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# Intellectual Capital Disclosure Practices – A Study of Selected Indian Companies

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**ABSTRACT**

The paper aims to examine the extent of intellectual capital disclosures (ICD) in annual reports of Indian companies. Content analysis method is used to study the disclosure practices of top 100 companies selected on the basis of market capitalization from BSE 500 Index. Study found that extent of ICD in annual reports of selected Indian companies is not much high. Highest disclosures are found from the category of external capital, followed by human capital. Study could not establish any impact of age on ICD whereas firm size and industry group are found as significant determinants of ICD.

## 1. Introduction

Recent changes in the global economic environment have resulted in difference between modern approach of value creation and the way how organizations monitored its operations traditionally (Ting & Lean, 2009). With the advent of new economy, focus on the organizational value drivers is shifting from shifting from physical and tangible assets towards intangible and knowledge-based resources. These new types of assets are identified by accounting literature as intellectual capital (IC). The rapid changes in the technology, increasing sophistication amongst customers and importance of innovation have shifted the base of competition from physical and financial resources to intellectual resources and intellectual capital (Cuganesan, 2016). Thus, there is a wide spread recognition that intellectual capital (IC) is critical force for business growth. As global economy relies more on knowledge-based resources in the creation of wealth, an organization's intellectual capital (IC) becomes significantly important. Since the inception of business, the firm's performance was used to be monitored in terms of efficient use of physical capital but upon entering this millennium, intellectual capital rather than physical capital seems to have become the established cornerstone for a company's future viability and growth (Abeysekera, 2008). Shift from industrial age to information age is changing the structure of global economy and there has been a considerable agreement in academic and professional fields that intellectual capital (IC) is central to value creation process in knowledge economy (Ashton, 2015). Intellectual capital is "becoming the preeminent resource for creating economic wealth. Tangible assets such as property, plant, and equipment continue to be important factors in the production of both goods and services. However, their relative importance has decreased through time as the importance of intangible, knowledge-based assets has increased" (Luthy, 1998).

With the constant increase the importance of IC, companies are also investing huge funds for the creation, growth and retention of IC. Despite the increasing importance and investment in the intangible assets and IC, there is a collective lack of understanding and difficulty to link these assets with financial reports (Lev & Daum, 2004). Since IC plays significant role in the value creation process for any organization, therefore IC information also becomes important for stakeholder to make his key decisions. It allows the investors to assess firm's future wealth creation capabilities. Globally, there is also increasing demand for greater transparency in the market place. Prompt disclosure of intellectual capital is therefore sought after. It is believed that to succeed in the knowledge-based economy, an open policy in disclosing intellectual capital information is essential to assist investors in their decision making (Goh & Lim, 2004). Due to increasing importance and demand for disclosures on intangibles and intellectual capital (IC), many studies have examined intellectual capital disclosure (ICD) practices of companies (Abeysekera, 2008, 2010; Nick Bontis, 2004; James Guthrie & Petty, 2000; Bharathi Kamath, 2017; Singh & Kansal, 2011). Therefore, the study of intellectual capital is an emerging area for research and is attracting the attention of academicians and researchers across the globe. Literature points towards number of studies taken up by researchers but the research on intellectual capital disclosure (ICD) practices of Indian companies is scattered and scanty. In earlier studies related to Indian context (Joshi & Ubha, 2009; Murthy & Abeysekera, 2007; Singh & Kansal, 2011) level of disclosure is found to be very low. Keeping in the mind the increasing importance of intellectual capital disclosures (ICD) and findings of earlier studies, present study is planned.

The objective of this study is to analyse the extent of intellectual capital disclosure (ICD) practices of Indian companies. The study further attempts to investigate the association between ICD and selected characteristics like age, industry and size of the company in terms of its market capitalization. The study is divided into different sections. Section-2 elaborates the concept of intellectual capital (IC). An extensive review of existing literature is presented in section-3 whereas, section-4 & 5 deal with methodology and results of data analysis respectively.

