. Thus, it was seen that there was a lot of variation in the disclosure scores of customer capital as validated by a

Table 3

Attribute-Wise Disclosure of Intellectual Capital from Year 2010 through 2015

Intellectual Capital Attributes	2010	2011	2012	2013	2014	2015	Total	Mean	SD
Internal Structures (Organisational Capital)									
Patents	110	100	135	191	162	143	841	140.16	33.52
Copyrights	29	22	26	32	35	39	183	30.5	6.15
Trademarks	114	153	162	194	198	178	999	166.5	31.11
Management	8	6	8	8	12	12	54	9	2.44
Philosophy									
Management Process	76	104	113	109	120	63	585	97.5	22.68
Corporate Culture	13	9	10	17	10	5	64	10.66	4.03
Information System	76	79	85	90	98	51	479	79.83	16.16
Networking System	56	55	72	78	69	50	380	63.33	11.16
Financial Relations	3	3	2	2	3	2	15	2.5	0.54
External Structures (Customer/Relational Capital)									
Brands	2278	2790	2940	3122	3183	2912	17225	2870.8	324.03
Customers	6654	6802	8823	9491	10055	10370	52195	8699.1	1615.8
Customer Loyalty	10	12	11	12	24	16	85	14.16	5.23
Company Names	1819	2006	2147	2183	2468	2587	13210	2201.6	285.4
Distribution Channels	18	14	23	30	38	28	151	25.16	8.68
Business Collaborations	465	401	400	407	458	437	2568	428	29.33
Licensing Agreements	884	1005	1013	1064	1100	1166	6232	1038.6	96.26
Favorable Contracts	5715	5680	5586	5869	6063	5735	34648	5774.6	168.35
Franchising Agreements	136	132	126	163	164	138	859	143.16	16.27
Employee Competence (Human Capital)									
Know-how	647	563	564	618	608	607	3607	601.16	32.56
Education	1901	1930	1976	2294	2132	2170	12403	2067.1	155.54
Vocational	129	143	136	138	106	98	750	125	18.54
Qualification									
Work-related	1706	1637	1723	1768	1479	1526	9839	1639.8	115.37
Knowledge									
Work-related	556	589	553	500	588	553	3339	556.5	32.45
Competencies									
Entrepreneurial Spirit	12	9	8	12	12	8	61	10.16	2.04
Total	23415	24244	26642	28392	29185	28894	160772	26795.33	2474.822

Source : Computed through Microsoft Excel

standard deviation of 2348.71. Similar to Human Capital, the disclosure of Structural Capital also remained more or less consistent throughout the study period with a standard deviation of 97.46 units. The mean disclosure of Human Capital has been observed to be 4999.833 while average disclosure of Customer/Relational Capital was observed to be 2348.713. In case of Structural Capital, the average disclosure has been observed to be 600. The observed results were similar to the previous studies related to the Intellectual Capital (Yi and Davey, 2010; Lipunga, 2013; Guthrie, Petty & Youngv nich, 2004; Sujan & Abeysekera, 2007; Bozzolan, Favotto and Ricceri, 2003; Joshi and Ubha, 2009; Abeysekera and Guthrie, 2003; Abeysekera, 2008; Brennan, 2001; Sonnier, 2008) showing an extensive disclosure of External/Customer/Relational Capital.

Table 4

Component-wise Disclosure of Intellectual Capital from Year 2010 through 2015

IC Components	2010	2011	2012	2013	2014	2015	Total	Mean	SD
Employee Competency	4951	4871	4960	5330	4925	4962	29999	4999.83	165.29
External Structures	17979	18842	21069	22341	23553	23389	127173	21195.5	2348.71
Internal Structures	485	531	613	721	707	543	3600	600	97.46
Total Intellectual Capital	23415	24244	26642	28392	29185	28894	160772	26795.33	2474.82

