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## **The association between corporate characteristics and human resource disclosures: the case of Indian corporate sector**

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**Abstract:** The purpose of the present study is to investigate the association between corporate characteristics and voluntary human resource (HR) disclosure practices of the Indian corporate sector. The study has been conducted on 267 companies listed on the Bombay Stock Exchange (BSE-500 Index) from the time period of starting from F.Y. 2012–2013 to 2019–2020. The outcomes of two-way LSDV regression model show that some characteristics have had significant effects on HR disclosure practices of the Indian listed companies, such as company age, leverage, ownership concentration, liquidity, total number of pages of an annual report and company size, profitability are partly affect the HR disclosure practices of the sample companies. Overall, it can be said that the Institute of Chartered Accountants of India (ICAI) and other regulatory bodies will take steps based on the HRDI developed in this study to make HR disclosure practices mandatory in India.

**Keywords:** corporate characteristics; human resource disclosure index; HRDI; annual reports; content analysis; India.

**JEL codes:** M-14, M-41, M-48, O-15.

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**Biographical notes:** Kirti Aggarwal has completed her PhD in Finance from the Haryana School of Business, Guru Jambheshwar University of Science and Technology, Hisar. Prior to her Doctoral thesis, she has completed her MCom (with Finance specialisation) and BCom from the Kurukshetra University, Kurukshetra. Her current research area of interest is accounting and finance. She has published various research papers in various journals of international repute.

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“There is a consensus that the business reporting model needs to expand to serve the changing information needs of the market and provide the information required for enhanced corporate transparency and accountability.”  
– (Beattie et al., 2004)

## 1 Introduction

Human resources (HRs) are the organisation's strategic assets (Ghuman, 2016; Gavareshki et al., 2019; Joshi et al., 2019; Maheshwari, 2019; Teimouri et al., 2019; Zafar, 2019; Rana, 2021; Rizvi and Garg, 2022). Furthermore, at a time when stakeholders expect greater transparency regarding a company's actions, the voluntary sharing of HR information for stakeholders is an increasing trend in corporate disclosure practises. Furthermore, for the capital market to function properly, appropriate HR disclosure practises are required (Aggarwal, 2021a). This information is used by corporations, regulatory agencies, and investors (Hellstrom, 2006). Stakeholders must make voluntary disclosures in order to make various decisions (Berradino, 2001). In today's corporate environment, companies release data beyond what is needed by law, a practise called as voluntary disclosure. According to the American Accounting Association (AAA) disclosure is the measure of information from the private domain (that is, inside information) into the public domain. Such a conversion of private information into public information can take place in financial statements or through non-accounting channels. The concept of voluntary disclosure is based on the legal context and regulatory pressure (Marston, 1986). In addition to the mandatory obligations, the company must disclose the information on a voluntary basis. It is said that voluntary disclosure plays a very crucial role in the functioning of the capital markets. The mandatory disclosure is inadequate to take the decision as compared to voluntary disclosure (Healy and Palepu, 2001; Bushee and Leuz, 2005). The existing study (Hassan et al., 2009) also argued that the mandatory disclosure is also not giving the competitive advantage. The voluntary disclosure mean information primarily outside of the financial statements that are not explicitly required by accounting rules or standards (FASB, 2001). The voluntary disclosure contains both types of information, i.e., financial and non-financial (Garg and Verma, 1994; Gakhar and Garg, 2008; Garg and Kumar, 2019b).

There are a lot of studies that have studied the factors of voluntary disclosure in developed nations (Cooke, 1992; Raffournier, 1995; Wallace and Naser, 1995; Ali and Abdelfettah, 2019; Chong and Rahman, 2020; Rosa Portella and Borba, 2020; Barbosa et al., 2021; Kainth and Wahlstrøm, 2021). On the contrary, very few studies have been conducted in developing nations (Kumar and Garg, 2019; Verma and Kirti, 2019; Aggarwal and Verma, 2020; Verma and Aggarwal, 2020). No serious attempt has been made to study the voluntary HR disclosure practice in developing countries like India. Therefore, this study is imperative for a number of reasons, such as the difficulty of generalising the findings of developed nations to developing nations and the different national policies that are also affecting the company's operations. Hence, it is vital to study the determinants of voluntary HR disclosure practices in India (Aggarwal, 2021a).

There are numerous theories that explain the voluntary disclosure practises of the companies. The most widely used theories are agency theory, signalling theory, legitimacy theory, stakeholder theory, and proprietary theory (Hossain et al., 1995; Healy and Palepu, 2001; Watson et al., 2002; Marston, 2003; Oyeler et al., 2003; Marston and Polei, 2004; Freedman and Jaggi, 2005; Belal and Cooper, 2011; Cotter et al., 2011; Raimo et al., 2020). According to agency theory, the agency is a relationship between managers and shareholders. The separation of management and ownership creates the problem of information asymmetry between both the parties. Managers have more information in comparison to shareholders (Healy and Palepu, 2001). As a result, the agency cost is arising. For the purpose of reducing agency costs, managers have been

trying to disclose more and more information in their annual reports to shareholders (Hossain et al., 1995; Watson et al., 2002; Marston, 2003; Oyelere et al., 2003; Marston and Polei, 2004; Barako et al., 2006; Hassan et al., 2009). Another theory is the signalling theory, which explains the voluntary disclosure practices of companies. According to this, the signalling theory provides the solution to the problem of information asymmetry (Akerlof, 1970; Ross, 1977; Levin, 2001). Managers reduce the problem of information asymmetry by providing a good signal regarding their company through adequate disclosure. The adequate disclosure increases the confidence of the shareholders (Hossain and Hammami, 2009).

The next theory is the legitimacy theory, which describes the voluntary disclosure practices of firms. Businesses are a part of society, and it is necessary for them to legitimise their interactions with society. Disclosure is a way to communicate with society (Cormier and Gordon, 2001). Firms act according to the expectations of society and legitimise their activities in the eyes of society (Freedman and Jaggi, 2005; Sobhani et al., 2009; Belal and Cooper, 2011). Additionally, the voluntary disclosure practices are also explained by the stakeholder theory. Stakeholders are the people who are directly or indirectly connected with the company. They play a significant role in the company's activities. Stakeholder includes the managers, stockholders, creditors, customers, suppliers, Government, trade unions, and the general public. They support the survival of the business. So, to gain such support, it is necessary to satisfy the information needs of the stakeholders by disclosing a greater amount of information in their annual reports (Smith et al., 2005).

PricewaterhouseCoopers (PwC) and Goldman Sachs predicted that South Asia was going to lead the world economy by 2050. The ultimate assets of South Asian countries such as Bangladesh and India are their human capital (HC). Huge foreign and local investments are required for the development of this region. To attract and retain investors, Bangladeshi and Indian companies need to expose their HC in a credible way. Moreover, effective HC disclosure is also beneficial for companies in attracting and keeping talent. Systematic HC disclosure may be highly useful in this regard (Financial Express, 2015). The importance of South Asia in the global economy is increasing day by day due to its enormous stock of HC (Khilji, 2012). So, the main purpose of the present study is to investigate the association between corporate characteristics such as company age, company size, leverage, ownership concentration, profitability, liquidity, type of auditor, total number of pages of an annual report, listing abroad on voluntary HR disclosure practices of the Indian corporate sector. These variables have been selected due to being most prominently used in the previous studies. The study has been conducted on 267 companies listed on the BSE-500 Index for the time period of eight years starting from F.Y. 2012–2013 to 2019–2020. For analysis purposes, descriptive statistics, Pearson's correlation matrix, two-way least square dummy variable (LSDV) regression model have been used.

The rationale behind undertaking this study is that there is limited published research on HR disclosure practices in India. The costliest asset of the organisation is its human assets, but they are treated as worthless when it comes to decision-making. Human assets are devalued when the pressure of competition causes restructuring or downsizing. The value of a public organisation's stock may change if human assets, which are currently expensed based on generally accepted accounting principles (GAAP), are capitalised. Earnings per share may increase. Corporate taxes may affect net income. If income tax

increases (Flamholtz, 1999), the gross national product/gross domestic product (GNP/GDP) may be affected.

In India, the concept of HR disclosure has not yet received the kind of attention given to the other areas of accounting research. There are different studies that deal with some aspects of HR disclosure practices but there are very few companies that have coverage and focus on these studies. Basically, the majority of the research studies surveyed are solely questionnaire-based studies or have dealt with the case studies of old companies. In this era of globalisation and the emergence of knowledge-based industries, there is a need to give a fresh look at HR reporting practices in India with an increasing emphasis on HR. Therefore, there is a gap found both in terms of literature and research relating to HR disclosure practices in India. So, the present study proposes to bridge the gap in the literature and research related to HR disclosure practices in India. The current study also proposes to give useful insights on HR disclosure practices in the Indian corporate sector.

The present study is motivated by the importance of HR disclosure for stakeholders in making their investment decisions and for managers to achieve their targets through the efficient use of their strategic assets, i.e., HRs. The communication of HR-related information by Indian corporates in their annual reports shows the transparency of their operations and the chances of future growth of their business. Thus, the findings of the study provide a significant contribution to The Institute of Chartered Accountants of India (ICAI) in developing the guidelines for Indian corporates that are concerned with HR issues through HR disclosure in their annual reports.

There are numerous regulations prevalent in India to regulate corporate disclosure practices such as the Chartered Accountants Act, 1949, the Companies Act, 2013, the Securities and Exchange Board of India (SEBI) (Amendment) Act, 2002 and the Indian Accounting Standards. The SEBI (Amendment) Act, 2002 specified principles of corporate governance and introduced a new clause 49 in the Listing Agreement of the Stock Exchanges in which disclosure of financial and non-financial information is mandatory in order to avoid fraudulent accounting (Ghafoor et al., 2019; Hashim et al., 2020; Nobanee et al., 2020; Benedetti et al., 2021; Madi et al., 2021; Maulidi and Ansell, 2021; Sallal et al., 2021). Despite this, there are no mandatory provisions requiring corporations to properly disclose HR disclosure practices. Thus, HR disclosure by corporates in India is purely voluntary in nature.

