



Disclosure of Non-Financial information by Indian corporations: Trend analysis

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Abstract

The main motive of this research study is to examine the trend of disclosing non-financial information by the Indian corporations.

This study is conducted based on top 87 Indian companies, listed in NSE according to their market capitalization for the periods 2015-16 to 2020-21. The overall non-financial disclosure level is measured through measuring the disclosure level of Intellectual capital (IC) and Environmental-Social-Governance (ESG). Therefore, two disclosure indexes – IC disclosure index having 45 items and ESG disclosure index having 52 items are prepared based on previous academicians. Here a score of 0-3 is used to quantify the disclosing level of non-financial information by applying the content analysis technique.

The results show that the tendency of disclosing all the three components of IC & ESG disclosure as well as overall IC & ESG disclosure increases every year over the study periods for the Indian corporations. Though both the components of non-financial information are increasing, the rate of disclosing ESG related information is much higher than the rate of disclosing IC related information.

This is the first research study that incorporates the two crucial segments – IC & ESG of the non-financial category in respect of Indian companies.

This study will be very helpful for the policy makers to create appropriate disclosure policy so that items, carrying more value will give more priority than the items carrying less value to restrict the disclosure cost within permissible limit after considering privacy policy of corporation.

Keywords: Non-financial disclosure, ic disclosure, esg disclosure, ic disclosure index, esg disclosure index

Introduction

Disclosure plays a critical role in promoting transparency, trust, and accountability across various field of business. As disclosure is considered as the main communicating medium to business entities to communicate with their insiders (managerial persons, employees) as well as outsiders (money lenders, customers, government) by publishing important and relevant information about their activities, achievement, objectives, future plans, growth opportunities and others so that the related parties can measure the associated risk more accurately and can also take appropriate investment decision (Clarkson *et al.*, 2013) [15]. Higher level of disclosure indicates higher transparency and accountability which are very helpful in developing a favourable reputation among the stakeholders. Consequently, firms with higher disclosure level enjoy a competitive advantage in terms of stakeholders' faith and confident, low transaction cost, high demand of its securities in the stock market and lower finance cost.

On the other hand, conclude that in some specific cases additional disclosure may increase cost of capital rather than decrease the cost. Behind their argument the authors provide the reason that as a result of disclosure of more information, business organizations unknowingly unfold or open up some confidential information which is very crucial for obtaining competition advantages and consequently business organizations have to compete with other competing businesses. Moreover, the researchers have also given another reason that in the absence of misreporting cost by disclosing more information organizations may try to mislead the investors and small or rational investors may treat such disclosure as non-informative. Still bona fide, successful and powerful organizations adopt and maintain

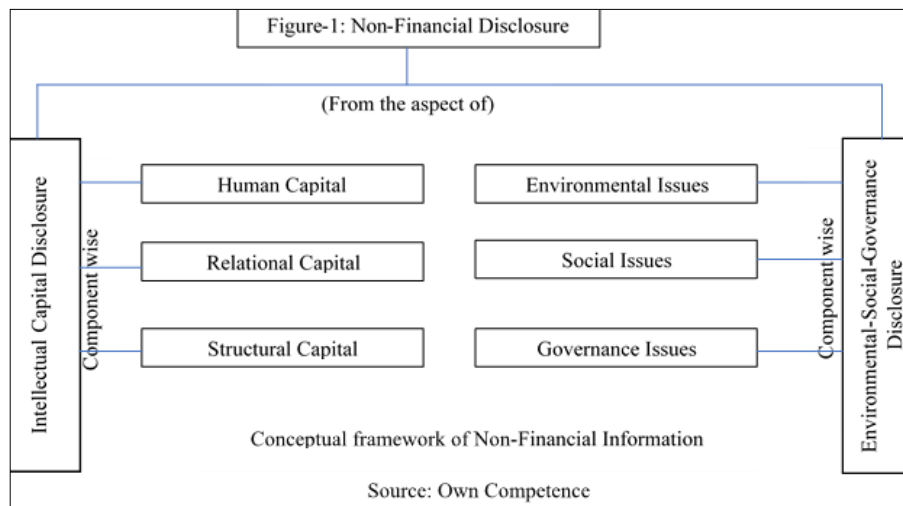
proper disclosure strategy to get benefits from such disclosure by providing adequate information to the stakeholders (Easley & O'Hara, 2004). A number of researchers like Easley & O'Hara (2004), Guthrie *et al.* (2006) [20]; Aregbesola (2019) [6] has shown how disclosure works in the favour of business. They reveal that disclosure helps to minimize its cost of capital by maintaining higher transparency level, confidence level, liquidity in stock market and higher demand in market that leads to a negative association between the disclosure level and cost of capital. The published disclosure may be categorised into financial disclosure and non-financial disclosure. Financial disclosure highlights how an organization financially strong that means its financial position, financial strength, profitability, cash flows and other financial elements which are measurable in monetary term and are obviously published in the financial statements. On the other hand, non-financial disclosure deals with those activities and attributes which are non-financial in nature that means which are not measurable in monetary term and remain unhighlighted in the financial statements but those have a crucial impact on organization – Corporate Social Responsibility, Environmental-Social-Governance related information, information about other intangible assets like human capital, relational capital and structural capital. Therefore, we can say that the non-financial disclosure indicates how an organization is sustainably sturdy. If we compare an organization's financial ability with the ability of bearing fruits of a tree, sustainability will be the strength or embonpoint of the tree stem. It is generally assumed that the stronger the stem, the better it will be because it increases the stamina of resistance as well as able to bear fruits in a large scale. In a similar vein, in the business world aspect it is also assumed

that businesses with higher sustainability also have higher financial viability. Therefore, by disclosing more non-financial information business organizations provide or give a signal about their sustainability - growth opportunity, better earning capability that leads to better confidence level and faithfulness among investors, attract more investors, enhance stock market liquidity and eventually lower capital cost as well as higher firm value (Rajesh, 2020) [44].