Source : Computed through Microsoft Excel

After examining the disclosure scores of all the three intellectual capital components, the ranks of the top 10 Indian companies on the basis of their disclosure scores for each category of Intellectual Capital for the year 2010 & 2015 were compared to their respective ranks in the year 2015 & 2010. Also, the ranks of top 10 Indian companies on the basis of their total intellectual capital disclosures scores for years 2010 and 2015 were compared with that of years 2015 and 2010, respectively. The results have been depicted in Table 5 where Module I depicts the comparison of ranks of top 10 Indian companies in the year 2010 with their respective ranks in the year 2015 and Module II reveals the comparisons of ranks of top 10 companies of 2015 in terms of their total Intellectual Capital disclosure with their respective ranks in 2010. It was observed that only 'Kotak Mahindra Bank' maintained its rank i. e. 'Rank 2' consistently in both years. In the year 2010, it was only Max India and Akzo Nobel which remained among the top 10 companies in the year 2015 as well, rather the rank showed an improvement from rank 9th to rank 7th in 2015 for MaxIndia Ltd. and rank 10th to rank 9th in 2015 in case of Akzo Nobel India Ltd. Other companies

that were among top 10 in the year 2010 showed a decline in their ranks in the year 2015. Some of them like Sun Pharmaceutical Industries Ltd. showed a great decline in its rank from a rank 3rd in 2010 to rank 125th in 2015. Further, if we talk about the top 10 companies as per ICD in 2015, 'ABB India Ltd' is one such company which witnessed a magnificent improvement in its rank and performance in terms of intellectual capital disclosure practices. Its rank improved from 198th in 2010 to 'Rank 1' in 2015. This means that 'ABB India Ltd' really worked on its intellectual capital disclosure in the past six years. 'Axis Bank' also witnessed a high improvement in its rank from 185th in 2010 to rank 10th in 2015. Other companies which showed improvement in 2015 were Bank of Baroda, ITC Ltd, GMR infrastructure, Larsen & Turbo and HDFC Bank.

Table 5**Ranks of Top 10 Intellectual Capital Reporting Indian Companies**

Module I			Module I		
Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Dabur India Ltd.	1	13	ABB India Ltd.	1	198
Kotak Mahindra Bank Ltd.	2	2	Kotak Mahindra Bank Ltd.	2	2
Sun Pharmaceutical Industries Ltd.	3	125	Bank Of Baroda	3	42
Wipro Ltd.	4	36	HDFC Bank Ltd.	4	11
BHEL	5	12	GMR Infrastructure Ltd.	5	24
Godrej Industries Ltd.	6	31	Larsen & Toubro Ltd.	6	19
Mindtree Ltd.	7	38	Max India	7	9
NTPC Ltd.	8	50	ITC Ltd.	8	26
Max India	9	7	Akzo Nobel India Ltd.	9	10
Akzo Nobel India Ltd.	10	9	Axis Bank Ltd.	10	185

Source : Own Compilation

Similarly, the comparison was done in the ranks of bottom 10 Indian companies on the basis of Intellectual Capital disclosure scores for the years 2010 & 2015 with that of 2015 & 2010, respectively. The results have been depicted in Table 6. Module I compares the ranks of bottom 10 companies in year 2010 with their respective ranks in 2015, whereas Module II reveals the

comparisons of ranks of bottom 10 Indian companies in terms of their total Intellectual Capital disclosure in year 2015 with their respective ranks in year 2010. It was observed that companies like ABB India Ltd., Hero Motocorp Ltd and Phoenix Mills Ltd showed an Improvement in their rank in the year 2015 as compared to their rank in the year 2010. Whereas, the companies like Coal India Ltd., Cairn India Ltd., Crompton Greaves Ltd., Karur Vysya Bank Ltd. and P&G Healthcare Ltd. showed a decline in their rank in the year 2015 as compared to the same in the year 2010.