The present study has contributed in different ways. Firstly, this present study helps to know the different factors that are influencing the voluntary HR disclosure practices of Indian corporates. Further, the hypothesis that the total number of pages of an annual report is significant and positive effect on HRDI. So, on the basis of the annual report's pages, stakeholders know which firm is more transparent for their decision purposes. Secondly, the different environments of countries affect the voluntary disclosure practices of a company. Accordingly, stakeholders make their investment decisions. Generally, it is seen that investors believe in short-term gains rather than long-term gains. Because, stakeholders are scattered throughout the world, it is not possible for them to manage and keep informed about the day-to-day affairs of a company. Hence, the voluntary HR information disclosed by a company through their annual reports helps stakeholders regarding the future prospects of a business. Through this, they easily know whether good or bad things are happening in a company or whether their funds are being used properly or not in a company. Third, the findings of the study revealed that Indian listed companies have low to moderate level of HR disclosure in their annual reports. It shows that managers are considering the HR disclosure as a tool to achieve the

competitive advantage and also consider a significant instrument to demonstrate the company's commitments towards their stakeholders. Further, it is imperative for the corporates to increase their HR disclosure because, HR disclosure influences the goodwill of a company and perception of the stakeholders towards the company. By disclosing more and more HR information, they are showing that they operate their business in an ethical manner and the greater transparency also helps to attract the national and international investors for the capital and invite the knowledgeable and capable employees in the organisation to achieve the objectives of the business. Fourth, this study also helps to ICAI and other regulatory bodies to take the steps on the basis of HRDI constructed in the study to make the HR disclosure practices mandatory in India.

## 2 Literature review and hypotheses development

Existing research (Healy et al., 1999; Botosan and Plumlee, 2002; Hassan et al., 2009) shows that voluntary disclosure has a variety of benefits such as reduction of capital costs, value relevance of financial statements, increased share price, etc. The study by Botosan and Plumlee (2002) documented that those companies which have disclosed voluntary information in their annual reports have lower capital costs. Another study by Qu et al. (2013) argued that the main goals of voluntary disclosure are institutional legitimacy and fair-trading in the stock market. The disclosure of voluntary information depends on cost-benefit analysis (Meek et al., 1995). A firm would disclose more information voluntarily if, the benefits were greater as compared to direct and indirect costs associated with the business. Additionally, the voluntary disclosure reduces the agency costs, political costs, etc.

The presents study uses the corporate characteristics as independent variables. These corporate characteristics have been chosen on the basis of exiting literature such as company age (Li et al., 2008; Aggarwal, 2021a), company size (Aggarwal, 2021a), leverage (Stropnik et al., 2017; Pradhan and Nibedita, 2021), ownership concentration (Akhtaruddin and Haron, 2010; Aggarwal, 2021a), profitability (Jindal and Kumar, 2012; Garg and Kumar, 2019b), liquidity (Ghosh and Nandi, 2009; Aggarwal, 2021a), type of auditor (Abd-Elsalam, 1999; Hail, 2002; Kaur et al., 2016), total number of pages of an annual report (Aggarwal and Verma, 2020; Aggarwal, 2021a), listing status (Haniffa and Cooke, 2002; Al-Akra et al., 2010; Kaur et al., 2016).

**Table 1** Explanatory variables

<i>Category of variable</i>	<i>Independent variable</i>
Structural	Company age, company size, leverage, ownership concentration, type of auditor
Performance	Profitability, liquidity
Market	Listing abroad, industry type
Other	Pages of an annual report

*Source:* Compiled from literature review

## 2.1 *Company age*

A long-established firm has more professional, competent, and knowledgeable staff in their organisation. Hence, they are disclosing more HR information in their annual reports. Younger firms are also disclosing more information in their annual reports. Haniffa and Cooke (2002) note that it is imperative for younger firms to disclose more information for the purpose of being evaluated by the interested parties and reducing the risk to the investor. The risk of investors decreases as the number of years in a business increase (Cordazzo and Vergauwen, 2012). Hence, younger firms will reveal more information as it seems less risky (Whiting & Woodcock, 2011). However, some younger firms have disclosed less information due to their lack of past records. The earlier studies (Hossain and Hammami, 2009; Fontana and Macagnan, 2013; Aggarwal, 2021a) documented a significant positive association between HR disclosures and a company's age. While the other study (Li et al., 2008) found a negative association. Some studies (Alam and Deb, 2010; Jindal and Kumar, 2012; Kateb, 2015; Kaur et al., 2016; Garg and Kumar, 2019b; Aggarwal and Verma, 2020) documented insignificant associations between the variables. Hence, it is hypothesised that:

H<sub>1</sub> There is a positive effect of company age on HRDI of the Indian listed companies.

## 2.2 *Company size*

Company size is another variable that effects the level of voluntary disclosures in annual reports of the companies. The relationship between company size and the level of voluntary disclosure may be explained through agency theory (Ousama and Fatima, 2010). Due to information asymmetry, conflicts are arising between management and shareholders. As a result, the agency cost is arising. To reduce agency costs, companies are disclosing a greater amount of information in their annual reports. In addition, the investors of the larger companies demanded more data than the mandatory disclosures (Nagar et al., 2003; Abeysekera, 2011). Larger corporations may be more concerned about additional HC disclosures (Barako et al., 2006). Again, to get extra benefits, a large-sized company discloses more information voluntarily in their annual reports. However, small companies have less voluntary disclosure in their annual reports due to maintaining their competitive position in the market. The existing literature (Wang et al., 2008; Alam and Deb, 2010; Moller et al., 2011; Jindal and Kumar, 2012; Bhatia and Mahajan, 2013; Uyar and Kilic, 2013; Bowrin, 2018) found a significant positive association between company size and the extent of voluntary disclosures. While the other studies (Bontis, 2003; Gheisari and Amozesh, 2016) found a negative association between both the variables. However, some studies (Kamath, 2008; Kateb, 2015) found no substantial connection between these variables. Thus, the following hypothesis may be formulated as:

H<sub>2</sub> There is a positive effect of company size on HRDI of the Indian listed companies.

## 2.3 *Leverage*

When a firm uses debt in their capital structure to acquire asset, this is known as leverage (Garg and Singh, 2017). The solvency position of a company also affects the level of voluntary disclosure of the company. Generally, it is argued that high leverage firms

disclose a greater amount of information voluntarily to satisfy the information needs of their creditors (Uyar and Kilic, 2012). However, another study (Khlifi and Bourri, 2010) found that low-leveraged firms also have more voluntary disclosure in their annual reports to make the market aware of their financial structure and to avoid a negative impression regarding their solvency position (Khlifi and Bourri, 2010). Previous studies (Chow and Wong-Boren, 1987; Williams, 2001; White et al., 2010; Haji and Ghazali, 2013; Al-Hamadeen and Suwaidan, 2014) affirm a positive relationship between leverage and voluntary disclosures. Some other studies (Kang and Gray, 2011; Melegy, 2013; Kateb, 2015; Stropnik et al., 2017; Aggarwal and Verma, 2020; Pradhan and Nibedita, 2021) discovered a negative association between leverage and voluntary disclosures. However, some studies (Pettersson and Rylme, 2003; Jindal and Kumar, 2012; Kaur et al., 2016; Garg and Kumar, 2019b; Aggarwal, 2021a) established an insignificant association between both the variables. Hence, the following hypothesis may be developed as:

H<sub>3</sub> There is a positive effect of leverage on HRDI of the Indian listed companies.

#### *2.4 Ownership concentration*

A firm discloses a greater amount of information voluntarily for the purpose of reducing the information asymmetry and thereby reducing agency costs (Akhtaruddin and Haron, 2010). According to the study by Chau and Gray (2002) concentrated ownership reduces the transparency of the company's activities and, as a result, increases agency costs. On the other hand, wider ownership is positively associated with the extent of voluntary disclosures. A diffused ownership structure encourages conflicts of interest between principles (shareholders) and agents (managers) who hold an insignificant amount of equity in the firm. If an organisation has widely spread ownership, agency costs will be higher for these companies since they have diverse interests between contracting parties (Akhtaruddin and Haron, 2010). A few studies (Hossain et al., 1995; Barako et al., 2006; Aggarwal, 2021a) discovered a negative relationship between ownership concentration and disclosure levels, while Aggarwal and Verma (2020) discovered a positive relationship. Thus, the next hypothesis can be written as:

H<sub>4</sub> There is a negative effect of ownership concentration on HRDI of the Indian listed companies.

#### *2.5 Profitability*

The difference between the levels of voluntary disclosure among Indian listed companies is also explained by the profitability of the companies. One company is more profitable in comparison to the other due to their skilled and high calibre employees (Ousama et al., 2012). And, this relationship has been studied by many researchers (Marston and Shrikes, 1991; Meek et al., 1995; Leventis and Weetman, 2004; Aggarwal and Verma, 2020; Aggarwal, 2021a). Profitable companies disclose a lesser amount of information voluntarily in their annual reports. Because, profitable companies want to hide the information related to their intellectual assets, because these assets contribute to the success of the company. Different studies (Wallace and Naser, 1995; Pettersson and Rylme, 2003; Chadwick and Dabu, 2009) found a significant positive effect of profitability on the extent of voluntary disclosures. Other studies (Hossain and

Hammami, 2009), revealed a negative association between profitability and the extent of voluntary disclosures. In contrast, some studies (Moller et al., 2011; Jindal and Kumar, 2012; Kateb, 2015; Garg and Kumar, 2019b) did not find any significant relationship between both the variables. Hence, the fifth hypothesis can be postulated as:

H<sub>5</sub> There is a positive effect of profitability on HRDI of the Indian listed companies.

## 2.6 *Liquidity*

Liquidity position is an important characteristic of the company. Those firms that have more liquid assets certainly employ their long-term assets in current assets in place of investing in fixed assets to earn a higher rate of return through their investment. It creates doubt in the minds of long-term fund providers regarding the efficiency of the companies in managing their finances. In such a situation, no one invests their money in that company. So, to avoid a negative impression and to ease the anxiety of the stakeholders, firms disclose more and more information in their annual reports. Hence, high liquid firms disclose more information voluntarily in their annual reports. The study conducted by Ghosh and Nandi (2009) found positive, and Aggarwal and Verma (2020) and Aggarwal (2021a) documented a negative association between liquidity and level of HR disclosure. This earlier finding prompts us to hypothesise that:

H<sub>6</sub> There is a positive effect of liquidity on HRDI of the Indian listed companies.