The regulators, managers and business administrators have realized about the growing demand and usability of non-financial information in addition to the financial information among the investor community in performance measuring as well as value gauging process. Hence, they have also consciously moved accordingly in publishing non-financial information in an equal importance (KPMG Report,2019). This is why in such highly globalized era to maintain and strengthen their sustainability, existence the business organizations have evolved their reporting practices and trends with the needs and demands of the wider group of stakeholders and other market participants. Over the last two decades the Indian companies drastically change their reporting landscape from simple financial parameters to complex non-financial parameters in expressing future value creation capability and for this purpose they also has

adopted several new rules and regulations or frameworks regarding to convey their non-financial performance in addition to the financial performance towards the interested stakeholders (KPMG Report,2019; Taliyang et.al.,2014; Bhasin, 2016) [13, 52, 57].

Hence considering the growing demand of non-financial information among the investor’s community and accordingly the evolution of reporting landscape in India the present publication has been undertaken to analyse the practices and trends of publishing non-financial information from the viewpoint of Indian context. For this purpose, the non-financial disclosure has been analysed from two dimensions– one is Intellectual Capital (IC) and another is Environmental-Social-Governance (ESG). However previous researchers like Bhasin, 2011 [11], 2016; Abeyekera, 2008; Gupta,2007 [21]; Shinde,2005 [47] have considered the non-financial disclosure from any one aspect either form IC disclosure or from ESG disclosure. But for the long-term survival and/or existence of a business organization both are simultaneously required. This if the first study that has been examined the trends of disclosing the non-financial information from the above mentioned two aspects.



For this purpose, top 87 NSE listed are analysed for the five-year periods from 2015-2016 to 2019-2020. Two disclosure indexes – IC disclosure index having 45 items, based on Guthrie *et al.*, 2004 [19]; Bukh *et al.*, 2005 [8]; Li *et al.*, 2008 [32]; Mondal & Ghosh,2014 and ESG disclosure index having 52 items, based on Plumlee *et al.*,2008&2015; Clarkson *et al.*,2013 [15, 39]; Poignant & Stensio,2014 [40] are prepared based on previous researchers to measure the volume of non-financial information in their annual reports through examining the annual reports of the sample companies for the study periods using the content analysis technique. Thereafter interpreting the findings of the two aspects of the non-financial category separately and comparing the findings of this study with the previous studies this study is concluded.

This research study is segregated into five sections. After this introductory section, the next section abridges pertinent existing literatures and develops research objectives. Third section states about the adopted methodology of this research study. Whereas section 4 explains the reporting status of Indian companies based on our findings and the last section takes the responsibility of concluding our study.

Literature review and Hypothesis development

1. Literature review

In this technical and digital revolution era, today’s business organizations not only have to face various challenges for their business activities but also for the disclosure of information regarding to their business. This disclosure mechanism has always been used by the corporates as a valuable tool for attracting investor’s attention and satisfying stakeholders via separating themselves from other competitors by disclosing higher level of relevant information (KPMG Report,2019). Through this disclosed information a business unit can reach or communicate to investors, shareholders and other stakeholders easily, that leads to lower information asymmetry and minimum estimation risk as well as agency cost (Prabowo,2017) [42]. Moreover, with this higher level of disclosure businesses effortlessly can represent their propositions and operations with more authentically and transparently (Guthrie et.al., 2006 [20]; Aregbesola,2019) [6]. And this authentication and transparency offer several competitive advantages in terms of higher confidence of investors and other concerned parties towards the business, improved relationship with

stakeholders, strengthened reputation, long-term sustainability, value creation, higher demand in the stock market and lower finance cost (Taliyang,2014) ^[52, 57].

Consequently, it is important to the corporates to develop the core disclosure mechanism in such a way so that they can simultaneously disclose financial information as well as non-financial information (Rodrigues et.al.,2015) ^[43]. The only publication of financial information is not sufficient to highlight the corporate value creation capabilities in future (Sriram,2008; Stathis,2015; Zambon & Monciardini,2015) ^[49, 50, 55, 60]. Financial information shows those items only which are measurable in monetary terms. But in businesses there exist so many attributes which are not measurable in monetary terms, but very crucial for the holistic development of business (e.g. skill, innovative power, experience, qualities, knowledge of their employees etc.) (Sriram,2008) ^[49]. Zambon & Monciardini (2015) ^[55, 60] argues that approximately 20% of a firm's true market value is depicted through the traditional financial statements and remaining 80% remains undisclosed due to its incapability in incorporating the values, generating from such intangible attributes. These intangible attributes all are incorporated in the non-financial disclosure and here is the importance of non-financial disclosure. With the aim of presenting all kind of information and highlighting all kind of hidden values, in the aggregate minimizing the information asymmetry there is considered to be a need to disclose more on non-financial information in the corporate reporting so that it can depicted at least some of the value stemming from these intangible assets (Sriram,2008) ^[49].

Hence on the one hand side the inclusion of non-financial information in the corporate disclosure is a competitive advantageous for a corporation for describing its true market value and disclosing all pertinent attributes from which corporation may wish prosperity in near future, on the other hand side it is very difficult to identify within which area or sector of non-financial information are argued to contribute more informative, more value carrier and complete disclosure. As the area of non-financial disclosures is a very vast, it includes Intellectual Capital Disclosure, Corporate Social Responsibility Disclosure, Environmental Disclosure as well as Sustainability Disclosure also (Arvidsson,2010) ^[4].

Out of this vast or broad area of non-financial information intellectual capital is considered as the most valuable and important resources in the future value creation process of a business organization (Bhasin,2015) ^[12]. As it is completely inherent resources which are developed by the business organization within himself through the skills, capabilities, experience and motivation of his employees, through his management process, procedures, strategies, routines, capability of maintaining peaceful and effective work environment. Because of these attributes, the intellectual capital can't be separated from the business organizations or can't be substituted by any other tangible assets. Where tangible assets can easily be substituted, imitated or acquired from the open market, specifically in such technological revolution era. That is why tangible assets are not much taken into consideration in gauging firm's future potentiality as well as future value creation capabilities (Bhasin,2016) ^[13].