Table 6**Ranks of Bottom 10 Intellectual Capital Reporting Indian Companies**

Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Bhushan Steel Ltd.	200	195	Coal India Ltd.	200	195
Shriram City Union Finance Ltd.	199	185	Torrent Power Ltd.	199	192
ABB India Ltd.	198	1	Cairn India Ltd.	198	100
Corporation Bank	197	128	Bank Of Maharashtra	197	117
Hero MotoCorp Ltd.	196	87	Container Corporation of India Ltd .	196	139
Coal India Ltd.	195	200	Bhushan Steel Ltd.	195	200
Gujarat Mineral Development Corporation Ltd.	194	181	TTK Prestige Ltd.	194	148
Ashok Leyland Ltd.	193	166	Crompton Greaves Ltd.	193	34
Torrent Power Ltd.	192	199	KarurVysya Bank Ltd.	192	87
Phoenix Mills Ltd.	191	80	P&G Healthcare Ltd.	191	41

Source : Own Compilation

Thus, it can be concluded that though certain companies worked hard in disclosing intellectual capital in their annual reports during the period of the study, yet the extent of IC disclosure was low. Moreover, the most disclosed category of IC was external structure or the Customers Capital with 79.157% disclosure out of the total intellectual capital disclosure whereas, the least disclosed category of disclosure was internal structure or the organisational capital with just 2.258% disclosure out of the total disclosure of intellectual

capital. Further, a high level of consistency was observed in the disclosure scores of the overall intellectual capital disclosure of various intellectual capital components over a period of six years.

Thereafter, the comparisons of top 10 and bottom 10 Indian companies over a period of six years was made on the basis of their disclosure scores for each of the three Intellectual Capital Categories. The results of the same have been discussed in the following sections.

Internal Structures (or Structural/Organisational Capital)

Table 7 depicts the comparison of the ranks of top 10 Indian companies for the years 2010 and 2015. Module I shows the comparisons of the ranks of top 10 Indian Companies in 2010 as against the ranks which they procured in the year 2015. The results reveal that 'Torrent Pharmaceuticals Ltd' is one such company which has maintained its disclosure of structural capital throughout the study period and bagged a consistent rank in both the years. Other companies showed a decline in their ranks in the year 2015 as compared to their

Table 7

Top 10 Structural Capital Reporting Indian Companies

Module I			Module I		
Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Wipro Ltd.	1	5	Biocon Ltd.	1	12
Aurobindo Pharma Ltd.	2	30	Sun Pharmaceutical Industries Ltd.	2	5
Marico Ltd.	3	4	Lupin Ltd.	3	144
ITC Ltd.	4	25	Marico Ltd.	4	3
Sun Pharmaceutical Industries Ltd.	5	2	Wipro Ltd.	5	1
SAIL	6	88	United Spirits Ltd.	6	16
Cadila Healthcare Ltd.	7	22	Colgate-Palmolive (India) Ltd.	7	41
Torrent Pharmaceuticals Ltd.	8	8	Torrent Pharmaceuticals Ltd.	8	8
HCL Technologies Ltd.	9	18	Larsen & Toubro Ltd.	9	48
Aditya Birla Nuvo Ltd.	10	16	Siemens Ltd.	10	51

Source : Own Compilation

ranks in the year 2010. Major decline has been witnessed in case of 'SAIL' as its rank dropped from 6th in 2010 to 88th in 2015. Sun Pharmaceuticals, on the other hand, showed an improvement in 2015 as its rank improved from 5th in 2010 to rank 2nd in 2015.

Further, Module II compares the ranks of top 10 Indian companies in the year 2015 with their respective ranks in 2010. The results reveal that the Structural Capital reporting of 'Lupin Ltd' improved magnificently thus, improving its rank from 144th in the year 2010 to rank 3rd in the year 2015. All other top companies showed an improvement in their ranks except 'Wipro' and 'Marico Ltd' as their ranks declined from rank 1st & rank 3rd in the year 2010 to 5th rank & 4th rank in the year 2015 respectively.

Table 8

Ranks of Bottom 10 Structural Capital Reporting Indian Companies

Module I			Module I		
Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Bajaj Corp Ltd.	200	199	Bank Of Maharashtra	200	23
Vakrangee Ltd.	199	198	Bajaj Corp Ltd.	199	200
Rajesh Exports Ltd.	198	196	Vakrangee Ltd.	198	199
Page Industries Ltd.	197	194	Sobha Developers (Pune) Pvt Ltd.	197	129
MOIL Ltd.	196	193	Rajesh Exports Ltd.	196	198
Gujarat State Petronet Ltd.	195	192	TTK Prestige Ltd.	195	128
IRB Infrastructure Developers Ltd.	194	191	Page Industries Ltd.	194	197
McLeod Russel India Ltd.	193	190	MOIL Ltd.	193	196
Hathway Cable & Datacom Ltd.	192	114	Gujarat State Petronet Ltd.	192	195
Indraprastha Gas Ltd.	191	189	IRB Infrastructure	191	194