## 2. Concept of Intellectual Capital

Even though there is an acceptance of the importance of IC in the literature, there is no agreed definition on it. The literature has tried to provide a number of IC definitions, but these definitions are generally ambiguous (James Guthrie & Petty, 2000). The Organization for Economic Co-operation and Development (1999) describes "intellectual capital as the economic value of two categories of intangible assets of a

company: organizational capital and human capital". Brennan and Connell (2000) defined "IC as the difference between the firm's market value and book value". Whereas, Brooking (1996) defined IC as company's ability to function and value creation. In addition to the above, IC can be defined from the view of value creation; as defined by Stewart (1997), IC is "intellectual material – knowledge, information, intellectual property and experience – that can be put to use to create wealth" Similarly Al-Ali (2003) also viewed IC as "the knowledge, experience and the brainpower of employees as well as knowledge resources sorted in the organization's databases, systems, processes, culture and philosophy".

Further from time-to-time researchers provided classification schemes for greater insights into IC. Edvinsson (1997) and OECD (1999) described two important components of IC i.e. Human Capital and Structural Capital. Bontis (1998) gave the most appropriate and widely used classification which categorized the IC into the following three components:

a) Human Capital
b) Structural Capital
c) Customer Capital

Human capital includes all the factors that affect the employee competence. It covers the Know-how, Education, Vocational Qualification, Work related knowledge, innovations, reactive abilities and changeability etc. (James Guthrie & Petty, 2000). Whereas Hudson (1993) defined the human capital as the combination Genetic inheritance; Education; Experience; and Attitudes about life and business. Human capital is considered most important component of IC as it is a major source of creativity, origination and tactical renewal, whether it is originated through brainstorming session, or in a research laboratory, via daydreaming at the office, or throwing out or discarding old files, re-engineering dysfunctional processes, or improving individual skills. The spirit of human capital lies in the utter intelligence of the members working in the organizational. Scope of this component is limited to the knowledge node. It is most difficult component of IC to codify.

Structural capital also known as internal capital, includes the elements like patents, copyrights management philosophy, corporate culture, management processes, information systems, and networking systems etc. Strong base of structural capital of an organization leads to a supportive culture motivating its human resources to try new things, to fail, to learn, and to try again. Culture of unduly penalizing failure will result in minimal success for the organization. Structuring intellectual assets with information systems can turn individual know-how into group property. The essence of structural capital lies in the knowledge embedded within the routines of an organization. Its scope is internal to the firm but external to the human capital (Nielson & Bukh, 2010). In fact, without structural capital, IC would be just human capital.

Customer Capital, also known as external capital and relational capital, consists of knowledge of marketing channels and customer relationships to gain broader market share. After all, understanding what customers want in a product or a service better than anyone else is what makes someone a business leader as opposed to a follower. Customer capital represents the potential an organization has due to ex-firm intangibles. These intangibles include the knowledge embedded in customers, suppliers, the government or related industry associations. The core of customer capital, also known as relational capital, lies in knowledge embedded in relationships which are external to the firm. Its scope is external to the firm and is also external to the human capital. Customer capital can be measured as a function of longevity as its value and importance keeps on increasing with the passage of time. This component of IC is also difficult to codify as it is external in nature (Brooking, 1996).

## 3. Review of Literature

**Sveiby (1997)**, known to be pioneer in the area of IC, gave a logical explanation about the management of the organizations who had only knowledge and creativity of their employees as key elements of growth of their business but not the traditional production function. The study proposed a theory for measuring knowledge capital by dividing it into three categories called customer capital, individual capital and structural capital. **Bontis (2003)** conducted the content analysis on annual reports of Canadian corporations. The study concluded that companies concerned about its performance indicators related to capital market need to focus on strategic and tactical initiatives related to voluntary disclosures of IC. In another study **(Abeysekera & Guthrie, 2004)** examined the human capital disclosures by companies registered in Sri Lanka. Using content analysis approach, study found a significant increase in all the categories of ICD over the period of time and found external capital as highly reported category. **Goh and Lim (2004)** in their study, adopting the definition of Karl Erik Sveiby for intellectual capital, examined the intellectual capital disclosure practices of top twenty profit making public limited companies of Malaysia. The incidences of disclosing intellectual capital information qualitatively were found to be high as compare to quantitatively. External capital had the more disclosures as compared to internal capital and employee competence. **Abeysekera and Guthrie (2005)** conducted an empirical investigation using annual reports of top thirty firms listed in Colombo Stock Exchange to examine the pattern of intellectual capital disclosure practices. External capital is found to be highly reported category followed by human capital.