In the year 2002 Bontis revealed that there is very limited disclosure of intellectual capital by the Canadian firms after considering 39 intellectual capital items, whether these

items are present or not in the annual reports of 10000 firms, listed in the same country by adopting content analysis technique. He also observed that patents, trademarks, copyrights etc. which are fallen in the category of intellectual property, are mostly disclosed. On the other hand, Abeyekera (2008) argued that there is an increasing trend in disclosing of non-financial information among the Sri Lankan firms. Moreover, the author compares this disclosure trend of Sri Lankan firms with the Singapore based firms and discover a differential pattern of disclosing the same. He noticed that Singapore based firms provide more emphasis on human capital rather than external capital due to its scarcity of land and other natural resources. Further in his study Taliyang & Mansor (2014) ^[52, 57] conclude that approximately 69 percent of Malaysian firms publish their intellectual capital items after adopting content analysis technique on 185 firms from various sectors listed in Malaysia. This empirical study is also found a significant and positive impact of intellectual capital on stock market. Staying on the same rope Guthrie & Petty (2000) ^[18] attempt to inspect the reporting pattern of intellectual capital of top 20 Australian firms (in terms of their size) using content analysis of the published annual reports to measure the amount of intellectual capital disclosure and have found that intellectual capital items are sickly realized, negligence in managing, lack of accuracy in identifying and reporting from the Australian perspective. But the results of the empirical study which is conducted by Joshi *et al.* (2016) ^[28] confirm an upward raising awareness in highlighting, identifying, reporting the intellectual capital among the Malaysian firms.

While by examining the content analysis of 30 entertainments, communication, technological and other knowledge based Indian firms, listed in the Bombay Stock Exchange for the year 2005-2006 Kamath (2008) ^[29] reports in his study that the extent of disclosing intellectual capital is significantly low by the Indian corporations. Farther Bhasin (2011) ^[11] conduct a comparative study with aim of analyzing the practices of disclosing intellectual capital by the IT-sector corporations from the view point of India as well as Australia. The author concludes his study by mentioning same as Kamath (2008) ^[29] that the extent of disclosure level regarding to the intellectual capital for the both countries is comparatively very low and mostly in descriptive form and not get any extra empathies or importance by the leading corporations in the same sector. Whereas Maji & Goswami (2016) reveals that the efficiency in intellectual capital and other physical capital have a positive and significant impact on the corporate performance of Indian knowledge-based sector and traditional sector.

On the other side with the increasing awareness about the obesity of pollution and Carbon (CO₂) emission, emission of chlorofluorocarbon (CFCs), drastic changes in climate, alarming condition of non-renewable natural resources and global warming another category of non-financial information, namely Corporate Social Responsibility (CSR) demand more attention of publishing non-financial information in addition to financial condition (Arvidsson, 2003) ^[1]. Despite the demand of this category of non-financial information Shinde (2005) ^[47] reported that like rest of the world in India the level of disclosing social responsibility is at its infant stage. Similarly, Bukh *et al.* (2006) also prove the lower level of highlighting CSR information from Indian perspective. While Gupta (2007)

[21] reveals the advantages, generating from the CSR disclosure. According to this study CSR disclosure facilitates the business organization to meet demand of information, to mitigate information gap, to build a credible image among the market participants and enhance its position in the thought of investors and other stakeholders. With this in mind Indian corporations publish a lot of information on CSR activities (Arvidsson,2010)^[4].

Moreover, various corporate scandals like exploitation of workers especially child and female workers, sexual harassments in business premises, incorporation of ghost employees provide much pressure on business units of disclosing the environmental, social and governance (ESG) practices and its impact on society (Duran,2018)^[16]. With the revolution of digitalization and therefore, dissolution of barrier in terms of place and time regulators as well as corporations to become conscious about the growing importance of environmental, social and governance (ESG) activities and disclosure for presenting its sustainable goal (Ruan & Liu,2021)^[45]. In addition of the financial information, environmental, social and governance (ESG) information enhance transparency and accountability that leads to exacerbate the accuracy power in measuring performance and associated risk and ultimately about its sustainability (Achim & Borlea,2015)^[5]. And contextually a group of previous researchers (Mocan *et al.*,2015; Hategan,2018; Garcia,2016; Berrone & Gomez, 2009)^[10, 23, 24, 35] argued that by disclosing ESG indicators cum non-financial information corporations provide a signal to the investors and potential investors and other related parties regarding to its less risky investment than others.

The inspiration of conducting this empirical research study to analyse the practices and trends of publishing non-financial information from the perspective of Indian corporations come from such limited and inconclusive research work on this subject matter from one hand side. And other hand side it is also observed about the growing demand as well as dependency of non-financial information over to the financial information for the purpose of collecting information as much as possible for taking accurate investment decision and extracting required values from the intangible assets (Rajesh,2020)^[44]. In this study the non-financial disclosure has been analyzed from the two aspects of non-financial category – one is Intellectual Capital (IC) and another is Environmental-Social-Governance (ESG) for the five-year periods from 2015-2016 to 2019-2020. Here IC is considered for its direct influence on generating firms' value. On the opposite side ESG is taken to cover up a broad area than the CSR. CSR only cover a small part of ESG. But most of the previous researchers conduct their research work on the basis of this small part of ESG i.e. CSR. That is why in this study we incorporate the two aspects of non-financial category – one is IC and other is ESG. Beside this the previous research work is limited for the period of one or two years, not more than. But for the first time this research study examines the subject matter from the Indian context after incorporating the two aspects of non-financial category for the period of 5 years.

2. Hypothesis development

From the above discussion the following hypothesis is developed:

H₁: There is an increasing trend in disclosing the non-financial information.

Research Methodology

1. Data and Sample

For this purpose, this study analyses the results of 87 companies for the five-year periods from 2015-2016 to 2019-2020. Initially top 100 companies are selected according to their market capitalization as on 31st March, 2020 and which are listed in Indian most leading stock market, National Stock Exchange (NSE) for this empirical research but due to the unavailability of annual reports of every year for the study periods 13 companies are eliminated and finally 87 companies are selected for analytical purpose. Here NSE is selected as it includes approximately 1600 companies from almost all the sectors of Indian economy as well as it also captures 65% (approximately) of the float-adjusted market capitalization of the Indian Stock Market (Nifty 50, Index Methodology, 2019). Additionally, it can be used in different way like benchmarking fund portfolios, index-based derivatives and index funds.

This empirical research is conducted based on secondary data which are collected directly from the annual reports of the selected companies using the content analysis technique which is considered as most suitable method of collecting data via codifying quantitative and qualitative information into different categorizes (Guthrie *et al.*,2004)^[19]. Still now annual report is believed as the prime medium of providing and collecting information between the senders (business entities) and receivers (all stakeholders) (Guthrie *et al.*,2004)^[19]. The authors, Mondal & Ghosh (2020) argued that most of the financial and market analyst mainly analysed annual reports to analysis performance of the business.