Source : Own Compilation

Further, the ranks of Bottom 10 Indian companies, on the basis of their Structural Capital reporting, were also compared. Table 8 depicts the results of the same, where Module I compares the ranks of bottom 10 companies in the year 2010 with their respective ranks in 2015 and Module II compares the ranks

of bottom 10 companies in the year 2015 with their respective ranks in 2010. The results reveal that there was no improvement in the reporting practices of the bottom 10 companies except for 'Hathway Cable', as it showed some improvement from 192nd rank in the year 2010 to 114th rank in the year 2015. 'Bank of Maharashtra' is one such company which declined very poorly to 200th rank in the year 2015 from 23rd rank in the year 2010. That means reporting of structural capital by this company declined, while others maintained their ranks to the bottom only.

External Structures (or Customer/Relational Capital)

The ranks of top 10 Indian companies on the basis of their Customer Capital reporting were also compared (Table 9). Module I compares the ranks of top 10 Customer Capital reporting companies in the year 2010 with their respective ranks in the year 2015. The results reveal that there was a decline in the customer capital reporting practices of the top Indian companies as compared to previous years. Maximum decline was seen in case of 'Akzo Nobel India' as its rank dropped from 9th in the year 2010 to 132nd in the year 2015. 'Sun Pharma' followed this as its rank dropped from 2nd in the year 2010 to 77th in

Table 9

Ranks of Top 10 Customer Capital Reporting Indian Companies

Module I			Module I		
Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Kotak Mahindra Bank Ltd.	1	3	Bank Of Baroda	1	35
Sun Pharmaceutical Industries Ltd.	2	77	ABB India Ltd.	2	193
Dabur India Ltd.	3	16	Kotak Mahindra Bank Ltd.	3	1
BHEL	4	11	GMR Infrastructure Ltd.	4	29
Mindtree Ltd.	5	29	Max India	5	13
Godrej Industries Ltd.	6	41	HDFC Bank Ltd.	6	14
Wipro Ltd.	7	49	Larsen & Toubro Ltd.	7	19
The Federal Bank Ltd.	8	38	SKF India Ltd.	8	77
Akzo Nobel India Ltd.	9	132	Axis Bank Ltd.	9	192
Tata Global Beverages Ltd.	10	27	ITC Ltd.	10	28

Source : Own Compilation

the year 2015. Further, Module II compared the ranks of top 10 customer capital reporting Indian Companies in the year 2015 with their respective ranks in 2010. The results reveal that there was an improvement in the ranks of all the companies as against their previous ranks. The most magnificent improvement was seen in case of 'ABB India Ltd' as its rank improved from 193rd in 2010 to 2nd rank in 2015. Similar was the case with 'Axis Bank' as its rank improved from 192nd in 2010 to 9th rank in 2015.

The ranks of bottom 10 Customer Capital reporting companies in the year 2010 & 2015 were also compared with their respective ranks in the year 2015 & 2010. Table 10 reveals the results of the same where Module I compares the ranks of bottom 10 companies of 2010 with their respective ranks in 2015 and Module II compares the ranks of bottom 10 companies in the year 2015 with their respective ranks in the year 2010. The results revealed an improvement the customer capital reporting of companies like 'Corporation Bank', 'Jaiprakash Associates', 'Hero MotoCorp', 'GAIL', 'Phoenix Mills', the most significant improvement was witnessed in case of 'ABB India Ltd' and 'Axis Bank'. There was a decline in the reporting practices of certain companies as well, like; 'Cairn India Ltd', 'Biocon Ltd.', 'Hindustan Zinc', 'KarurVysys Bank', 'Bank of