## 2.7 *Type of auditor*

The study of Hail (2002) demonstrates that type of auditor influences the voluntary disclosure practices of the companies. Additionally, another study (Xiao et al., 2004) revealed that international auditing firms help to disseminate innovative practices such as HR reporting. Because they have a good reputation in the market and compel clients to provide more and more disclosure to justify their market position. The existing studies (Ahmed and Nicholls, 1994; Raffournier, 1995; Xiao et al., 2004; Aggarwal and Verma, 2020) found positive and Aggarwal (2021a) documented a negative effect of auditor type on voluntary disclosures. Other studies (Wallace et al., 1994; Hossain et al., 1995; Abd-Elsalam, 1999; Kaur et al., 2016) found an insignificant association between both the variables. Thus, based on the above arguments, formulate the following hypothesis:

H<sub>7</sub> Indian listed firms engaging one of the Big 4 international auditing firms are more likely to disclose more HR information in their annual reports than Indian listed firms engaging with other auditing firms.

## 2.8 *Total number of pages of an annual report*

The shareholders are large in number, and it is not possible for them to manage the daily affairs of a business. So, they appoint a board of directors to manage the business. Hence, shareholders need information about the company's activities. The annual report is considered the best medium to circulate the required information to the stakeholders. The voluntary information revealed by firms exemplifies account transparency and also aids in gaining stakeholder confidence. Pages of an annual report show to what extent information is disclosed by the companies. As the number of pages of an annual report

increases, the amount of information disclosed by companies will also increase. So, more pages of annual reports imply more information being disclosed by the companies (Aggarwal and Verma, 2020; Aggarwal, 2021a). The earlier studies by Aggarwal and Verma (2020) and Aggarwal (2021a) found a significant positive association between pages of an annual report and HR disclosure of the Indian listed firms. Hence, the eighth hypothesis can be framed as:

H<sub>8</sub> There is a positive effect of total number of pages of an annual report on HRDI of the Indian listed companies.

## 2.9 Listing abroad

Many existing studies (Haniffa and Cooke, 2002; Al-Akra et al., 2010; Muttakin et al., 2015; Kaur et al., 2016; Kamardin et al., 2017) found that the listing status of a company affects the extent of voluntary disclosure of the firms. Those companies which are listed on international stock exchanges are disclosing greater amounts of information in their annual reports due to prevailing the problem of information asymmetry between management and shareholders. Foreign shareholders demand greater amount of information, because of language barriers and scattered throughout the world (Haniffa and Cooke, 2002). Thus, the last hypothesis may be framed as:

H<sub>9</sub> There is a positive effect of listing abroad on HRDI of the Indian listed companies.

**Table 2** Summary of independent and control variables

<i>Category of variable</i>	<i>Independent variable</i>	<i>Proxy</i>	<i>Expression</i>
Structural	Company age	Maturity of the company since its incorporation year	AGE
	Company size	Net fixed assets	NFA
		net sales	NS
		Market capitalisation	MC
	Leverage	Debt-equity ratio	DER
	Ownership concentration	Promoter's holding	PH
	Type of auditor	Big4 – 1; other – 0	TOA
Performance	Profitability	Profit after tax	PAT
		Return on total assets	ROTA
		Return on equity	ROE
	Liquidity	Earnings per share	EPS
		Current ratio	CR
Market	Listing abroad	Quick ratio	QR
		Europe (London or Luxembourg) or America (NYSE or NASDAQ) – 1, other – 0	LS
Other	Total number of pages of an annual report	pages of an annual report	par
Control variables	Sector dummy	Control sector-specific effect	SECTOR
	Year dummy	Control time-specific effect	YEAR

*Source:* Compiled from literature review

Table 2 provides the summary of independent and control variables.

### 3 Research methodology

This section includes a sample of the study, the measurement of dependent, independent, and control variables, and model development.

#### 3.1 Sample

The present study has been conducted on companies listed on the BSE-500 Index. Those companies belonging to the banking and financial sector, following the accounting year, whose data has not been available on the CMIE ProwessIQ Database, and whose annual reports are not available on the website of a company are excluded from the study (Table 3). The final sample includes 267 companies (Table 4). The time period of the study includes eight years starting from F.Y. 2012–2013 to 2019–2020. The data for the study has been collected from the respective annual reports of the sample companies and the Centre for Monitoring Indian Economy (CMIE) ProwessIQ Database.

**Table 3** Criteria for selecting the sample

<i>Sample</i>	<i>Indian companies (BSE-500 index)</i>
Indian companies	500
Less: banking and financial, whose annual reports and data on CMIE ProwessIQ database are not available	(233)
Final sample	267

*Source:* Compiled from CMIE ProwessIQ Database

**Table 4** Industry sector-wise distribution of sample companies

<i>S. no.</i>	<i>Industry sector</i>	<i>Number of companies</i>	<i>% age</i>
1	Automotive	16	5.99
2	Cement/construction	14	5.24
3	Chemicals	28	10.49
4	Conglomerates	6	2.25
5	Cons durable	5	1.87
6	Cons non-durable	10	3.75
7	Engineering	21	7.87
8	Food and beverage	11	4.12
9	Manufacturing	16	5.99
10	Media	10	3.75
11	Metals and mining	16	5.99
12	Oil and gas	12	4.49
13	Pharmaceuticals	26	9.74
14	Retail/real estate	10	3.75
15	Services	17	6.37

*Source:* Compiled from Moneycontrol Website

**Table 4** Industry sector-wise distribution of sample companies (continued)

<i>S. no.</i>	<i>Industry sector</i>	<i>Number of companies</i>	<i>% age</i>
16	Technology	17	6.37
17	Telecom	7	2.62
18	Tobacco	3	1.12
19	Utilities	10	3.75
20	Miscellaneous	12	4.49
<i>Total</i>		<i>267</i>	<i>100.00</i>

*Source:* Compiled from Moneycontrol Website

### 3.2 Variables

This section presents the details of variables used in the present study.

#### 3.2.1 Human resource disclosure index

The human resource disclosure index (HRDI) has been used for scoring of the items. It includes 88 items (Annexure), which are divided into nine components (Table 5). The data for HR disclosure is gathered from annual reports of the sample companies. Because, it contains a large amount of financial and non-financial information about companies. An annual report is a significant way of communicating corporate information to the external world. It is an easy way of conveying all types of information to the different parties connected with the company. The report contains the audited financial statements as it creates confidence among the stakeholders. It is a reliable mode of communication for information. The annual report is described by Duff and Phelps (1976) as the most direct, least expensive, timeliest, and fairest method of reaching all shareholders and other present or potential investors. Hay (1955) found that 99% of companies communicate with the external world through annual reports. From an investor's point of view, the annual report is the primary source of information. Further, the content analysis approach has been used for scoring of HR disclosure items using annual reports of the respective company for the time period of F.Y. 2012–2013 to 2019–2020.

Content analysis is defined as a technique that codifies qualitative and quantitative information into pre-defined categories in order to derive patterns in the presentation and reporting of information. It is a systematic, objective, and reliable way to analyse the information (Guthrie et al., 2004). According to Krippendorff (1980), it is a systematic, replicable research technique for making valid inferences from texts or other meaningful matter to the contexts of their use. It is motivated by the search for techniques to infer from symbolic data what would be either too costly, no longer possible, or too obtrusive by the use of other techniques. In this approach, there are two indexes for assignment of weights, such as weighted (Courtis, 1978; Marston, 1986) and unweighted index (Cooke, 1989, 1991; Hossain et al., 1994; Raffournier, 1995; Narasimhan and Vijayalakshmi, 2006; Aljifri, 2008; Akhtartuddin et al., 2009; Aggarwal and Verma, 2020; Aggarwal, 2021a, 2021b). Under the weighted index, importance is given to each item. On the contrary, in the unweighted index, each item is assumed to be equally important. Both indexes (weighted and unweighted) have also used by some studies (Singhvi and Desai,

1971; Choi, 1973; Mangena and Pike, 2005). The present study has been used the unweighted index for scoring of the items. In content analysis approach, a score 1 for disclosure and 0 if it fails to disclose the same (Gakhar and Garg, 2007; Garg and Gakhar, 2009; Absar, 2014, 2016; Absar et al., 2014; Ahmed et al., 2017; Bansal et al., 2018; Elgammal et al., 2018; Garg and Kumar, 2018, 2019a; Ibrahim et al., 2019; Aggarwal, 2021a, 2022a, 2022b, 2023; Alrawashedh et al., 2021; Dube and Chang, 2022; Munjal et al., 2023). The formula for calculating the HRDI is expressed as follows:

$$HRDI_{it} = \frac{\text{Total score of individual company of the } i^{\text{th}} \text{ company in year } t}{\text{Maximum possible score obtainable of the } i^{\text{th}} \text{ company in year } t} \times 100$$

where

$HRDI_{it}$  HRDI of the  $i^{\text{th}}$  company in year  $t$

$t = 1, 2, 3, \dots, 8$ .

**Table 5** Detail of components of HRDI

<i>S. no.</i>	<i>Component of human resource disclosure index</i>	<i>No. of items</i>
1	Human resource policy and vision	12
2	General information about human resource	12
3	Financial information relating to human resource	15
4	Importance of human resource to the organisation	12
5	Human resource development	10
6	Employee's health and safety	6
7	Human resource relationship and culture	11
8	Different benefits/assistance given to employees	6
9	Employee's engagement and empowerment	4
<i>Human resource disclosure index</i>		88

*Source:* Compiled from literature review

### 3.2.2 Measurement of independent variables

Company age	Incorporation year of a company
Net fixed assets	Total fixed assets – cumulative depreciation
Net sales	Sales price x no. of products sold in a specific time period
Market capitalisation	Company's outstanding shares*current market price of one share
Debt-equity ratio	Total debt/shareholder's funds or net worth
Promoter's holding	Percentage of promoter's holding in equity share capital
Type of auditor	Big4 = 1, Otherwise 0
Profit after tax	Profit earned after paying taxes
Return on total assets	Profit after tax/total assets*100
Return on equity	Profit after taxes – preference dividend/shareholders equity*100

Earnings per share	Net profit – dividend on preference shares/number of equity shares
Current ratio	Current assets/current liabilities
Quick ratio	Liquid assets/current liabilities
Listing Abroad	America (NYSE and NASDAQ) and Europe (London and Luxemburg) – 1, Other – 0

Total number of pages of an annual report = Pages of an annual report of a company.