Here the overall non-financial disclosure is measured by measuring the Intellectual Capital (IC) disclosure level and Environmental-Social-Governance (ESG) disclosure level. Each disclosure level is measured through the individual disclosure index separately- IC Disclosure Index and ESG Disclosure Index. In case of IC disclosure index in total 45 items are selected from its category wise - Human Capital, Relational Capital and Structural Capital wise, based on Guthrie *et al.*, 2004^[19]; Bukh *et al.*, 2005^[8]; Li *et al.*, 2008; Mondal & Ghosh,2014. Whereas the ESG disclosure index is build up with total 52 items from its component wise – Environmental, Social and Governance wise, based on Plumlee *et al.*,2008&2015; Clarkson *et al.*,2013^[15, 39]; Poinant & Stensio,2014^[40]. Alike of previous studies (Guthrie *et al.*,2006; Abeysekera,2008; Poinant & Stensio,2014; Plumlee *et al.*,2008,2015)^[2, 20, 39, 40] we also codify quantitative and qualitative information to measure the disclosure level by assigning a value range from 0 to 3, just like a score, based on the nature of disclosure. A value of 0 is put if the item is not disclosed in the annual report; a value of 1 is given if the item is presented in a descriptive form. If the item is disclosed in numerical form, a value of 2 is assigned and alternatively a value of 3 is also assigned if the item is presented in both way – descriptively and numerically. After that the disclosure index (DI) is computed by dividing the sum of actual scores of each item by the maximum score of all items.

$$DI = \frac{AS}{MS} \text{ i.e. } \frac{\sum_{i=0-3}^n Din}{n \times 3}$$

Here the actual score means the assigned value which is given based on the nature of disclosure using content analysis technique and the maximum score is also calculated by multiplying total number of items in the checklist with the maximum score value (i.e. 3).

2. Concept of Intellectual Capital Disclosure

In such knowledge-based economy knowledge, innovation, other human power, information-technology etc. are considered as the key organizational resources which are adopted by an organization in order to enhance its competitive power than other similar competitors. This competitive power is generated through the strength of internal processes, working culture as well as organizational culture, knowledge sharing processes, efficiency, motivation & efforts of employees, good relationship with stakeholders and their satisfaction and other similar intangible attributes. These intangible attributes are commonly known as intellectual capital (IC) of firms (Mehrotra *et al.*,2017) [37]. Where Stewart (2000, p.11) [46] defined IC as “intellectual material - knowledge, information, intellectual property, experience – that can be put to use to create wealth”. Beside this IC is defined as “a non-monetary asset without physical substance but (which) possess value or (which) can generate future benefits” by Choong (2008, p.613) [14]. Generally, IC is the combination of human capital, structural capital and relational capital (Sanchez *et al.*,2013). Whereas human capital covers skills, knowledge, capabilities, creativity, personal attribute, technical competence at personal level of employees and team work, healthy work environment, culture of employees, gender equality at organizational level (Stropnik *et al.*,2017) [51, 56]. Structural capital includes organizational structure, management procedures, internal working systems, management philosophy, organizational culture etc. (Stropnik *et al.*,2017) [51, 56]. And relational capital concerns with the relationship to its external related parties, commonly known as stakeholders like customers, investors, creditors, other resource providers, bankers, financiers, shareholders etc. (Joshi *et al.*,2013) [27].

3. Concept of Environmental-Social-Governance Disclosure

The Environmental, Social and Governance, popularly pronounced as ESG is a generic term for evaluating corporate behaviour towards its sustainability, social responsibility, impactful and ethical investment (Virtania and Siregar,2017) [54, 59]. It may be viewed as a successor to socially responsible investment, efficient CSR performing which are gaining popularity worldwide (Kang & Hustvedt,2014). Though CSR is used interchangeably with ESG, but it is a narrow concept and a part of ESG (Kang & Hustvedt,2014). A group of researchers (Davis and Blomstrom,1966; McWilliams & Siegel,2001; Lea,2002) [31, 33] defines CSR as a person’s obligation to consider the effects of his decisions and actions on the whole social system. But ESG covers governance policy, environmental duties also of a business along with its social responsibilities (Kang & Hustvedt,2014). Hence, ESG is taken as the combination of three components – environmental, social and governance (Ghosh & Mondal, 2023) [17]. The environmental component includes those criteria which are looked after how a corporation performs their duties, in order to protect the natural resources and natural environment. And the social component covers those

criteria which are concerned with how a corporation manages or maintains its relationship with its employees and stakeholders. Lastly, governance component deals with a corporation’s leadership, internal process, executives’ efficiency and performance, organizational culture & strategy, shareholders’ right.

Empirical Results & Discussion:

1. Intellectual Capital (IC) Disclosure Trends Analysis

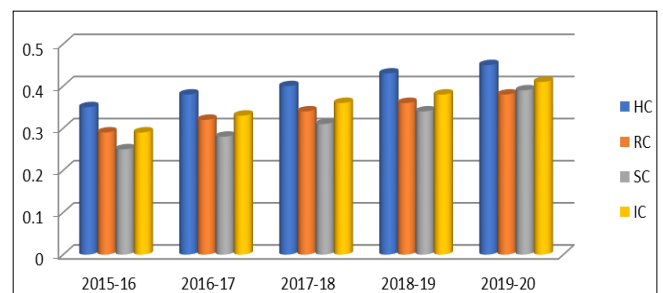
The five years results of disclosing various IC items on the basis of its component wise which are displayed in table-3 indicate that there are increasing trends in disclosing or reporting the intellectual capital and its three components, namely Human Capital, Relational Capital and Structural capital for the study periods in the annual reports of the corporations in India.