Table 10

Ranks of Bottom 10 Customer Capital Reporting Indian Companies

Module I			Module I		
Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Corporation Bank	200	118	Cairn India Ltd.	200	127
Bhushan Steel Ltd.	199	194	Container Corporation Of India Ltd.	199	125
Jaiprakash Associates Ltd.	198	139	Coal India Ltd.	198	197
Coal India Ltd.	197	198	Biocon Ltd.	197	36
Hero MotoCorp Ltd.	196	94	Hindustan Zinc Ltd.	196	61
GAIL (India) Ltd.	195	56	GMDC	195	190
Vakrangee Ltd.	194	106	Bhushan Steel Ltd.	194	199
ABB India Ltd.	193	2	Karur Vysya Bank Ltd.	193	95
Axis Bank Ltd.	192	9	Nestle India Ltd.	192	181
Phoenix Mills Ltd.	191	61	Bank of Maharashtra	191	99

Source : Own Compilation

Maharashtra', 'Container Corporation of India', etc. This implies that most of the bottom 10 companies of the year 2010 were taking active interest in reporting their customer capital, thus, improving their ranks in the year 2015.

Employee Competence (or Human Capital)

Table 11 gives the comparative analysis of the ranks of top 10 human capital reporting companies. Module I reveals the comparison of the ranks of top 10 Indian companies in the year 2010 with their respective ranks in 2015. The results show that there is a great decline in the ranks of top 10 companies in the year 2015 as compared to their past rank thus, indicating a decline in the reporting of their human capital. The maximum decline has been witnessed in the case of 'Sobha Developers' and 'TTK Prestige' as their ranks declined from rank 7th & rank 10th in the year 2010 to rank 192nd & rank 170th in the year 2015 respectively. Further Module II compared the ranks of top 10 human capital reporting Indian companies in year 2015 with their respective ranks in year 2010. The results exhibit that there was an improvement in the ranks of all the

Table 11
Ranks of Top 10 Human Capital Reporting Indian Companies

Module I			Module I		
Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Neyveli Lignite Corporation Ltd.	1	19	Bajaj Auto Ltd.	1	101
Reliance Industries Ltd.	2	109	Sundaram Finance Ltd.	2	13
SAIL	3	116	Rural Electrification Corporation Ltd.	3	136
Vakrangee Ltd.	4	36	Jaiprakash Associates Ltd.	4	32
Sun TV Network Ltd.	5	153	Ipca Laboratories Ltd.	5	160
Dabur India Ltd.	6	79	ACC Ltd.	6	63
Sobha Developers (Pune) Pvt. Ltd.	7	192	IFCI Ltd.	7	18
State Bank of India	8	73	Supreme Industries Ltd.	8	105
TTK Prestige Ltd.	9	188	IndusInd Bank Ltd.	9	20
UPL Ltd.	10	170	TV18 Broadcast Ltd.	10	11

Source : Own Compilation

companies. Though improvement in case of a few like 'IFCI Ltd', 'IndusInd Bank' and 'TV18 Broadcast' was very low. On the other hand, companies like 'Rural Electrification Corporation Ltd.', 'Ipca Laboratories Ltd.', 'Supreme Industries' and 'Bajaj Auto Ltd' showed a significant improvement in their ranks.

Table 12 portrays the comparative analysis of the ranks of bottom 10 human capital reporting Indian companies. The results of Module I reveal that there was an improvement in the ranks of some of the bottom 10 companies like 'Torrent Pharmaceuticals', 'Shriram City Union Finance Ltd.', 'Tata Global Beverages', 'The Jammu & Kashmir Bank' etc. whereas, Module II reveals that the ranks of 'P&G Healthcare' and 'Sobha Developers' have shown a decline. The maximum decline was witnessed in case of 'Sobha Developers' as its rank declined from 7th in the year 2010 to rank 192nd in 2015. This implies that some companies are not taking an active interest in reporting their human capital attributes to the public, while there is an improvement in the reporting practices of others.