**Murthy and Abeysekera (2007)** explored the human capital value creation practices of knowledge-based software and service exporter industry in India. Study used the content analysis for identifying extent of human capital disclosed by the sample companies. Semi-structured interviews were also conducted with the head of human resources of target firms. The reporting frequency of different attributes related to human capital was found to be synchronization with management's perceptions towards value creation through human capital assessed through interviews. **Kamath (2008)** studied the extent of voluntary intellectual capital disclosures of companies working in the emerging sectors of Information, communications and technology in India. It further examined the relationship of disclosures with the firm size in terms of market capitalization. Content analysis method was applied on a sample of 30 companies representing technology, entertainment, communication and other knowledge (TecK) industries. The results showed significantly small extent of disclosures in Indian firms. The disclosures in case of information technology firms were found to be high. Whereas, companies belonging to telecom sector were found to be disclosing next to IT firms. It is further evident that there is no

 

significant relationship between firm size and extent of ICD. Another study **(Joshi & Ubha, 2009)** analysed the ICD of highly knowledge intensive companies from India and concluded that IC disclosures of the sample companies are close to negligible. **Yi and Davey (2010)** developed a ICD index using content analysis to study the IC reporting practices of Chinese companies. Study concluded that level of ICD is not high. Most of the companies are found to be reporting in qualitative nature only and there were no quantitative disclosures found. Though the level of disclosure is found to be low but is high enough to conclude that companies are atleast aware of IC reporting. **Singh and Kansal (2011)** investigated the inter firm intellectual capital disclosures and its variants among top 20 Indian companies and also studied the impact of intellectual capital disclosures on the creation of intellectual capital. Using content analysis, the study found that intellectual capital disclosures among knowledge led companies are low, narrative and varying significantly. Brand and business collaborations were found to be highly disclosed items with regard to IC. Whereas, employee competence and internal organizational capital followed the Brand and business collaborations in this regard. The correlation between IC valuation and disclosures is found to be negative, weak and insignificant. **Dumay and Cai (2015)** evaluated the content analysis as a methodology for studying the ICD practices and concluded that present method of content analysis need to be undertaken more rigorously for reaching more reliable and valid outputs. **Wang, Sharma and Davey (2016)** investigated the ICD by Indian and Chinese IT companies. Applying content analysis approach on a sample of 20 companies from both countries, study concluded that level of ICD of IT companies from both the nation is high. While comparing the ICD, it is found that Indian companies are disclosing more than Chinese companies. Most frequent disclosures belong to the category of external capital and least disclosures are found to be from human capital category.

## 4. Objectives and Methodology

Objectives of the study are defined as follows:

a) To study the extent of intellectual capital disclosure (ICD) of Indian companies.
b) To investigate the relative importance of different components of IC with regard to disclosures.
c) To analyse the relationship between ICD and selected characteristics like age, industry and size of the company in terms of its market capitalization.

Sample for the study consisted of Top 100 companies selected from BSE 500 Index on the basis of market capitalization. Annual reports for the year 2016-17 were downloaded from the websites of respective companies. Content analysis method was used to measure and quantify the ICD in the annual reports of selected companies. This method allows to analyse the published documents systematically, objectively and with reliability (James Guthrie, 2001). This method has been widely used to study accounting disclosures in different domains (Nick Bontis, 2003; Goh & Lim, 2004; J. Guthrie, Petty, Yongvanich, & Ricceri, 2004; B. Kamath, 2008; Yi & Davey, 2010). An IC disclosure index was constructed using the items of intellectual capital (IC) proposed by Yi and Davey (2010) on the basis of prior literature as shown in Table-I.