### 3.2.3 Measurement of control variables

Sector dummy set of dummies taken to control sector-specific effect

Year dummy set of dummies taken to control time-specific effect.

**Table 6** Test results for model selection

<i>Test hypothesis</i>	<i>Tests</i>	<i>Test statistics</i>	<i>P-value</i>	<i>Conclusion</i>
Selection between REM and pooled regression model	Lagrange multiplier (LM) test	$\chi^2 (01) = 2,454.13$	0.000	REM model is preferred over pooled regression model
Selection between FEM and pooled regression model	F-test	$F (26, 2,094) = 15.96$	0.000	FEM model is preferred over pooled regression model
Selection between FEM and REM model	Hausman test	$\chi^2 (11) = 1,439.75$	0.000	FEM is favoured

*Source:* Author's computation

Table 6 presents the results of the LM test, F-test and Hausman test used to select the appropriate model to assess the effect of company characteristics on HR disclosures. The significance value of the LM test favoured REM over the pooled regression model. The significance value of the F-test favoured FEM over the Pooled regression model. Finally, to decide between FEM and REM, the Hausman test was conducted, which goes in favour of the FEM. Further, FEM is classified into two types: one-way fixed effect and two-way fixed effect model. One-way fixed effect model may contain constant slope and different intercepts for either cross-section or time. On the other hand, the two-way fixed effect model includes constant slope and different intercepts for both cross-section and time (Dhar and Bakshi, 2015). The data in the study is both cross-section and time effect significant, as shown by the F-test (Table 6). So, the model used in this study is a two-way fixed effect. The cross-section and time effect are considered by taking sector and year dummies, respectively, in the regression model (Cormier and Magnan, 1999; Frias-Aceituno et al., 2013; Correa-Garcia et al., 2020). Thus, the final model used in the study can be named two-way LSDV regression.

### 3.3 Regression model

The specified model is presented below:

$$\begin{aligned}
HRDI_{it} = & \alpha + \beta_1 Age_{it} + \beta_2 NFA_{it} + \beta_3 NS_{it} + \beta_4 MC_{it} + \beta_5 DER_{it} + \beta_6 PH_{it} \\
& + \beta_7 TOA_{it} + \beta_8 PAT_{it} + \beta_9 ROT A_{it} + \beta_{10} ROE_{it} + \beta_{11} EPS_{it} + \beta_{12} CR_{it} \\
& + \beta_{13} QR_{it} + \beta_{14} LS_{it} + \beta_{15} PAR_{it} + \beta_6 SECTOR_{it} + \beta_{17} YEAR_{it} + \varepsilon_{it}
\end{aligned}$$

where

$HRDI_{it}$	HRDI of the $i^{\text{th}}$ company in year $t$
$Age_{it}$	company age of the $i^{\text{th}}$ company in year $t$
$NFA_{it}$	net fixed assets of the $i^{\text{th}}$ company in year $t$
$NS_{it}$	net sales of the $i^{\text{th}}$ company in year $t$
$MC_{it}$	market capitalisation of the $i^{\text{th}}$ company in year $t$
$DER_{it}$	debt-equity ratio of the $i^{\text{th}}$ company in year $t$
$PH_{it}$	promoter's holding of the $i^{\text{th}}$ company in year $t$
$TOA_{it}$	type of auditor of the $i^{\text{th}}$ company in year $t$
$PAT_{it}$	profit after tax of the $i^{\text{th}}$ company in year $t$
$ROTA_{it}$	return on total assets of the $i^{\text{th}}$ company in year $t$
$ROE_{it}$	return on equity of the $i^{\text{th}}$ company in year $t$
$EPS_{it}$	earnings per share of the $i^{\text{th}}$ company in year $t$
$CR_{it}$	current ratio of the $i^{\text{th}}$ company in year $t$
$QR_{it}$	quick ratio of the $i^{\text{th}}$ company in year $t$
$LS_{it}$	listing status of a company of the $i^{\text{th}}$ company in year $t$
$PAR_{it}$	pages of an annual report of the $i^{\text{th}}$ company in year $t$
$SECTOR_{it}$	set of dummies taken to control sector-specific effect of the $i^{\text{th}}$ company in year $t$
$YEAR_{it}$	set of dummies taken to control time-specific effect of the $i^{\text{th}}$ company in year $t$
$\alpha$	the constant
$\beta$	the slope of the regression equation
$\varepsilon_{it}$	the error term.

## 4 Empirical results

This section entails the results and discussions of the study.

### 4.1 Descriptive statistics

It presents the descriptive statistics of both the variables. It includes mean, minimum, maximum and standard deviation.

**Table 7** Descriptive statistics of dependent and independent variables

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Std. deviation</i>
HRDI	2,136	40.48	11.36	70.46	10.30
Age of a company	2,136	42.17	2.00	157.00	24.92
Net fixed assets	2,136	6,150.44	1.32	306,471.00	20,308.22
Net sales	2,136	12,761.42	37.52	523,539.67	40,881.91
Market capitalisation	2,136	23,830.59	96.01	864,122.44	59,696.97
Debt-equity ratio	2,136	0.61	0.00	120.49	3.11
Promoter's holding	2,136	55.14	0.00	99.33	17.46
Profit after tax	2,136	1,005.99	-73,131.50	35,163.00	3,707.54
Earnings per share	2,136	30.02	-227.00	5717.00	151.87
Return on total assets	2,136	8.11	-88.41	39.00	8.22
Return on equity	2,136	14.21	-417.70	117.29	20.86
Current ratio	2,136	1.82	0.00	25.56	1.78
Quick ratio	2,136	1.29	0.00	25.31	1.65
Type of auditor	2,136	0.30	0.00	1.00	0.46
Pages of an annual report	2,136	202.19	27.00	642.00	84.53
Listing status of a company	2,136	0.11	0.00	1.00	0.31

Note: DV = dependent variable and IV = independent variable;  $N = 267 \times 8 = 2,136$ .

*Source:* Author's computation

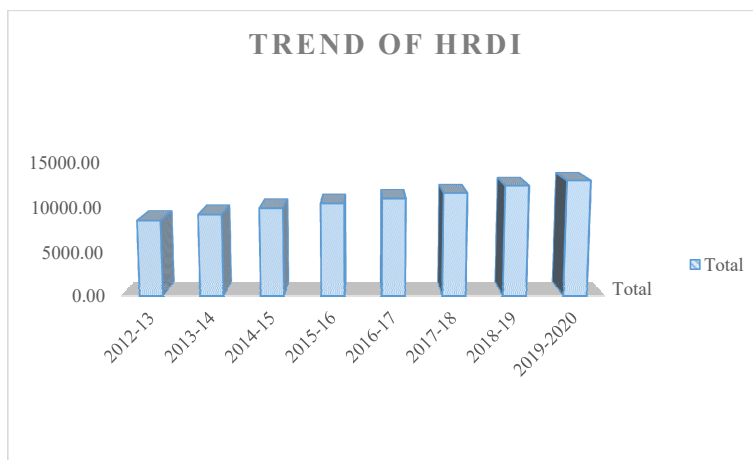
The results of descriptive statistics have shown by Table 7. It presents that the mean percentage of HRDI is 40.48. It is ranging on low to moderate side. And, the minimum value of HRDI is 11.36% and the maximum is 70.46% with the standard deviation of 10.30%. On an average, the age of a company is 42.17. The minimum age is 2 and the maximum is 157. On an average basis, the annual report's pages are 202 with minimum is 27 and the maximum is 642. In nutshell, it can be said that the voluntary disclosure of HR information for the stakeholders is an emerging trend in disclosure practices from the time when stakeholders demand greater transparency regarding the activities of the companies. Additionally, for better functioning of the capital market, the good disclosure practices are imperative (Aggarwal, 2021a). Furthermore, Figure 1 depicts the trend of HRDI. It shows that the trend of HRDI is on continuously increasing side. It means selected Indian listed companies are increasing their HR disclosures with the passage of the time.

Table 8 Correlation matrix of variables

Variable	HRDI	AGE	NFA	NS	MC	DER	PH	PAT	EPS	ROTA	ROE	CR	QR	TOA	P-IR	LS
HRDI	1															
AGE	0.061** (0.005)	1														
NFA	0.305** (0.000)	0.006 (0.799)	1													
NS	0.305** (0.000)	0.081** (0.000)	0.628** (0.000)	1												
MC	0.380** (0.000)	0.054* (0.012)	0.514** (0.000)	0.510** (0.000)	1											
DER	-0.041 (0.057)	-0.010 (0.659)	0.046* (0.035)	0.010 (0.629)	-0.032 (0.139)	1										
PH	-0.090** (0.000)	-0.137** (0.000)	0.006 (0.766)	-0.042 (0.050)	-0.059** (0.006)	-0.053* (0.014)	1									
PAT	0.269** (0.000)	0.047* (0.029)	0.394** (0.000)	0.517** (0.000)	0.725** (0.000)	-0.125** (0.000)	-0.048* (0.025)	1								
EPS	0.021 (0.338)	-0.028 (0.198)	-0.009 (0.662)	0.015 (0.488)	0.033 (0.126)	-0.029 (0.182)	-0.014 (0.518)	0.048* (0.026)	1							
ROTA	0.051* (0.019)	-0.074** (0.001)	-0.135** (0.000)	-0.041 (0.058)	0.195** (0.000)	-0.260** (0.000)	-0.031 (0.154)	0.208** (0.000)	0.113** (0.000)	1						
ROE	0.029 (0.187)	-0.034 (0.112)	-0.092** (0.000)	-0.001 (0.945)	0.120** (0.000)	-0.592** (0.000)	0.009 (0.663)	0.205** (0.000)	0.085** (0.000)	0.780** (0.000)	1					
CR	0.016 (0.455)	-0.074** (0.001)	-0.119** (0.000)	-0.078** (0.000)	0.010 (0.655)	-0.089** (0.000)	0.038 (0.078)	0.049* (0.023)	0.010 (0.633)	0.314** (0.000)	0.106** (0.000)	1				
QR	0.040 (0.067)	-0.115** (0.000)	-0.122** (0.000)	-0.092** (0.000)	0.029 (0.177)	-0.085** (0.000)	0.016 (0.451)	0.058** (0.008)	0.017 (0.425)	0.318** (0.000)	0.111** (0.000)	0.023** (0.000)	1			
TOA	0.157** (0.000)	0.000 (0.983)	0.019 (0.390)	0.006 (0.765)	0.109** (0.000)	0.006 (0.767)	-0.196** (0.000)	0.026 (0.235)	0.042 (0.050)	-0.008 (0.726)	-0.023 (0.293)	-0.027 (0.219)	0.019 (0.391)	1		
PAR	0.623** (0.000)	0.106** (0.000)	0.359** (0.000)	0.269** (0.000)	0.332** (0.000)	0.007 (0.736)	-0.133** (0.000)	0.259** (0.000)	-0.022 (0.299)	-0.066** (0.002)	-0.068** (0.002)	-0.054* (0.013)	-0.033 (0.125)	0.147** (0.000)	1	
LS	0.098** (0.000)	0.242** (0.000)	0.182** (0.000)	0.165** (0.000)	0.244** (0.000)	0.104** (0.000)	-0.328** (0.000)	0.183** (0.000)	-0.010 (0.633)	-0.133** (0.000)	-0.125** (0.000)	-0.073** (0.001)	-0.077** (0.000)	0.056** (0.009)	0.142** (0.000)	1

Note: \*Correlation is significant at the 0.05 level (2-tailed) and \*\*correlation is significant at the 0.01 level (2-tailed).