Table 1: Overall IC Disclosure Results

Year	2015-16	2016-17	2017-18	2018-19	2019-20
Human Capital	0.35	0.38	0.40	0.43	0.45
Relational Capital	0.29	0.32	0.34	0.36	0.38
Structural Capital	0.25	0.28	0.31	0.34	0.39
Intellectual Capital	0.29	0.33	0.36	0.38	0.41

Source: Own compilation

The table-3 shows that in the year 2015-2016 the disclosing amount of human capital is 0.35 and in 2016-2017, 2017-2018, 2018-2019 & 2019-2020 is 0.38, 0.40, 0.43 & 0.45 respectively. Hence from 2015-2016 to 2019-2020 the disclosure level of same enhance by 0.10 (i.e. 0.45-0.35). Similarly for the same periods the disclosure level of relational capital and structural capital enhance by 0.09 (i.e.0.38-0.29) and 0.14 (i.e.0.39-0.25) respectively. Finally, IC disclosure is also enhanced by 0.12 (i.e. 0.41-0.29) during the study periods. During this study periods, the highest increased component is structural capital, second is human capital and last is relational capital.



Source: Own compilation

Fig 2: Bar Chart of Component wise IC Disclosure Level

Alternatively, the graphical presentation of above-mentioned results in Figure-2 clearly shows the increasing trend of IC and its each component. That means Indian corporations are also started to report about their IC information like other corporations in the developed countries in order to attract foreign investors.

Here table-4 shows the item wise disclosure results from each component of intellectual capital for the five years study periods. Consequently, on the basis of this disclosure results we can explain in the following way about the item wise disclosure pattern under each component of IC by the Indian corporations.

Under the Human Capital, ‘employee’s benefits’ is fall under the category of highest disclosing item and ‘training programme’ is second most reported item. The item named as ‘number of employees’ stands at third position. Therefore, it indicates that Indian corporations are more likely to report how they engage in retaining their man power and upgrade them time to time. On the other hand, the Indian corporations are less interested to disclose about the efficiency, ability, productivity of employees. That’s why ‘employee’s productivities’, ‘know how’ and ‘employees’ motivation’ are the least reported items under the human capital.

Under the relational capital the most remarkable disclosing

item is ‘favourable contracts’ and followed by item, named as ‘market share’. The next disclosed item is ‘number of clients. Hence Indian companies are willing to disclose how far they are capable to maintain a smooth and effective relationship with outside the world. But in this same disclosing line the last position is held by ‘customer education’. It is reflecting that Indian corporations are less interested to engage as well as to report regarding customer training. Whereas customer training is a programme which is designed for its customer for better understands and finds value of its products. The third last reported item is ‘company reputation’, followed by ‘franchising agreement’ under the relational capital.

Table 2: Summary of maximum and minimum disclosing IC items

Capital	Maximum Disclosure Items	Score	Minimum Disclosure Items	Score
Human Capital	Employee Benefits	1259	Employee Productivity	177
	Training Programmes	953	Know How	184
	Numbers of Employees	857	Employee Motivation	288
Relational Capital	Favorable Contracts	1081	Customer Education	62
	Market Share	688	Franchising Agreements	167
	Number of Clients	585	Company Reputation	303
Structural Capital	Infrastructure	786	Copyrights/Design	89
	Research and Development	667	Trademarks	205
	Management Philosophy	435	Patents	237

Source: Own compilation

From the item wise disclosure results in table-4 it is clear that in case of structural capital the Indian corporations provide more importance in reporting about their development of infrastructure, engagement in research & development and management philosophy in order to indicate about the betterment of other. As under the structural capital line the first three positions are held by items ‘Infrastructure’, ‘research & development’ and ‘management philosophy’ respectively. In addition to these the other remarkable disclosing items are ‘technological processes, ‘intellectual property’, and ‘knowledge/talent management’. Similarly, some of items named as ‘patents’, ‘trademarks’, ‘copyright’ are fall in the least reported category under this same disclosing line.

2. Environmental-Social-Governance (ESG) Disclosure Trends Analysis

The table-3 shows the overall result of disclosing ESG report by the Indian corporations in their annual reports and/or any other reports. The results show that the tendency of disclosing all the three components of ESG disclosure as well as overall ESG disclosure increases every year over the study periods.

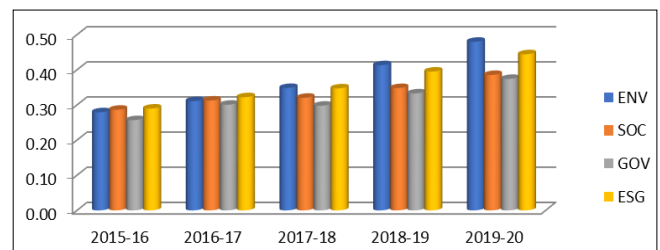
Table 3: Overall ESG Disclosure Results

Category	2015-16	2016-17	2017-18	2018-19	2019-20
Environmental Issues	0.28	0.31	0.35	0.41	0.48
Social Issues	0.29	0.31	0.32	0.35	0.39
Governance Issues	0.26	0.30	0.30	0.33	0.37
ESG	0.29	0.32	0.35	0.40	0.44

Source: Own compilation

In the year 2015-16 the amount of disclosing environmental issues is 0.28, in the year 2016-17, 2017-18, 2018-19 and 2019-20 is 0.31, 0.35, 0.41 and 0.48 respectively. That means the environmental disclosure raised by 0.20 (i.e. 0.48-0.28) points during the study periods. Whereas social

disclosure increased by 0.10 (i.e. 0.39-0.29) and governance disclosure by 0.12 (i.e. 0.37-0.26). Hence this outcome can be explained as the Indian corporations mostly reported their environmental information than the social and governance information. And second highest reporting category is governance and last is social.



Source: Own compilation

Fig 3: Bar Chart of Component wise ESG Disclosure Level

On the other hand, table no. 2 represents item wise results of each component of ESG disclosure. After observing the item wise results, it is noticed that the item named as ‘Training to environmental protection’ from the environmental issues is the most published item. Hence this suggests that Indian corporations are more focusing on training related to the environmental protection their employees. So that they can described how much they are internally dependent as well as internally strong and sustainable. ‘Recycling waste products’ from the same group is ranked as second most reported item. By disclosing this item, the corporations want to highlight their sustainable power, employees’ engagement and better customer satisfaction. As recycling, reuse of limited business resources, natural resources and managing waste more efficiently are core components of sustainability. Moreover ‘water recycled’, ‘reduction in carbon emission’, ‘amount spent on environmental purpose’, ‘enhance biodiversity’ are the remarkable reported items. Contrary there are lacks of

enthusiasm of preventing emission of polluted social, emission of other gas like NO_x, SO_x by the Indian business firms. As ‘prevention of polluted soil emission’, ‘Initiatives to control of NO_x, SO_x gas’ are the last reported items in the Environmental disclosing category.