**Table-I**
**List of Intellectual Capital Items**

| Internal Capital (8 items) | External Capital (8 items) | Human Capital (5 items) |
|---|---|---|
| Patents | Brands | Employee |
| Copyrights | Company Names | Education |
| Trademarks | Customers | Training |
| Management Philosophy | Customer Satisfaction | Work-related Knowledge |
| Corporate Culture | Distribution Channels | Entrepreneurial Spirit |
| Information Systems | Business Partnership | |
| Networking Systems | Licensing agreements | |
| Financial Relations | Market Share | |

*Source: Yi and Davey (2010)*

Annual reports of selected companies were scanned manually to race the items of ICD. An ICD index was constructed assigning score of 1 if a particular item is disclosed in the report and 0 if item is not found to be disclosed. For the purpose of analysing relationship between ICD and company characteristics, three characteristics were used viz age, industry and firm size. Age was determined taking year of incorporation as base. In order to determine the nature of industry, all companies were categorized into two broader categories only viz manufacturing and services. Market capitalization was used as proxy of firm size. Data related to age, industry and market capitalization was extracted from Prowess data base maintained by CMIE. ICD index was created in Microsoft Excel whereas, the other statistical analysis was performed using IBM SPSS Statistics Version 21.

## 5. Results and Findings

Annual reports of all the sample companies were scanned manually to trace items related to ICD as proposed by Yi and Davey (2010) and a ICD index was created to measure and quantify the extent of ICD. Summary of the items disclosed by companies is shown as Annexure-I which highlights the levels of disclosures and number of IC items reported by companies in their respective annual reports.

Table – 2 summarizes the overall status related to disclosure of different IC items. Most disclosed items if found to be Employee (disclosed by 97 companies), Customers

 

(disclosed by 96 companies), Education (disclosed by 95 companies), Training (disclosed by 90 companies) and Market Share (disclosed by 73 companies).

**Table – 2**
**Item wise disclosure by Sample Companies**

| Sr. | Item of IC | Disclosed by No. of Companies |
|---|---|---|
| 1 | Employee | 97 |
| 2 | Customers | 96 |
| 3 | Education | 95 |
| 4 | Training | 90 |
| 5 | Market Share | 73 |
| 6 | Brands | 61 |
| 7 | Customer Satisfaction | 52 |
| 8 | Patents | 45 |
| 9 | Trademarks | 39 |
| 10 | Information Systems | 28 |
| 11 | Copyrights | 22 |
| 12 | Distribution Channels | 20 |
| 13 | Corporate Culture | 17 |
| 14 | Entrepreneurial Spirit | 9 |
| 15 | Company Names | 8 |
| 16 | Licensing agreements | 6 |
| 17 | Management Philosophy | 4 |
| 18 | Networking Systems | Not disclosed at all |
| 19 | Financial Relations | Not disclosed at all |
| 20 | Business Partnership | Not disclosed at all |
| 21 | Work-related Knowledge | Not disclosed at all |

*(Source: Researcher's Compilation)*

Items like Entrepreneurial Spirit; Company Names; Licensing Agreements; and management Philosophy are found to be disclosed by negligible number of companies. Whereas, on the other side, items like Work-related Knowledge; Business Partnership; Financial Relations; and Networking systems are not at all disclosed by any of the sample company. Table – 3 and Table – 4 demonstrate company wise disclosure of IC items.