Source: Author's computation

**Figure 1** Trend of HRDI (see online version for colours)

Source: Author's computation

Table 8 entails the results of Pearson's correlation matrix. It shows that age (p-value = 0.005) net fixed assets (p-value 0.000), net sales (p-value = 0.000), market capitalisation (p-value = 0.000), profit after tax (p-value = 0.000), type of auditor (p-value = 0.000), annual report's pages (p-value = 0.000), listing status (p-value = 0.000) have significant positive and promoter's holding (p-value = 0.000) has significant negative correlation with HRDI at 1% level of significance. HRDI has significant positive correlation with return on total assets (p-value = 0.019) at 5% level of significance. Earnings per share (p-value = 0.338), return on equity (p-value = 0.187), current ratio (p-value = 0.455), quick ratio (p-value = 0.067) have insignificant positive and debt-equity ratio (p-value = 0.057) has insignificant negative correlation with HR disclosures.

#### 4.2 Regression results

This section presents the results of two-way LSDV regression model.

Multicollinearity statistics are shown in Table 9. Multicollinearity generally occurs when there are high correlations between two or more predictor variables. In other words, one predictor variable can be used to predict the other. This creates redundant information, skewing the results in a regression model (Vogt, 2005). The results show that VIF values are less than 10 and tolerance values are more than 0.10 (Wooldridge, 2010; Hill et al., 2011; Field, 2013). Hence, the problem of multicollinearity is not present in the specified model. Further, the Breusch-Pagan test has been used to check the problem of heteroskedasticity (Table 10). Heteroskedasticity refers to the non-constant error variance, or the idea that, once the predictors have been included in the regression model, the remaining residual variability changes as a function of something that is not in the model (Cohen et al., 2007). The problem is also not present in the given model as the significance value is more than 5% level of significance.

Table 11 presents the results of two-way LSDV regression model. It shows that the value of adjusted R-square is 52.5%. It shows that selected independent variables explain 52.5% variations in the dependent variable.

**Table 9** Multicollinearity statistics

<i>Variable</i>	<i>Multicollinearity statistics</i>	
	<i>VIF</i>	<i>Tolerance</i>
Age of a company	1.327	0.754
Net fixed assets	2.436	0.410
Net sales	2.623	0.381
Market capitalisation	3.045	0.328
Debt-equity ratio	2.043	0.489
Promoter's holding	1.397	0.716
Profit after tax	2.606	0.384
Earnings per share	1.057	0.946
Return on total assets	4.531	0.221
Return on equity	5.287	0.189
Current ratio	2.676	0.279
Quick ratio	2.736	0.279
Type of auditor	1.214	0.824
Pages of an annual report	2.147	0.466
Listing status of a company	1.393	0.718

Note: VIF – variance inflation factor.

*Source:* Author's computation

**Table 10** Breusch-Pagan test for heteroskedasticity

Chi-square	0.57
P-value	0.315

*Source:* Author's computation

**Table 11** Results of two-way LSDV regression model

<i>Variable</i>	<i>Coefficients</i>	<i>Std. error</i>	<i>t-statistics</i>	<i>Sig.</i>	<i>Confidence-interval</i>
<i>Corporate characteristics</i>					
Age of a company	-0.006*	-0.007	-2.873	0.083	-0.0201 – 0.00772
Net fixed assets	-1.64E-05	0.000	-1.388	0.165	-0.0000395 – 0.00000676
Net sales	3.12e-05***	0.000	5.127	0.000	1.93e-05 – 4.31e-05
Market capitalisation	3.17e-05***	0.000	7.061	0.000	2.29e-05 – 4.05e-05
Debt-equity ratio	-0.119*	-0.071	-1.684	0.092	-0.257 – 0.0196
Promoter's holding	-0.004**	-0.010	-3.372	0.010	-0.0243 – 0.0165
Profit after tax	-0.000166**	0.000	-2.481	0.013	-0.000297 – -0.0000348
Earnings per share	0.001	-0.001	0.629	0.530	-0.00138 – 0.00269
Return on total assets	0.008	-0.040	0.199	0.843	-0.0701 – 0.0859
Return on equity	0.014	-0.017	0.805	0.421	-0.0196 – 0.0468

Notes: \*, \*\* and \*\*\* represent significance level at 10%, 5% and 1%, respectively.

*Source:* Author's computation

**Table 11** Results of two-way LSDV regression model (continued)

<i>Variable</i>	<i>Coefficients</i>	<i>Std. error</i>	<i>t-statistics</i>	<i>Sig.</i>	<i>Confidence-interval</i>
<i>Corporate characteristics</i>					
Current ratio	-1.277***	-0.308	-4.148	0.000	-1.88 – -0.673
Quick ratio	1.515***	-0.333	4.547	0.000	0.862 – 2.169
Type of auditor	0.417	-0.369	1.132	0.258	-0.306 – 1.14
Pages of an annual report	0.0425***	-0.003	15.960	0.000	0.0373 – 0.0477
Listing status of a company	0.520	-0.579	0.899	0.369	-0.615 – 1.656
<i>Industry dummy</i>					
Cement/construction	-4.746***	-0.941	-5.045	0.000	-6.591 – -2.901
Chemicals	-2.581***	-0.798	-3.233	0.001	-4.147 – -1.016
Conglomerates	-6.334***	-1.238	-5.117	0.000	-8.762 – -3.906
Cons durable	-1.796	-1.315	-1.366	0.172	-4.376 – 0.783
Cons non-durable	-0.259	-1.043	-0.248	0.804	-2.304 – 1.787
Engineering	-0.765	-0.845	-0.905	0.366	-2.422 – 0.893
Food and beverage	-4.018***	-1.002	-4.011	0.000	-5.982 – -2.053
Manufacturing	-4.788***	-0.900	-5.321	0.000	-6.553 – -3.024
Media	-6.893***	-1.029	-6.701	0.000	-8.91 – -4.876
Metals and mining	-1.235	-0.938	-1.317	0.188	-3.074 – 0.604
Oil and gas	-1.406	-1.122	-1.253	0.210	-3.607 – 0.795
Pharmaceuticals	-2.399***	-0.811	-2.959	0.003	-3.989 – -0.809
Retail/real estate	-3.780***	-1.050	-3.601	0.000	-5.838 – -1.722
Services	-4.470***	-0.894	-4.998	0.000	-6.225 – -2.716
Technology	-1.559*	-0.942	-1.655	0.098	-3.407 – 0.288
Telecom	-1.596	-1.186	-1.346	0.179	-3.922 – 0.73
Tobacco	-0.545	-1.645	-0.331	0.741	-3.771 – 2.682
Utilities	0.049	-1.096	0.045	0.964	-2.1 – 2.199
Miscellaneous	-4.157***	-0.976	-4.259	0.000	-6.071 – -2.243
<i>Year dummy</i>					
2013–2014	1.927***	-0.615	3.133	0.002	0.721 – 3.134
2014–2015	3.225***	-0.625	5.160	0.000	2.000 – 4.451
2015–2016	4.843***	-0.629	7.702	0.000	3.610 – 6.076
2016–2017	4.408***	-0.676	6.522	0.000	3.083 – 5.733
2017–2018	6.744***	-0.673	10.020	0.000	5.423 – 8.064
2018–2019	8.616***	-0.705	12.210	0.000	7.232 – 9.999
2019–2020	10.87***	-0.713	15.240	0.000	9.467 – 12.26

Notes: \*, \*\* and \*\*\* represent significance level at 10%, 5% and 1%, respectively.

Source: Author's computation

**Table 11** Results of two-way LSDV regression model (continued)

<i>Variable</i>	<i>Coefficients</i>	<i>Std. error</i>	<i>t-statistics</i>	<i>Sig.</i>	<i>Confidence-interval</i>
Constant	28.99***	-1.119	25.920	0.000	26.80 – 31.19
Observations	2,136				
Adjusted R-square	0.525				

Notes: \*, \*\* and \*\*\* represent significance level at 10%, 5% and 1%, respectively.

*Source:* Author's computation

#### 4.2.1 *Company age*

Age has a significant (p-value = 0.083) but negative impact on HR disclosures (Hypothesis 1). It shows that younger firms are disclosing more information in their annual reports. Because, it is imperative for younger firms to disclose more information for evaluation by the interested parties. Younger firms also disclose greater data in their annual reports for the purpose of reducing the risk of investors (Haniffa and Cooke, 2002). The findings are contradictory to Garg (1992), Uyar et al. (2013) and Garg and Kumar (2019b).

#### 4.2.2 *Company size*

Two proxies (net sales and market capitalisation) have significant (p-values = 0.000 and 0.000 respectively) and positive effects on HRDI. Net fixed assets has an insignificant (p-value = 0.165) and negative impact on HR disclosures (Hypothesis 2). So, it can be said that, large-sized companies may be more concerned regarding additional disclosures related to HC (Barako et al., 2006). Again, to get additional benefits, large companies disclose more information voluntarily in their annual reports. The findings are in line with Garg and Gakhar (2010) and Garg and Kumar (2019b) [market capitalisation] and contradictory with Garg (1992) [net sales].