Alternatively, from the results displayed in table-2 it is clearly understood that the corporations in India have mostly highlighted their employees’ related information from the social disclosing category. As the items named as ‘employees’ welfare’, ‘number of employees’, ‘compensation plan-wages/remuneration’, ‘Safety of employees’ are the most noticeable items in the annual reports of the Indian corporations. Inversely ‘knowledge

about the products/services’, ‘product certificate’, ‘reduce impact of products’, ‘collaboration with other firm regarding environmental issues’ are the highest ignoring areas in the socially disclosed category. Therefore, it reveals that Indian companies are unwilling to disclose their product related information. But the results of governance disclosing category reveal that most of the Indian corporations make their strategies towards the maximum utilization of renewable as well as non-renewable resources and reported accordingly. For these reasons the items, named as ‘Optimum use of renewable energy’ and ‘Optimum use of non-renewable energy’ are ranked first and second in the same disclosing category.

Table 8: Summary of maximum and minimum disclosing ESG items

Category	Maximum Disclosure Items	Score	Minimum Disclosure Items	Score
Environmental Issues	Training to environmental protection	851	Prevention of polluted soil emission	141
	Recycling waste product	817	Certificates to environmental issues	200
	Amount spent to environmental purpose	782	Initiatives to control of NO _x , SO _x gas	224
Social Issues	Employees Welfare	1120	Knowledge about the products/services	73
	Number of Employees	787	Collaboration with other firm regarding environmental issues	167
	Compensation Plan-Wages/Remuneration	759	Product certification	272
Governance Issues	Optimum use of renewable energy	682	Employee Engagement	252
	Optimum use of non-renewable energy	463	Existence of environmental practices	289
	Relationship with Stakeholders	435	Existence of pollution control department	284

Source: Own compilation

In the same line the third rank item is ‘Relationship with Stakeholders’. Hence, we can say that the corporations in India also give much emphasis on maintaining a relationship with their stakeholders in their governance strategy. Contrary ‘Employee Engagement’ and ‘Existence of environmental practices’ are less reported items in the governance disclosing category.

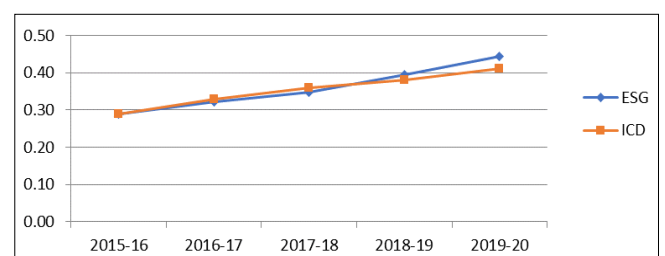
Comparative study with others research

This section is concern about a comparative study with other empirical research work regarding the disclosure trend of non-financial information outside India. Though this research study may differ with other empirical studies in terms of the purpose of study, disclosure index, sample selection as well as collection of data, study periods, using in research methodology, analytical process etc., in the following way we compare this research study with others.

According to the report of WBCSD also environmental issues are the most highlighted ESG information by the Indian corporations, but a contradictory result is found in case of governance issues information. WBCSD reports that information relating to governance issues is least reported category. While our disclosure results show that the second most reported category is governance issues. From the perspective of reporting channels, there is a greater focus in India on channeling ESG disclosure than China through mainstream reports, with 23% of India’s provisions requesting ESG cum sustainability information in companies’ annual reports. In China product/service responsibility, social impact and value creations, climate change, emission of pollution are frequently disclosing items under ESG category. Whereas accountability, employment conditions, employment policy are the highest publishing items in the annual reports of the corporations of Other European Countries.

A group of researchers like Guthrie & Petty (2000) [18], Sujan & Abeysekera (2007) and Bhasin (2016) [13] conducted similar type of research work based on Australian corporations. In their study they argued that Australian corporations are mostly reported the relational capital under the intellectual capital through a separate section of intellectual capital. But Indian corporations contradictory reported the structural capital under the intellectual capital by their annual reports. In case of Indian corporations it is

also found that there is no specific section of disclosing intellectual capital separately like Australian corporations. In Australia the highest disclosed human capital items are employees’ trainings and organizational sprints. In India employees’ training is also second most reported human capital item, followed by employee benefits. Alternatively, distribution channels and customers are fall in the highest reporting category in Australia, where as in India favourable contracts and market share are fall under the same category under the relational capital. Lastly in Australia management philosophy and management processes are the most reported items under the category of structural capital, where as in India infrastructure and research & development are the most reported items under the same category.



Source: Own compilation

Furthermore, the study carry out by Oliveras *et al.* (2008) [38] is also fall under the same category of this research work but based on Spanish corporations. Using the same content analysis technique in the annual reports of Spanish corporations they also noticed that vocational qualification and financial relations are the frequently reported items in the human capital and relational capital respectively. Corporate culture is the highest disclosing item in the structural capital by the same corporation. Whereas Indian corporations are less interested to report about the qualification of employees and corporate culture. After staying on the same line of research Ismail (2008) [25] reveals that employee’s benefits, training programmes, management philosophy are the highest reported intellectual capital items by the Egyptian corporations.

Conclusion

A group of previous researchers (Sriram,2008; Stathis,2015; Zambon & Monciardini,2015) [4, 50, 55, 60] have shown that how the limitation or incapability of traditional financial statements in exhibiting hidden value of intangible assets increase the demand of non-financial information in firm's market value creation process. They also argue that approximately 20% of a firm's true market value is only captured by the traditional financial statements and remaining 80% remains undisclosed. Therefore investors, potential investors and other market participants demand more non-financial information and also rely more on this type of information to measure firm's future value more accurately. That is why this empirical research study takes an initiative to analysis the current trends of disclosing non-financial information in their annual reports by the Indian corporations.