**Table – 3**
**Companies with Highest Intellectual Capital Disclosure (ICD)**

| | | No. of Items Disclosed in Annual Report | | | |
|---|---|---|---|---|---|
| Sr. | Company | Internal Capital | External Capital | Human Capital | Overall ICD |
| 1 | Infosys Ltd. | 6 | 6 | 4 | 16 |
| 2 | State Bank of India | 6 | 5 | 4 | 15 |
| 3 | Tata Motors Ltd. | 5 | 6 | 4 | 15 |
| 4 | Piramal Enterprises Ltd. | 4 | 6 | 4 | 14 |
| 5 | Dr. Reddy'S Laboratories Ltd. | 3 | 6 | 3 | 12 |
| 6 | H C L Technologies Ltd. | 4 | 5 | 3 | 12 |
| 7 | Larsen & Toubro Ltd. | 4 | 5 | 3 | 12 |
| 8 | Titan Company Ltd. | 4 | 5 | 3 | 12 |
| 9 | A B B India Ltd. | 4 | 4 | 3 | 11 |
| 10 | Asian Paints Ltd. | 3 | 5 | 3 | 11 |
| 11 | Godrej Consumer Products Ltd. | 3 | 5 | 3 | 11 |
| 12 | Mahindra & Mahindra Ltd. | 3 | 5 | 3 | 11 |
| 13 | Wipro Ltd. | 3 | 4 | 4 | 11 |
| 14 | Cipla Ltd. | 3 | 4 | 3 | 10 |
| 15 | Hero Motocorp Ltd. | 3 | 4 | 3 | 10 |
| 16 | I T C Ltd. | 4 | 3 | 3 | 10 |
| 17 | Tata Consultancy Services Ltd. | 3 | 4 | 3 | 10 |
| 18 | Tata Steel Ltd. | 2 | 5 | 3 | 10 |
| 19 | Vedanta Ltd. | 0 | 6 | 4 | 10 |
| 20 | Zee Entertainment Enterprises | 2 | 4 | 4 | 10 |

*(Source: Researcher's Compilation)*

Table – 3 shows the list of 20 companies disclosing the maximum number of items related to IC. It is quite apparent from the Table – 3 that Infosys Ltd. is the company disclosing highest number of IC items (16 out of 21) followed by State Bank of India and Tata Motors Ltd. (15 items each). Piramal Enterprises Ltd. is disclosing 14 items whereas, companies like Dr. Reddy's laboratories; HCL Technologies; Larson & Toubro Ltd; Titan Company Ltd. are disclosing only 12 items each.

 

Contrary to this Table – 4 shows the companies whose annual reports are found to be reporting lowest number of items related to ICD. Companies like Bajaj Finance Ltd; Indusind Bank; JSW Steels and NHPC ltd etc. are disclosing only 4 items each. Companies like Bank of Baroda; and Oil India ltd are found to be having zero number of disclosures related to IC items.

**Table – 4**
**Companies with Lowest Intellectual Capital Disclosure (ICD)**

| Sr. | Company | No. of Items Disclosed in Annual Report | | | |
|---|---|---|---|---|---|
| | | Internal Capital | External Capital | Human Capital | Overall ICD |
| 1 | Bank of Baroda | 0 | 0 | 0 | 0 |
| 2 | Oil India Ltd. | 0 | 0 | 0 | 0 |
| 3 | Container Corpn. Of India Ltd. | 0 | 1 | 0 | 1 |
| 4 | Bajaj Holdings & Invst. Ltd. | 0 | 0 | 3 | 3 |
| 5 | Bajaj Finance Ltd. | 0 | 1 | 3 | 4 |
| 6 | IndusInd Bank Ltd. | 0 | 1 | 3 | 4 |
| 7 | J S W Steel Ltd. | 0 | 1 | 3 | 4 |
| 8 | N H P C Ltd. | 1 | 1 | 2 | 4 |
| 9 | Torrent Pharmaceuticals Ltd. | 0 | 1 | 3 | 4 |
| 10 | Bajaj Auto Ltd. | 0 | 2 | 3 | 5 |
| 11 | H D F C Bank Ltd. | 0 | 2 | 3 | 5 |
| 12 | M R F Ltd. | 0 | 2 | 3 | 5 |
| 13 | Petronet L N G Ltd. | 0 | 2 | 3 | 5 |
| 14 | Power Finance Corpn. Ltd. | 0 | 2 | 3 | 5 |
| 15 | Power Grid Corpn. Of India Ltd. | 1 | 1 | 3 | 5 |
| 16 | R E C Ltd. | 1 | 2 | 2 | 5 |
| 17 | Shriram Transport Finance Co. | 1 | 1 | 3 | 5 |
| 18 | Sun T V Network Ltd. | 0 | 2 | 3 | 5 |