Table 12

Ranks of Bottom 10 Human Capital Reporting Indian Companies

Module I			Module I		
Companies	Ranks in 2010	Ranks in 2015	Companies	Ranks in 2010	Ranks in 2015
Torrent Pharmaceuticals Ltd.	200	177	Torrent Power Ltd.	200	193
Shriram Transport	199	198	SJVN Ltd.	199	196
Siemens Ltd.	198	197	Shriram Transport	198	199
Shriram City Union Finance Ltd.	197	76	Siemens Ltd.	197	198
SJVN Ltd.	196	199	SKF India Ltd.	196	183
Tata Global Beverages Ltd.	195	22	Thermax Ltd.	195	168
The Jammu & Kashmir Bank Ltd.	194	60	The Federal Bank Ltd.	194	171
Torrent Power Ltd.	193	200	Procter & Gamble Hygiene & Health Care Ltd.	193	36
United Breweries Ltd.	192	65	Sobha Developers (Pune) Pvt Ltd.	192	7
Ultratech Cement Ltd.	191	99	Bharat Electronics Ltd.	191	176

Source : Own Compilation

Consistency of Intellectual Capital Disclosure Scores

Further, the consistency of the intellectual capital disclosure scores over a period of six years was examined. For the purpose of examining the consistency among the intellectual capital disclosure scores a time series analysis of the disclosure scores was conducted using Spearman's Rank correlation.

Table 13

Spearman's Rank Correlation for Total Disclosure Scores for Years 2010 through 2015

Years	2010	2011	2012	2013	2014	2015
2010	1					
2011	0.784*	1				
2012	0.634*	0.776*	1			
2013	0.490*	0.569*	0.700*	1		
2014	0.465*	0.523*	0.645*	0.751*	1	
2015	0.517*	0.546*	0.668*	0.686*	0.883*	1

Source : Computed through SPSS

(Note : * indicates that correlation is significant at 0.01% level.

Table 13 shows the values of correlation coefficients of total intellectual capital disclosure scores for various years. It has been observed that all the values of correlation coefficients were more than 0.45 and all being significant at 1% level of significance with most of the values more than 0.60. As far as the correlation between the years 2010 & 2011 is concerned, the value of correlation coefficient came out to be 0.784 significant at 1% level of significance, thus, revealing a high level of consistency among the disclosure scores of 2010 & 2011. Similarly, for the year 2011 and 2012 the correlation coefficient of 0.776 came out significant at 1% level of significance indicating that the correlation coefficients of the consecutive years was high, whereas the coefficient of correlation showed decreasing trend in the further years. The highest degree of consistency has been observed between year 2014 & 2015 where the coefficient of correlation is the highest i.e.; 0.883 significant at 1% level of significance. Thus, it has been observed through the time series analysis that the consistency among the disclosure scores was high over the study period.

Further, moving on to the results of the consistency of disclosure scores of various intellectual capital categories, the results of the time series analysis of the disclosure scores of Employee Competency or the Human Capital using Spearman's Rank Correlation came out to be consistent. The correlation

coefficients of all the years are significant either at 1% level or 5% level of significance. Further, the coefficients of consecutive years are high, all greater than 0.55 significant at 1% level of significance depicting a high level of consistency in the disclosure scores of human capital among the consecutive years.

Table 14

Spearman's Rank Correlation for Employee Competence Disclosure Scores for Years 2010 through 2015

Years	2010	2011	2012	2013	2014	2015
2010	1					
2011	0.630*	1				
2012	0.444*	0.603*	1			
2013	0.271*	0.418*	0.572*	1		
2014	0.178**	0.215*	0.449*	0.630*	1	
2015	0.154**	0.164**	0.369*	0.482*	0.661*	1

Source : Computed through SPSS

Note : * indicates that correlation is significant at 0.01% level and ** indicates that correlation is significant at 0.05%

The least consistency has been seen between the years 2010 and 2015 and 2011 & 2015 with very low correlation coefficients of 0.154 and 0.164 respectively, both significant at 5% level of significance.

External Structure (or relational capital) disclosure consistency in Table 15 reveals that all the values of correlation coefficients are significant at 1% level of significance with most of the values greater than 0.60.

The results for this category were quite similar to that of the total disclosure as the values of correlation coefficients for consecutive years are more than 0.70 all significant at 1% level of significance. In case of year 2010 and 2011, value is 0.793, for 2011 and 2012 it is 0.764, in case of 2012 and 2013 it is 0.712, for 2013 & 14 it is 0.751 and highest correlation coefficient of 0.887 has been observed in case of years 2014 & 2015 implying the highest level of consistency among these years. Further, we can observe that all the values of Spearman's Rank Correlation remain greater than 0.50 which means companies are actively and consistently reporting information regarding its external structures.