#### 4.2.3 *Leverage*

The debt-equity ratio has a significant (p-value = 0.092) but negative impact on HR disclosures (Hypothesis 3). Khliki and Bouri (2010) found that low-leverage firms have more voluntary disclosure to make the market aware of their financial structure and to avoid a negative impression regarding their solvency position (Khliki and Bouri, 2010). The outcomes are consistent with Abdi et al. (2018) and contradictory with Garg and Divya (2009), Shehata et al. (2014) and Garg and Kumar (2019b).

#### 4.2.4 *Ownership concentration*

The promoter's holding has a significant (p-value = 0.010) and negative impact on HR disclosures (Hypothesis 4). Therefore, it can be said that, the concentrated ownership in a company indicates the low level of disclosure in annual reports of the company due to the fact that major shareholders get the information through their private meetings. The findings are in line with Aggarwal (2021a) and contradictory with Garg and Gakhar (2009, 2010).

#### *4.2.5 Profitability*

Only one proxy that is profit after tax has a significant (p-value = 0.013) but negative effect on HRDI. The rest of the proxies (earnings per share, return on total assets, and return on equity) have insignificant (p-values = 0.530, 0.843 and 0.421 respectively) but positive effects on HR disclosures (Hypothesis 5). Profitable companies disclose a lesser amount of data voluntarily in their annual reports. Profitable companies want to hide the information related to their intellectual assets, because, these assets contribute to the success of the company. The findings are in line with Garg (1992) [profit after tax] and Garg and Gakhar (2009, 2019b) [return on equity].

#### *4.2.6 Liquidity*

Both the proxies (current and quick ratio) have significant (p-values = 0.000 and 0.000 respectively) effects on HRDI. Quick ratio has a positive and current ratio has a negative impact on HRDI (Hypothesis 6). High liquid firms disclose a greater amount of data voluntarily for the purpose of avoiding negative impressions regarding their company. So, firms have an incentive to disclose more and more information in their annual reports to get rid of the anxiety of stakeholders. The outcomes are in line with Shehata et al. (2014) [current ratio] and contradictory with Garg and Kumar (2019b) [current ratio].

#### *4.2.7 Type of auditor*

The type of auditor has an insignificant (p-value = 0.258) but positive impact on HR disclosures (Hypothesis 7). The study by Xiao et al. (2004) revealed that international auditing firms help to disseminate innovative practices such as HR reporting. Because they have a good reputation in the market and compel clients to provide more and more disclosure to justify their market position. The outcomes are contradictory to Shehata et al. (2014).

#### *4.2.8 Total number of pages of an annual report*

The total number of pages of an annual report has a significant (p-value = 0.083) and positive impact on HR disclosures (Hypothesis 8). So, it can be concluded that pages of an annual report show to what extent information is disclosed by the companies. As the number of pages of an annual report increases, the amount of information disclosed by the companies will also increase. The outcomes are in line with Ali and Ahmed (2019) and Aggarwal (2021a).

#### *4.2.9 Listing abroad*

Listing abroad has an insignificant (p-value = 0.369) but positive impact on HR disclosures (Hypothesis 9). Due to the prevailing problem of information asymmetry between management and shareholders, those companies which are listed on international stock exchanges are disclosing greater amounts of information in their annual reports. Because of language barriers and scattered throughout the world (Haniffa and Cooke, 2002). The findings are contradictory to Kaur et al. (2016).

Table 12 entails the results of hypotheses.

**Table 12** Results of hypotheses

<i>Hypotheses</i>	<i>Results</i>
H <sub>1</sub> : Company age → HRDI	Accepted
H <sub>2</sub> : Company size → HRDI	Partly accepted
H <sub>3</sub> : Leverage → HRDI	Accepted
H <sub>4</sub> : Ownership concentration → HRDI	Accepted
H <sub>5</sub> : Profitability → HRDI	Partly accepted
H <sub>6</sub> : Liquidity → HRDI	Accepted
H <sub>7</sub> : Type of auditor → HRDI	Rejected
H <sub>8</sub> : Total number of pages of an annual report → HRDI	Accepted
H <sub>9</sub> : Listing abroad → HRDI	Rejected

*Source:* Author's computation

### 4.3 Discussion

The significance of HR disclosure is growing worldwide, and the same appears to be the case in India. The present study has given an idea of how emergent countries, especially India, perform HR disclosure generally and in the Indian corporate sector in particular. More specifically, it examined the association between corporate characteristics such as company age, company size, leverage, ownership concentration, profitability, liquidity, type of auditor, total number of pages of an annual report, listing abroad, and HR disclosure of the selected Indian listed companies. The study shows that Indian listed companies disclose HR-related information in their annual reports. And, the level of HR disclosure is on the low to moderate side. Further, the results of two-way LSDV regression model depicted that the level of HR disclosure in the Indian listed company's annual reports is explained the company age (Hossain and Hammami, 2009; Fontana and Macagnan, 2013; Aggarwal, 2021a), leverage (Adil et al., 2018), ownership concentration (Aggarwal, 2021a), liquidity [Shehata et al., 2014 (current ratio)], total number of pages of an annual report (Ali and Ahmed, 2019; Aggarwal, 2021a) and company size [Garg and Gakhar, 2010; Garg and Kumar, 2019b (market capitalisation)], profitability [Garg, 1992 (profit after tax)]; Garg and Gakhar, 2009; Garg and Kumar, 2019b (return on equity)] are partly effect the HR disclosure practices of the sample companies.

The present study has made an important contribution to the HR disclosure literature. The study also has implications for regulators. Emerging economies, such as Indian subcontinent countries, are likely to require more effective and stronger HR reporting mechanisms than their westernised counterparts if they are to become equal, full, and active participants in the global financial marketplace. Effective HR reporting as well as the institutional and quality of regulatory governance have an impact on the firm's performance. Furthermore, regularity authorities in India should consider the unique features of religion and other social heterogeneity conditions when introducing control mechanisms. The managers of Indian corporates should be interested in these results because the awareness of HR reporting on a firm level and other country level factors will affect the pricing of securities and the composition of international portfolios, which would facilitate investors' decision-making process.

#### 4.4 Robustness

To get a more efficient and robust model, the present study has further regressed HRDI with only selected variables that are found to be most significant in the two-way LSDV regression model analysis (Kaur et al., 2016). The regression model used to understand variations in HRDI of the companies is stated as under:

$$HRDI_{it} = \alpha + \beta_1 AGE_{it} + \beta_2 NS_{it} + \beta_3 MC_{it} + \beta_4 DER_{it} + \beta_5 PH_{it} + \beta_6 PAT_{it} + \beta_7 CR_{it} + \beta_8 QR_{it} + \beta_9 PAR_{it} + \beta_{10} SECTOR_{it} + \beta_{11} YEAR_{it} + \varepsilon_{it}$$

All selected variables such as age, net sales, market capitalisation, debt-equity ratio, promoter's holding, profit after tax, current ratio, quick ratio, and pages of an annual report influence the HR disclosure of the selected Indian listed companies. Further, the value of adjusted R-square has been improved from 0.525 to 0.537 in the reduced model, implying the remaining variables do not have much bearing on HRDI and they do not significantly impact it.

**Table 13** Results of two-way LSDV regression model, robust

<i>Variable</i>	<i>Coefficients</i>	<i>Std. error</i>	<i>t-statistics</i>	<i>Sig.</i>	<i>Confidence-interval</i>
<i>Corporate characteristics</i>					
Age of a company	-0.005**	-0.007	-0.775	0.038	-0.0189 – 0.0082
Net sales	2.74e-05***	0.000	4.933	0.000	1.65e-05 – 3.82e-05
Market capitalisation	3.10e-05***	0.000	7.495	0.000	2.29e-05 – 3.91e-05
Debt-equity ratio	-0.173***	-0.051	-3.391	0.001	-0.273 – -0.0728
Promoter's holding	-0.009*	-0.010	-0.891	0.073	-0.0278 – 0.0104
Profit after tax	-0.000142**	0.000	-2.160	0.031	-0.000271 – -0.0000131
Current ratio	-1.236***	-0.303	-4.086	0.000	-1.83 – -0.643
Quick ratio	1.492***	-0.332	4.490	0.000	0.840 – 2.143
Pages of an annual report	0.0418***	-0.003	16.030	0.000	0.0367 – 0.0470
<i>Sector dummy</i>					
Cement/construction	-5.027***	-0.926	-5.428	0.000	-6.844 – -3.211
Chemicals	-2.693***	-0.796	-3.383	0.001	-4.254 – -1.132
Conglomerates	-6.484***	-1.227	-5.287	0.000	-8.889 – -4.079
Cons durable	-2.045	-1.311	-1.561	0.119	-4.615 – 0.525
Cons non-durable	-0.066	-1.026	-0.065	0.948	-2.078 – 1.945
Engineering	-0.898	-0.841	-1.067	0.286	-2.548 – 0.752
Food and beverage	-4.279***	-0.996	-4.297	0.000	-6.231 – -2.326
Manufacturing	-4.906***	-0.897	-5.468	0.000	-6.666 – -3.147

Notes: \*, \*\* and \*\*\* represent significance level at 10%, 5% and 1%, respectively.

Source: Author's computation

**Table 13** Results of two-way LSDV regression model, robust

<i>Variable</i>	<i>Coefficients</i>	<i>Std. error</i>	<i>t-statistics</i>	<i>Sig.</i>	<i>Confidence-interval</i>
<i>Sector dummy</i>					
Media	-6.986***	-1.025	-6.817	0.000	-8.996 – -4.976
Metals and mining	-1.620*	-0.911	-1.779	0.075	-3.406 – 0.166
Oil and gas	-1.854*	-1.107	-1.675	0.094	-4.024 – 0.317
Pharmaceuticals	-2.601***	-0.806	-3.228	0.001	-4.182 – -1.021
Retail/real estate	-4.127***	-1.036	-3.985	0.000	-6.158 – -2.096
Services	-4.681***	-0.884	-5.299	0.000	-6.414 – -2.949
Technology	-1.488	-0.936	-1.590	0.112	-3.323 – 0.347
Telecom	-2.087*	-1.159	-1.800	0.072	-4.36 – 0.186
Tobacco	-0.412	-1.641	-0.251	0.802	-3.63 – 2.807
Utilities	-0.533	-1.041	-0.512	0.609	-2.574 – 1.508
Miscellaneous	-4.271***	-0.969	-4.407	0.000	-6.172 – -2.37
<i>Year dummy</i>					
2013–2014	1.923***	-0.615	3.125	0.002	0.716 – 3.129
2014–2015	3.246***	-0.624	5.200	0.000	2.022 – 4.470
2015–2016	4.844***	-0.628	7.709	0.000	3.611 – 6.076
2016–2017	4.412***	-0.673	6.552	0.000	3.091 – 5.732
2017–2018	6.685***	-0.669	9.998	0.000	5.374 – 7.996
2018–2019	8.586***	-0.698	12.300	0.000	7.217 – 9.955
2019–2020	10.92***	-0.701	15.590	0.000	9.550 – 12.30
Constant	29.92***	-1.051	28.460	0.000	27.86 – 31.99
Observations	2,136				
Adjusted R-square	0.537				

Notes: \*, \*\* and \*\*\* represent significance level at 10%, 5% and 1%, respectively.