*(Source: Researcher's Compilation)*

Tables – 5 presents some descriptive statistics regarding component wise and overall ICD of sample companies. Maximum number of disclosures in case of different component are found to be 6 out of 8 in case of internal capital; 6 out of 8 in case of external capital and 4 out of 5 in case of human capital. There seems not much difference as such the number of items disclosed are concerned. With regard to Overall ICD the maximum number of items being disclosed are found to be only out of 21. From the average scores of mean disclosures, it is visible that overall mean score of ICD is 7.72 whereas, component wise is found highest in case of external capital followed by human capital. Mean disclosure scores in case of internal capital is found to be lowest.

**Table – 5**
**Descriptive Statistics with regard to ICD of sample Companies**

| Items | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Internal Capital | 100 | 0 | 6 | 1.58 | 1.423 |
| External Capital | 100 | 0 | 6 | 3.20 | 1.400 |
| Human Capital | 100 | 0 | 4 | 2.94 | 0.708 |
| Overall ICD | 100 | 0 | 16 | 7.72 | 2.778 |

*(Source: Researcher's Compilation)*

With regard to first objective of the study, it can be concluded that ICD of selected Indian companies is not much high. Summary of item wise disclosure, disclosed that that only 17 out of 21 items are being disclosed. There are four items which are not disclosed at all by any of the company. On the other hand, there are two companies whose annual reports have reported zero number of disclosures. Even the companies having highest number of items disclosed, are disclosing only 16 out of 21 items.

In order to analyse the relative importance of different components of disclosures, One Way ANOVA was used to test the difference between mean disclosures of different components of IC. Table – 6 highlights the results of statistical procedure to test the following null hypothesis:

*$H_1$: There is no significant difference between mean disclosures of different components of IC.*

**Table – 6**
**Component wise comparison of ICD**

| Items | Mean Value for different components | | | F-Value | p-value |
|---|---|---|---|---|---|
| | Internal Capital | External Capital | Human Capital | | |
| | N = 100 | N = 100 | N = 100 | | |
| Overall Score of ICD | 1.58 | 3.20 | 2.94 | 50.633 | 0.000** |

*(** significant at 1%)*

 

Mean value of disclosures for different components of intellectual capital viz internal capital, external capital and human capital is found to be 1.58, 3.20 and 2.94 respectively. F-value for test of ANOVA is found to be 50.633 (p-value = 0.000). Results are found to be significant at 1% level of significance and hypothesis $H_1$ is rejected. Which implies that there is significant difference between the mean scores of different components of ICD. Further results of post-hoc analysis revealed that mean disclosure score of internal capital and significantly different from external capital (p-value = 0.000) and human capital (p-value = 0.000) both. But there is significant difference between mean disclosures for external capital and human capital (p-value = 0.134). Therefore, with regard to second objective of the study it can be concluded that category of external capital and human capital carries more importance and significance for Indian companies, as mean disclosures in case of these components are significantly higher than internal capital.

In order to accomplish third objective of study, Karl Pearson coefficient of correlation was used to investigate the relationship of ICD with age and firm size. Following null hypotheses were framed in this regard:

*$H_2$: There is no significant relationship between ICD and age*

*$H_3$: There is no significant relationship between ICD and firm size in terms of market capitalization.*

**Table – 7**
**Relationship of ICD with Age and Firm Size**

| Variable | Age of Company | | Size of Company | |
|---|---|---|---|---|
| | r | p-value | r | p-value |
| Overall Score of ICD | 0.084 | 0.405 | 0.289 | 0.004** |

*(** significant at 1%)*

Table-7 highlights the results for hypotheses $H_2$ and $H_3$. Correlation between ICD and age is found to be insignificant (r = 0.084). Study failed to reject $H_2$ as p-value is found to be higher than 5%. Whereas, in case of correlation between ICD and firm size, it is found to be weak positive (r = 0.289) but significant at 1% level of significance as p-value is 0.004. Therefore, it can be concluded that there is no relationship between ICD and age of company but relationship between ICD and firm size is significant and positive. It implies that companies with higher market capitalization are tend to disclose more with regard to IC in their annual reports.