Table 15
Spearman's Rank Correlation for External Structure Disclosure Scores for Years 2010 through 2015

Years	2010	2011	2012	2013	2014	2015
2010	1					
2011	0.793*	1				
2012	0.633*	0.764*	1			
2013	0.511*	0.587*	0.712*	1		
2014	0.480*	0.553*	0.670*	0.751*	1	
2015	0.522*	0.552*	0.687*	0.714*	0.887*	1

Source : Computed through SPSS

Note : * indicates that correlation is significant at 0.01% level.

Now, moving on to the Internal Structure (or organisational capital) disclosure consistency, Table 16 shows that the results are similar to that of the other two intellectual capital components and all the correlation coefficients are significant at 1% level of significance with most of the values greater than 0.60, indicating a high level of consistency of internal structure disclosure over a period of six years. Similar to the other two intellectual capital components i.e. Human Capital & Customer Capital, the level of consistency of disclosure of Organisational Capital is high. The highest level of consistency has been seen in the years 2014 & 2015 whereas the lowest consistency in disclosure scores has been observed in the years 2010 and 2015.

Table 16
Spearman's Rank Correlation for Internal Structure Disclosure Scores for Years 2010 through 2015

Years	2010	2011	2012	2013	2014	2015
2010	1					
2011	0.728*	1				
2012	0.578*	0.682*	1			
2013	0.532*	0.591*	0.722*	1		
2014	0.539*	0.563*	0.629*	0.702*	1	
2015	0.527*	0.568*	0.624*	0.608*	0.767*	1

Source : Computed through SPSS

Note: * indicates that correlation is significant at 0.01% level

The above results reveal a high level of consistency in the intellectual capital disclosure scores over period of six years. That means the companies are active and consistent in disclosing their Intellectual Capital.

CONCLUSION

On the basis of the analysis of the nature and extent of Intellectual Capital Disclosure by the Indian Companies for a period of six years, it has been concluded that the level of Intellectual Capital Disclosure has shown a growing trend over the period of six years. The total disclosure for all the six years was 159433 units of disclosure, where the most disclosed category of Intellectual Capital Disclosure is the External Structures or the Customer/Relational Capital with 126203 units of disclosure frequency out of the total disclosure of IC made by the companies. The disclosure of External Capital is observed to be 79.157% of the total disclosure. The least disclosed category of Intellectual Capital Disclosure is observed to be internal structures or the structural/organisational capital with only 2.258% disclosure out of the total. Thus, the nature of disclosure was inclined towards the customer/relational capital up to an extent of 79%. It has also been seen that the level of disclosure of customer/relational capital has grown over the years from a score of 17979 units of disclosure frequency in the year 2010 to 23389 units of disclosure frequency in the year 2015. Whereas the level of disclosure of human capital and structural capital has more or less remained constant.

All the values of Spearman's Rank Correlation for total disclosure score came out to be significant at 1% level of significance with values of correlation coefficient more than 0.45 and most values more than 0.60 revealing a high level of consistency in the total intellectual capital disclosure over a period of six years. Also, all the values of Spearman's Rank Correlation for Internal Structure disclosure score came out to be significant at 1% level of significance with values of correlation coefficient more than 0.50, revealing a high level of consistency in the disclosure scores of internal capital over a period of six years. Similar were the results for External Structure disclosure and Employee Competence disclosure.

Further, in case of ranking of top 10 companies based on Intellectual Capital Disclosure scores, Dabur India which was ranked 1st in 2010 was shifted to rank 13th in 2015. While it was only Kotak Mahindra Bank which maintained its rank i.e. rank 2nd consistently for both the years. Sun Pharmaceuticals performed very poorly in 2015 as its rank declined to 125th in 2015 from 3rd in the year 2010. ABB India improved drastically in 2015 from a rank of 198th in

2010 to rank 1st in 2015. All the companies which were among Bottom 10 in 2010 showed an improvement in their ranks in 2015. Whereas a few companies like Crompton Greaves and P&G showed a decline in their ranks in the year 2015 as compared to 2010.

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