Source: Author's computation

## 5 Conclusions and implications of the study

The purpose of the present study is to investigate the association between corporate characteristics such as company age, company size, leverage, ownership concentration, profitability, liquidity, type of auditor, total number of pages of an annual report, listing abroad, and voluntary HR disclosure practices of the Indian corporate sector. The present study has been conducted on 267 companies listed on the BSE-500 Index for the time period of eight years (F.Y. 2012–2013 to 2019–2020). The data for the study has been collected from the respective annual reports of the sample companies and Centre for Monitoring of Indian Economy (CMIE) ProwessIQ Database. For analysis purposes, descriptive statistics, Pearson's correlation matrix, two-way LSDV regression model have been used. The outcomes of descriptive statistics show that the mean percentage of HRDI is 40.48. It ranges from low to moderate side. And, the minimum value of HRDI is 11.36% and the maximum is 70.46% with a standard deviation of 10.30%. The voluntary disclosure of HR information to stakeholders is an emerging trend in disclosure practices

from the time when stakeholders demand greater transparency regarding the activities of the companies. Additionally, for the better functioning of the capital market, the good disclosure practices are imperative (Aggarwal, 2021a). The trend of HRDI is also on the continuously increasing side. It means selected Indian listed companies are increasing their HR disclosures with the passage of time. Further, the outcomes of Two-way LSDV regression model show that there is significant positive effect of net sales, market capitalisation, quick ratio, annual report's pages and a significant negative effect of age, debt-equity ratio, promoter's holding, profit after tax, and current ratio on HR disclosures. And, there is insignificant positive of earnings per share, return on total assets, return on equity, type of auditor, listing abroad, and an insignificant negative of net fixed assets on HRDI. Overall, the HR disclosure practices of the selected Indian listed companies are fairly good.

There are several implications of the present study. This study helps to understand the factors which are influencing the HR disclosure practices of the Indian listed firms. The hypothesis such as total number of pages of an annual report has a significant and positive effect on HRDI. So, on the basis of the annual report's pages, stakeholders know which firm is more transparent for their decision purposes. This study also helps The ICAI and other regulatory bodies to take the steps on the basis of the HRDI constructed in the study to make the HR disclosure practices mandatory in nature in India. Furthermore, the findings of the study revealed that Indian listed companies disclose low to moderate levels of HR information in their annual reports. It shows that managers are considering HR disclosure as a tool to achieve a competitive advantage and also consider it a significant instrument to demonstrate the company's commitments towards their stakeholders. Additionally, it is imperative for the corporates to increase their HR disclosure because, HR disclosure influences the goodwill of a company and the perception of its stakeholders towards it. By disclosing more HR information, they are showing that they operate their business in an ethical manner, and the greater transparency also helps to attract national and international investors for the capital and invite the knowledgeable and capable employees in the organisation to achieve the objectives of the business.

Although, Indian companies disclose the HR information in their annual reports for the stakeholders that are connected directly or indirectly to their business. But, some companies are reluctant to disclose additional information such as HR related information to safeguard the interest of the stakeholders. In order to provide the adequate HR disclosure by the Indian corporates, it is hoped that Indian regulatory bodies (ICAI) will encourage the companies to consider the HR disclosure as an important part of their annual report. Additionally, Indian regulatory bodies should provide a reward to companies that are actively involved in the HR related disclosure to encourage them to continue the disclosure in the long-run also.

It should be necessary for investors to understand the impact of various company characteristics on the HR disclosure of Indian listed companies. Furthermore, the different environments of different countries affect the HR disclosure practices of the companies. This will be revealed in the investment decisions of the stakeholders. As a result, they make their investment decisions more wisely. Generally, it is seen that investors invest in a particular company for a short-term gain and believe in the bird in hand approach rather than owners who invest their funds for long-term gain. Because, stockholders do not exercise their ownership rights, such as approving the compensation of the directors, attending AGM meetings, and keeping themselves informed of the

affairs of the country, level factors, and performance of the firm. Additionally, when a multinational company enters an emerging country and invests in the domestic firm, they should focus on the core business. So, they are able to transfer their knowledge, technology, thus improving the operational performance of a company.

Emerging economies, such as Indian subcontinent countries, are likely to require more effective and stronger HR reporting mechanisms than their westernised counterparts if they are to become equal, full, and active participants in the global financial marketplace. Effective HR reporting as well as the institutional and quality of regulatory governance have an impact on the firm's performance. Furthermore, regulatory authorities in India should consider the unique features of religion and other social heterogeneity conditions when introducing control mechanisms. The managers of Indian corporates should be interested in these results because the awareness of HR reporting on a firm level and other country-level factors will affect the pricing of securities and the composition of international portfolios, which would facilitate investors' decision-making process.

There are some limitations to the study. The present study has used only one medium of HR disclosure, i.e., annual reports. Other forms of media, such as press releases, websites, and media reports, could be used as well. The present study used an unweighted index to indicate the presence or absence of a particular item. Further study would use a weighted index for scoring of an item. The sample size for the present study has been taken as eight years. Further study could enhance the sample size to improve the efficiency of the model.

There are some future research directions for the study. Due to a lack of standardised reporting, the HR disclosure practices of different companies and industries are incomparable. Two problems are arising, the first being, should HR disclosure be obligatory or willful? and the second, how should the disclosure be standardised. Regarding standardisation, either the users (companies) take proactive action regarding the formulation of clear guidelines on this issue, or they may be forced by the accounting bodies to make their own policy for such disclosures, and the companies will have to follow them. Until now, none of the bodies in India have taken any strong outlook, except for the Governments of Sweden, Denmark, and the UK. Thus, the onus is on the researchers to evaluate the key segments of HR disclosure from the stakeholders' point of view and develop some standard guidelines. Therefore, a survey of various stakeholders should find the appropriate response to these problems.

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## Annexure

Table A1 Description of the human resource disclosure items

<i>Human resource disclosure items</i>		<i>Research study</i>
<i>S. no.</i>	<i>(a) Disclosure of human resource policy and vision component</i>	
1	Policy of recruitment and selection	Ax and Marton (2008), Hamzah et al. (2013), Absar et al. (2014), Dey and Sarkar (2015), Mohammad (2015), Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
2	Equal opportunity policy and non-discrimination	Dey and Sarkar (2015), Puri et al. (2016), Hussain and Das (2018), Zubek (2018) and Verma and Kirti (2019)
3	Policy towards woman empowerment	Hussain and Das (2018) and Verma and Kirti (2019)
4	Policy of training	Christopher and Kong (1998), Murthy and Abeysekera (2007), Huang et al. (2008), Alam and Deb (2010), Whiting and Woodcock (2011), Fontana and Macagnan (2013), Vazakidis et al. (2013), Absar et al. (2014), Sharma and Kumar (2014), Dey and Sarkar (2015), Mohammad (2015), Puri et al. (2016), Hussain and Das (2018), Zubek (2018) and Verma and Kirti (2019)
5	Policy regarding child labour/forced labour	Hussain and Das (2018) and Verma and Kirti (2019)
6	Policy for combating sexual harassment	Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
7	Whistle Blower policy/vigil mechanism	Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
8	Policy of remuneration for directors, key managerial persons and other employee	Hussain and Das (2018) and Verma and Kirti (2019)
9	Employee retention policy	Absar et al. (2014), Dey and Sarkar (2015), and Verma and Kirti (2019)
10	Policy of reward	Hussain and Das (2018) and Verma and Kirti (2019)
11	Policy of bonus scheme	Hussain and Das (2018) and Verma and Kirti (2019)
12	Compliance with employment and labour laws etc.	Puri et al. (2016) and Verma and Kirti (2019)
	<i>Total (a)</i>	
<i>(b) disclosure of general information about human resource component</i>		
1	General and vocational education/qualification	Murthy and Abeysekera (2007), Absar et al. (2014), Dey and Sarkar (2015), Mohammad (2015), Hussain and Das (2018) and Verma and Kirti (2019)
2	Work-related knowledge and experience	Murthy and Abeysekera (2007), Hussain and Das (2018) and Verma and Kirti (2019)
3	Education Index	Khadijeh (2015) and Verma and Kirti (2019)
4	Diversity of employees	Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)