The disclosing results of the non-financial information through IC & ESG using the content analysis technique for the top 87 companies out of top 100 companies according to their market capitalization listed in National Stock Exchange (NSE) for the five year periods from 2015-2016 to 2019-2020 show that there is an increasing trends in disclosing IC as well as ESG information and ultimately non-financial information in the annual reports by the Indian corporations for the study periods but the amount of disclosing such type of information is not still reach up to the mark. Though both the components of non-financial information are increasing, the rate of disclosing ESG related information is much higher than the rate of disclosing IC related information. Training to employees regarding to the protection of environment, recycling waste products, conservation & reuse of water, amount spent on environment purpose, employees welfare, compensation plan of employees, safety of employees, utilization process of non-renewable & renewable resources, relationship with stakeholders are the frequently disclosing information under the ESG category by the sample companies. Whereas employees benefits, employees trainings, number of employees, favorable contracts, market shares, number of clients, infrastructure, research & development, management philosophy are the most reported intellectual capital information by the Indian companies.

Though this empirical research first timely examines the subject matter from the Indian context after incorporating the two aspects of non-financial category for the period of 5 years, it is not free from any limitation. In this study we only consider top 100 companies listed in NSE, hence there may be more than 100 companies listed in NSE or in BSE or may not listed in any stock exchange and we ignore their reporting pattern of non-financial information. Hence, we can't say that the outcomes of this study may not represent all the companies in India. Empirical literatures reveal that the amount and patterns of disclosing the non-financial information in many cases depend on the industry type in which organizations are operated. This industry type is also omitted in this research study.

References

- Arvidsson S. Demand, supply of information on intangibles the case of knowledge-intense companies, PhD dissertation, Department of Business Administration, Lund University, Lund, 2003.
- Abeysekera I. Intellectual capital disclosure trends: Singapore, Sri Lanka, Journal of Intellectual Capital,2008:9(2):723-737.
- Alwert K, Bornemann M, Will M. Does intellectual capital reporting matter to financial analysts? Journal of Intellectual Capital,2009:10(3):354-68.
- Arvidsson S. Communication of corporate social responsibility a study of the views of management teams in large companies, Journal of Business Ethics,2010:96(3):339-54.
- Achim MV, Borlea SN, Developing of ESG Score to Assess the Non-financial Performances in Romanian Companies, Procedia Economics, Finance,2015:32:1209-1224. doi: 10.1016/S2212-5671(15)01499-9
- Aregbesola O, Intellectual Capital Disclosure In Niger (1), Bowen University, <https://www.researchgate.net/publication/337593519>, 2019.
- Bontis N, Intellectual capital disclosure in Canadian corporations, Journal of Human Resource Costing & Accounting,2003:7(1):9-20.
- Bukh PN, Nielsen C, Gormsen P, Mouritsen J, Disclosure of information on intellectual capital in Danish IPO prospectuses. Accounting, Auditing Accountability Journal,2005:18(6):713-32. DOI: 10.1108/09513570510627685
- Bukh PN, Nielsen C, Mouritsen J, Gormsen P, Disclosure of information on intellectual capital in Danish IPO prospectuses, Accounting, Auditing Accountability Journal,2006:18(6):713-32.
- Berrone P, Gomez-Mejia LR, Environmental Performance, Executive Compensation An Integrated Agency-Institutional Perspective, Academy of Management Journal,2009:52(1):103-126.
- Bhasin M.L, Disclosure of Intellectual Capital in Annual Reports An Empirical Study of the Indian IT Corporations, Modern Economy,2011:2(4):455-467.
- Bhasin, Madan, Voluntary Reporting of Intellectual Capital: Scenario of a Developing Economy, British Journal of Research,2015:2(6):180-195.
- Bhasin ML, Intellectual Capital Reporting Practices: Experience of Australia, India, International Journal of Management Sciences, Business Research,2016:5(12):61-80.
- Choong KK, Intellectual capital definitions, categorization, reporting models, Journal of Intellectual capital,2008:9(4)609-638. <https://doi.org/10.1108/14691930810913186>
- Clarkson P, Fang X, Li Y, Richardson G, The relevance of environmental disclosure are such disclosures incrementally informative? J. Acc. Public Policy,2013:32:410-431.
- Duran II. Rodrigo P, Why Do Firms in Emerging Markets Report? A Stakeholder Theory Approach to Study the Determinants of Non-Financial Disclosure in Latin America, Sustainability,2018:10(9):1-20. <https://doi.org/10.3390/su10093111>
- Ghosh C, Mondal A, Relationship between Cost of Equity Capital, Environmental-Social-Governance Disclosure Level An empirical study on select Indian Companies, Business Spectrum,2023:8(1):98-120. ISSN 2249-4804.
- Guthrie J, Petty R, Intellectual Capital Australian Annual Reporting Practices, Journal of Intellectual Capital,2000:1(3):241-251.
- Guthrie J, Petty R, Yongvanich K, Ricceri F, Using content analysis as a research method to inquire into intellectual capital reporting, Journal of Intellectual Capital,2004:5(2):282-93. DOI: <https://doi.org/10.1108/14691930410533704>
- Guthrie J, Petty R., Ricceri F 2006, The voluntary reporting of intellectual capital comparing evidence from Hong Kong, Australia, Journal of Intellectual Capital,2006:7(2):254-271. DOI: 10.1108/14691930610661890
- Gupta AD, Social responsibility in India towards global compact approach, International Journal of Social economics,2007:34:637-663.
- Ghosh SK, Maji SG, Empirical Validity of Value Added Intellectual Coefficient Model in Indian Knowledge-based Sector", Global Business Review,2015:16(6):947-962.
- Garcia S, Cintra Y, Torres, RCSR, Lima FG, Corporate Sustainability Management A Proposed Multi-criteria Model to Support Balanced Decision-Making, Journal of Cleaner Production,2016:136:181-196. <https://doi.org/10.1016/j.jclepro.2016.01.110>
- Hategan CD, Sirghi N, Curea-Pitorac RI, Hategan VP, Doing Well or Doing Good The Relationship between Corporate Social Responsibility, Profit in Romanian Companies, Sustainability,2018:10:1041.