For the purpose of analyzing association between ICD and industry type of sample companies, all the industries were categorized into two broader categories called manufacturing and services. Generally, it is assumed that nature of industry group of company may have affect on the level of ICD. Study used Independent sample t-test to assess the difference between mean disclosures for manufacturing and services industries. Following is the null hypothesis framed in this regard:

*$H_4$: There is no significant difference between mean disclosures of companies belonging to manufacturing and services industry.*

**Table – 8**
**Intellectual Capital Disclosures and Nature of Industry**

**($N_1$ = 59; $N_2$ = 41)**

| Particular | Manufacturing Sector | | Services Sector | | Mean diff. | t-value | p-value |
|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | | | |
| Internal Capital | 1.76 | 1.291 | 1.32 | 1.572 | 0.446 | 1.552 | 0.124 |
| External Capital | 3.53 | 1.251 | 2.73 | 1.484 | 0.794 | 2.890 | 0.005** |
| Human Capital | 2.92 | 0.624 | 2.98 | 0.821 | 0.060 | 0.417 | 0.677 |
| Overall ICD | 8.20 | 2.448 | 7.02 | 3.094 | 1.179 | 2.124 | 0.036* |

*(* and ** significant at 5% and 1% level of significance respectively)*

Results for testing the significance of hypothesis $H_4$ are disclosed in Table-8. Results highlight that $H_4$ is rejected in case of external capital (p-value = 0.005) and Overall ICD (p-value = 0.036) at 1% and 5% level of significance respectively. It implies that difference between the mean disclosure is found to be significant for these two cases. Therefore, it can be concluded that mean disclosures of external capital and overall ICD is high in case of companies belonging to manufacturing sector in comparison to service sector. Whereas, difference between mean disclosures for internal capital and human capital is found to be insignificant.

## 6. Conclusion

Keeping in view the recent changes in the economies and increasing importance of intellectual capital, need is realized for the disclosures of IC related items in the annual reports of companies so that investors and other stakeholder be assisted for informed and better decision making. Study attempted to analyse the extent of ICD in annual reports of selected Indian companies and to investigate the relative importance of components of ICD and also the relationship of ICD with selected company characteristics. Study concluded that status of ICD in annual reports of companies is not much high. Results of content analysis revealed that there are certain items which are not at all being disclosed by any of the sample company. And similarly, there are some companies which are not at all disclosing any of the item related to ICD. Even those

 

companies which are found to be disclosing IC items, the level of disclosure is found to be moderate only as the company having highest disclosure is disclosing only 16 items. Further investigation of the disclosures highlighted that companies are disclosing more about external capital, followed by human capital. IC items related to internal capital are found to be least disclosed. There is no relationship found between ICD and age of company but study established positive and significant relationship between ICD and firm size. Which implies that large firms are disclosing more. With regard to relationship between ICD and nature of industry, study concluded that companies belonging to manufacturing industry are disclosing more with regard to IC in their annual reports.