*Source:* Compiled from literature review

**Table A1** Description of the human resource disclosure items (continued)

<i>Human resource disclosure items</i>		<i>Research study</i>
<i>(b) Disclosure of general information about human resource component</i>		
5	Total number of employees	Gupta (1992), Pettersson and Rylme (2003), Abeysekera and Guthrie (2004), Murlthy and Abeysekera (2007), Alam and Deb (2010), Whiting and Woodcock (2011), Joshi and Mahei (2012), Fontana and Macagnan (2013), Hamzah et al. (2013), Vazakidis et al. (2013), Absar et al. (2014), Sharma and Kumar (2014), Dey and Sarkar (2015), Kansal and Joshi (2015), Khadijeh (2015), Vohra (2015), Barot (2017), Shukuhian and Ashraf (2017), Hussain and Das (2018) and Verma and Kirti (2019)
6	Geographical distribution of employees	Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
7	Category of employees	Joshi and Mahei (2012) and Verma and Kirti (2019)
8	Average age of employees	Gupta (1992), Joshi and Mahei (2012), Khadijeh (2015), Kaur et al. (2016) and Verma and Kirti (2019)
9	Total no. of woman employees	Kansal and Joshi (2015), Hussain and Das (2018) and Verma and Kirti (2019)
10	Total no. of employees with disabilities	Hussain and Das (2018) and Verma and Kirti (2019)
11	Total number or rate of employee turnover	Pettersson and Rylme (2003), Ax and Marton (2008), Fontana and Macagnan (2013), Hamzah et al. (2013), Vazakidis et al. (2013), Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
12	Employee induction and familiarisation program	Hussain and Das (2018) and Verma and Kirti (2019)
<i>Total (b)</i>		
<i>(c) Disclosure of financial information relating to human resource component</i>		
1	Amount spent on recruitment and selection	Hamzah et al. (2013), Hussain and Das (2018) and Verma and Kirti (2019)
2	Amount spent in training	Hamzah et al. (2013), Khadijeh (2015), Hussain and Das (2018) and Verma and Kirti (2019)
3	Cost of safety measures	Hussain and Das (2018) and Verma and Kirti (2019)
4	Profit sharing and employee share option plans (ESOPs) or employee purchase share schemes	Kansal and Joshi (2015), Hussain and Das (2018) and Verma and Kirti (2019)
5	Loans and advances to HR	Kansal and Joshi (2015), Hussain and Das (2018) and Verma and Kirti (2019)
6	Sales/turnover per employee	Kansal and Joshi (2015), Khadijeh (2015), Shukuhian and Ashraf (2017) and Verma and Kirti (2019)
7	Workers and staff welfare expenses	Hussain and Das (2018) and Verma and Kirti (2019)
8	Employee cost/employee benefits expense as a % of revenue from operations	Verma and Kirti (2019)
9	Employee welfare fund	Kansal and Joshi (2015) and Verma and Kirti (2019)
10	Employees/workers compensation fund	Hussain and Das (2018) and Verma and Kirti (2019)

Source: Compiled from literature review

**Table A1** Description of the human resource disclosure items (continued)

<i>Human resource disclosure items</i>		<i>Research study</i>
<i>(c) Disclosure of financial information relating to human resource component</i>		
11	Compensated absences and leave encashment	Puri et al. (2016) and Verma and Kirti (2019)
12	Termination benefits	Puri et al. (2016) and Verma and Kirti (2019)
13	Provision for or contribution to employee or worker retirement benefit like pension provision, provident fund, superannuation fund, gratuity fund etc.	Alam and Deb (2010), Fontana and Macagnan (2013), Sharma and Kumar (2014), Kansal and Joshi (2015), Puri et al. (2016), Hussain and Das (2018), Zubek (2018) and Verma and Kirti (2019)
14	Redundancy and retrenchment information	Hussain and Das (2018) and Verma and Kirti (2019)
15	Medical benefits	Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
<i>Total (c)</i>		
<i>(d) Disclosure relating to importance of human resource to the organisation component</i>		
1	Recognising human resource an important resource of an organisation	Absar et al. (2014), Dey and Sarkar (2015), Hussain and Das (2018) and Verma and Kirti (2019)
2	Total amount of employee value added in value added statement	Hussain and Das (2018) and Verma and Kirti (2019)
3	Value added per employee	Khadijeh (2015), Shukuhian and Ashraf (2017) and Verma and Kirti (2019)
4	Human resource valuation	Verma and Kirti (2019)
5	Separate HRA Statement showing total value of human resource	Alam and Deb (2010), Sharma and Kumar (2014), Dey and Sarkar (2015), Khadijeh (2015), Hussain and Das (2018) and Verma and Kirti (2019)
6	Valuation model used	Gupta (1992), Joshi and Mahei (2012), Khadijeh (2015), Vohra (2015), Shukuhian and Ashraf (2017) and Verma and Kirti (2019)
7	Discount rate applied	Gupta (1992), Joshi and Mahei (2012), Khadijeh (2015), Vohra (2015), Shukuhian and Ashraf (2017) and Verma and Kirti (2019)
8	Age wise distribution of employees	Gupta (1992), Joshi and Mahei (2012), Khadijeh (2015), Vohra (2015), Shukuhian and Ashraf (2017) and Verma and Kirti (2019)
9	Employee cost/HR value (%)	Vohra (2015), Barot (2017) and Verma and Kirti (2019)
10	HRV to total resources	Vohra (2015) and Verma and Kirti (2019)
11	PBT to human resource value	Verma and Kirti (2019)
12	Establishing and promoting the corporation's employee brand	Khadijeh (2015) and Verma and Kirti (2019)
<i>Total (d)</i>		

*Source:* Compiled from literature review

**Table A1** Description of the human resource disclosure items (continued)

<i>Human resource disclosure items</i>		<i>Research study</i>
<i>S. no.</i>	<i>(e) Disclosure of human resource development component</i>	
1	Employees career growth/development and planning	Gupta (1992), Murthy and Abeysekera (2007), Ax and Marton (2008), Hamzah et al. (2013), Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
2	Management succession plan	Alam and Deb (2010), Sharma and Kumar (2014), Mohammad (2015), Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
3	Training and development programmes for existing/new employees	Christopher and Kong (1998), Murthy and Abeysekera (2007), Huang et al. (2008), Alam and Deb (2010), Whiting and Woodcock (2011), Fontana and Macagnan (2013), Vazakidis et al. (2013), Absar et al. (2014), Sharma and Kumar (2014), Dey and Sarkar (2015), Mohammad (2015), Puri et al. (2016), Hussain and Das (2018), Zubek (2018) and Verma and Kirti (2019)
4	Percentage of employee (category-wise) given safety or skill up-gradation training	Hussain and Das (2018) and Verma and Kirti (2019)
5	Training to employees through in-house programme	Kansal and Joshi (2015) and Verma and Kirti (2019)
6	Establishment of trainee centres	Kansal and Joshi (2015) and Verma and Kirti (2019)
7	Job rotation opportunities	Ax and Marton (2008) and Verma and Kirti (2019)
8	Performance recognition	Sharma and Kumar (2014), Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
9	HR awards/rewards for good performance	Abeysekera and Guthrie (2004), Huang et al. (2008), Sharma and Kumar (2014), Puri et al. (2016), Hussain and Das (2018) and Verma and Kirti (2019)
10	Entrepreneurial spirit and innovativeness	Abeysekera and Guthrie (2004), Murthy and Abeysekera (2007), Huang et al. (2008), Hamzah et al. (2013), Hussain and Das (2018) and Verma and Kirti (2019)
<i>Total (e)</i>		
<i>(f) Disclosure of employee's health and safety component</i>		
1	Promoting employee Health and safety practices at work place	Ax and Marton (2008) Hamzah et al. (2013), Absar et al. (2014), Alvarez (2015), Dey and Sarkar (2015), Kansal and Joshi (2015), Puri et al. (2016), Zubek (2018) and Verma and Kirti (2019)
2	Information to employees about training regarding health and safety issues	Hussain and Das (2018) and Verma and Kirti (2019)
3	Providing a low cost health care for employees	Kansal and Joshi (2015) and Verma and Kirti (2019)
4	Establishing a safety department/committee	Kansal and Joshi (2015) and Verma and Kirti (2019)
5	Compliance with health and safety standards and regulations	Kansal and Joshi (2015) and Verma and Kirti (2019)
6	Receiving a safety award	Kansal and Joshi (2015) and Verma and Kirti (2019)
<i>Total (f)</i>		

Source: Compiled from literature review

**Table A1** Description of the human resource disclosure items (continued)

<i>Human resource disclosure items</i>		<i>Research study</i>
<i>S. no.</i>	<i>(g) Disclosure of human resource relationship and culture component</i>	
1	Fair work practices	Puri et al. (2016) and Verma and Kirti (2019)
2	Respect and promotes human rights	Puri et al. (2016) and Verma and Kirti (2019)
3	Employee motivation	Mohammad (2015), Hussain and Das (2018) and Verma and Kirti (2019)
4	Management-employee relationship	Hamzah et al. (2013), Absar et al. (2014), Dey and Sarkar (2015), Kansal and Joshi (2015), Hussain and Das (2018) and Verma and Kirti (2019)
5	Employee thanks/appreciation	Murthy and Abyeckera (2007), Hamzah et al. (2013) and Verma and Kirti (2019)
6	Union activity/workers' unions/association	Murthy and Abyeckera (2007) Absar et al. (2014) Hussain and Das (2018) and Verma and Kirti (2019)
7	Collective bargaining agreements/ enterprise bargaining	Hussain and Das (2018) and Verma and Kirti (2019)
8	No. of cases filed or pending of child labour/forced labour	Hussain and Das (2018) and Verma and Kirti (2019)
9	No. of cases filed or pending of Sexual Harassment	Verma and Kirti (2019)
10	Punishment to employee	Hussain and Das (2018) and Verma and Kirti (2019)
11	Employee involvement in the community	Murthy and Abyeckera (2007), Hamzah et al. (2013) and Verma and Kirti (2019)
	<i>Total (g)</i>	
<i>(h) Disclosure of different benefits/assistance given to employees component</i>		
1	Staff accommodation	Kansal and Joshi (2015) and Verma and Kirti (2019)
2	Employee recreation and entertainment relating to cultural function, annual picnic/travelling, sports activities, etc.	Kansal and Joshi (2015), Hussain and Das (2018) and Verma and Kirti (2019)
3	Subsidised canteen	Kansal and Joshi (2015) and Verma and Kirti (2019)
4	Subsidised transport	Kansal and Joshi (2015) Verma and Kirti (2019)
5	Information about support for day care, maternity and paternity leave	Kansal and Joshi (2015), Hussain and Das (2018) and Verma and Kirti (2019)
6	Holiday benefits	Kansal and Joshi (2015), Hussain and Das (2018) and Verma and Kirti (2019)
	<i>Total (h)</i>	
<i>(i) Disclosure of employee's engagement and empowerment component</i>		
1	Employee engagement practices	Puri et al. (2016) and Verma and Kirti (2019)
2	Employee engagement/satisfaction survey	Epstein and Wisner (2001), Puri et al. (2016) and Verma and Kirti (2019)
3	Employee empowerment	Puri et al. (2016) and Verma and Kirti (2019)
4	Feedback from employees	Alvarez (2015), Kansal and Joshi (2015) and Verma and Kirti (2019)
	<i>Total (i)</i>	
		<i>Human resource disclosure index (HRDI) = a + b + c + d + e + f + g + h + i</i>

Source: Compiled from literature review