25. Ismail TH, Intellectual Capital Reporting in Knowledge Economy Evidence from Egypt' Paper Presented at the International Conference on Economic Direction III: Economic Policy in a Rapidly Changing World. Kuwait University, 2008.
26. Insights on Corporate Reporting, KPMG in India, 2019.
27. Joshi M, Cahill D, Sidhu J, Intellectual capital, financial performance an evaluation of the Australian financial sector, *Journal of Intellectual Capital*,2013:14(2):264-285, <https://doi.org/10.1108/14691931311323887>
28. Joshi PL, Min TH, Deshmukh A, Jaffar NB, Extent, Determinants of Intellectual Capital Disclosures by Top Listed Companies in Malaysia, *Indian Journal of Finance*,2016:10(4):7-28.
29. Kamath B, Intellectual Capital Reporting in India Content Analysis of Teck Firms, *Journal of Human Resource Costing, Accounting*,2008:12(3):213-224.
30. Kang J, Hustvedt G, Building Trust Between Consumers, Corporations The Role of Consumer Perceptions of Transparency, Social Responsibility, *Journal of Business Ethics*,2014:125(2):253–265. <https://doi.org/10.1007/s10551-013-1916-7>
31. Lea R, Corporate social responsibility Institute of Directors (IoD) member opinion survey, Institute of Directors London, 2002.
32. Li J, Pike R, Haniffa R, Intellectual capital disclosure, corporate governance structure in UK firms, *Accounting, Business Research*,2008:38:(2):137–159. DOI: 10.1080/00014788.2008.9663326
33. McWilliams A, Siegel D, Corporate social responsibility A theory of the firm perspective, *Academy of Management Review*,2001:26(1):117–127.
34. Mondal A, Ghosh SK 2014, Determinants of Intellectual Capital Disclosure Practices of Indian Companies, *Journal of Commerce Accounting Research*,2001:3(3):25-35.
35. Mocan M, Rus S, Draghici A, Ivascu L, Turi A, Impact of Corporate Social Responsibility Practices on the Banking Industry in Romania, *Procedia Economics Finance*,2015:(23):712–716.
36. Maji SG, Goswami M 2016, Intellectual capital, firm performance in emerging economies the case of India, *Review of International Business, Strategy*,2015:26(3):410–430.
37. Mehrotra V, Malhotra AK, Pant R, Intellectual Capital Disclosure by the Indian Corporate Sector, *Global Business Review*,2017:19(2):1-17. DOI: 10.1177/0972150917713562.
38. Oliveras E, Gowthorpe C, Kasperskaya Y, Perramon J, Reporting Intellectual Capital in Spain, *Corporate Communications*,2008:13(2):168-181.
39. Plumlee M, D Brown, S Marshall, The impact of voluntary environmental disclosure quality on firm value, Working paper, University of Utah, 2008.
40. Poignant A, Stensio S, The effect of integrated reporting on corporate environmental disclosure, *Stockholm School of Economics, Department of Accounting, Master thesis in Accounting, Financial Management*, 2014.
41. Plumlee M, Brown D, Hayes RM, Marshall RS, Voluntary environmental disclosure quality, firm value Further evidence, *Journal of Accounting, Public Policy*,2014:34(4):336-361.
42. Prabowo BH, The Impact of Intellectual Capital Disclosure, Information Asymmetry on the Cost of Equity Capital: an Empirical Investigation in Indonesia, *Research in Business, Social Science*,2017:6(5):1-12. <http://dx.doi.org/10.20525/ijrbs.v6i5.763>
43. Rodrigues HS, Gupta P, Carlson R, Exploiting Intellectual Capital for Economic Renewal, *International Journal of Innovation Science*,2015:7(1):13-26.
44. Rajesh R, Exploring the Sustainability Performances of Firms Using Environmental, Social, Governance scores”, *Journal of Cleaner Production*,2020, 24. <https://doi.org/10.1016/j.jclepro.2019.119600>
45. Ruan L, Liu H, Environmental, Social, Governance Activities, Firm Performance Evidence from China, *Sustainability*,2021:13:1-16. <https://doi.org/10.3390/su13020767>
46. Stewart TA, Intellectual Capital The New Wealth of Organizations, Nicholas Brealey Publishing, London, 2000.
47. Shinde S, Social responsibility corporate style, available at <http://www.expresscomputeronline.com/20050502/technologylike01.shtml>, 2005.
48. Sujan A, Abeysekera I, Intellectual Capital Reporting Practices of the Top Australian Firms, *Australian Accounting Review*,2007:17(42):71-83.
49. Sriram RS, Relevance of intangible assets to evaluate financial health, *Journal of Intellectual Capital*,2008:9(3):351-66.
50. Stathis KL, Ocean Tomo Releases 2015 Annual Study of Intangible Asset Market Value, 2015. available at <http://www.oceantomo.com>
51. Stropnik N, Korošec B, Tominc P, The Relationship Between the Intellectual Capital Disclosure, Cost of Debt Capital – A Case of Slovenian Private Audited Organisations, *Naše gospodarstvo/Our Economy*,2017:63(4):3-16. DOI: 10.1515/ngoe-2017-0019
52. Taliyang S, Harun R, Mustafa N, Mansor M, Intellectual Capital Disclosure, Market Capitalization, *International Journal of Business Social Science*, 2014, 10.
53. The Road Ahead, Survey of Corporate Responsibility Reporting, KPMG in India, 2017.
54. Virtania LO, Siregar SV, The Effect of Environmental Disclosure on Cost of Equity, *Advances in Economics, Business, Management Research*,2017:36:05-104. <http://creativecommons.org/licenses/by-nc/4.0/>
55. Zambon S, Monciardini D, Intellectual Capital, Innovation: A Guide for Future Research, *Journal of Innovation Economics Management*,2015:2(1)13-26.
56. Stropnik N, Korošec B, Tominc P, The Relationship Between the Intellectual Capital Disclosure, Cost of Debt Capital – A Case of Slovenian Private Audited Organisations, *Naše gospodarstvo/Our Economy*,2017:63(4):3-16. DOI: 10.1515/ngoe-2017-0019
57. Taliyang S, Harun R., Mustafa N, Mansor M, Intellectual Capital Disclosure, Market Capitalization, *International Journal of Business, Social Science*, 2014, 10.
58. The Road Ahead, Survey of Corporate Responsibility Reporting, KPMG in India, 2017.
59. Virtania LO, Siregar SV, The Effect of Environmental Disclosure on Cost of Equity, *Advances in Economics, Business, Management Research*,2017:36:05-104, <http://creativecommons.org/licenses/by-nc/4.0/>
60. Zambon S, Monciardini D, Intellectual Capital, Innovation: A Guide for Future Research, *Journal of Innovation Economics, Management*,2015:2:(1)13-26.