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**Annexure – 1**

**Company wise extent of Intellectual Capital Disclosure (ICD)**

| High Level of Disclosure (Items disclosed 14 to 21) | Moderate Level of Disclosure (Items disclosed 8 to 14) | Low Level of Disclosure (Items disclosed 0 to 7) |
|---|---|---|
| Infosys Ltd. (16) | Piramal Enterprises Ltd. (14) | A C C Ltd. (7) |
| State Bank of India (15) | Dr. Reddy'S Laboratories (12) | Adani Ports & SEZ Ltd. (7) |
| Tata Motors Ltd. (15) | H C L Technologies Ltd. (12) | Ashok Leyland Ltd. (7) |
| | Larsen & Toubro Ltd. (12) | Aurobindo Pharma Ltd. (7) |
| | Titan Company Ltd. (12) | Bajaj Finserv Ltd. (7) |
| | A B B India Ltd. (11) | Bharat Electronics Ltd. (7) |
| | Asian Paints Ltd. (11) | Bharat Forge Ltd. (7) |
| | Godrej Consumer Products (11) | Britannia Industries Ltd. (7) |
| | Mahindra & Mahindra Ltd. (11) | D L F Ltd. (7) |
| | Wipro Ltd. (11) | G A I L (India) Ltd. (7) |
| | Cipla Ltd. (10) | Grasim Industries Ltd. (7) |
| | Hero Motocorp Ltd. (10) | Hindalco Industries Ltd. (7) |
| | I T C Ltd. (10) | I C I C I Bank Ltd. (7) |
| | Tata Consultancy Services (10) | Indus Towers Ltd. (7) |
| | Tata Steel Ltd. (10) | L I C Housing Finance Ltd. (7) |
| | Vedanta Ltd. (10) | N M D C Ltd. (7) |
| | Zee Entertainment Enterp. (10) | Nestle India Ltd. (7) |
| | Avenue Supermarts Ltd. (9) | Oracle Financial Services (7) |
| | Bharat Petroleum Corpn. Ltd. (9) | Tata Power Co. Ltd. (7) |
| | Bharti Airtel Ltd. (9) | Ultratech Cement Ltd. (7) |
| | Glenmark Pharmaceuticals (9) | Ambuja Cements Ltd. (6) |
| | Hindustan Petroleum Corpn. (9) | Axis Bank Ltd. (6) |
| | I C I C I Prudential Life Ins. (9) | Bosch Ltd. (6) |
| | Indian Oil Corpn. Ltd. (9) | Coal India Ltd. (6) |
| | Lupin Ltd. (9) | Cummins India Ltd. (6) |
| | Motherson Sumi Systems Ltd. (9) | Hindustan Zinc Ltd. (6) |
| | N T P C Ltd. (9) | India bulls Housing Finance (6) |
| | Reliance Industries Ltd. (9) | Interglobe Aviation Ltd. (6) |
| | Shree Cement Ltd. (9) | P&G Hygiene & HealthCare (6) |
| | Sun Pharmaceutical Ltd. (9) | Punjab National Bank (6) |
| | U P L Ltd. (9) | Bajaj Auto Ltd. (5) |
| | Alkem Laboratories Ltd. (8) | H D F C Bank Ltd. (5) |
| | Bharat Heavy Electricals Ltd. (8) | M R F Ltd. (5) |
| | Cadila Healthcare Ltd. (8) | Petronet L N G Ltd. (5) |
| | Colgate-Palmolive (India) Ltd. (8) | Power Finance Corpn. (5) |
| | Dabur India Ltd. (8) | Power Grid Corpn. of India (5) |
| | Eicher Motors Ltd. (8) | R E C Ltd. (5) |
| | Havells India Ltd. (8) | Shriram Transport Finance (5) |
| | Hindustan Unilever Ltd. (8) | Sun T V Network Ltd. (5) |
| | Housing Development Finance Corp (8) | Bajaj Finance Ltd. (4) |
| | Kotak Mahindra Bank Ltd. (8) | IndusInd Bank Ltd. (4) |
| | Marico Ltd. (8) | J S W Steel Ltd. (4) |
| | Maruti Suzuki India Ltd. (8) | N H P C Ltd. (4) |
| | Oil & Natural Gas Corp (8) | Torrent Pharmaceuticals (4) |
| | Pidilite Industries Ltd. (8) | Bajaj Holdings & Invst. (3) |
| | Siemens Ltd. (8) | Container Corp. of India (1) |
| | Steel Authority of India Ltd. (8) | Bank of Baroda (0) |
| | Tech Mahindra Ltd. (8) | Oil India Ltd. (0) |
| | Vodafone Idea Ltd. (8) | |
| **No. of Companies - 3** | **No. of Companies - 49** | **No. of Companies - 48** |

*(Source: Researcher's Compilation)*