Corporate sustainability disclosure's importance in China: financial analysts' perception

Jhunru Zhang, Hadrian Geri Djajadikerta and Terri Trireksani

Abstract

Purpose – *Corporate sustainability in China has become a subject of increasing international concern. Corporate sustainability disclosure (CSD) is considered a useful tool to facilitate the empowerment and acknowledgement of stakeholders in the quest for sustainability. However, the degree of cultural and political influences for being sustainably orientated can be significantly different between countries. This study aims to examine the perception of financial analysts, as CSD report users, in China about the level of importance of various indicators of corporate sustainability described in the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines.*

Design/methodology/approach – *A set of questionnaires was developed based on GRI G4 guidelines to measure the perception of financial analysts in China on the level of importance of each sustainability indicator described in the GRI G4. A five-point Likert scale was used to measure the report users' perceptions of each of the indicators.*

Findings – *The findings of this study increase our understanding of how Chinese CSD report users perceive corporate sustainability differently from the GRI guidelines. The main results show that the environmental aspect of sustainability was seen to be important in China, followed by the social and economic aspects. Indicator-wise, "water", "effluents and waste", "emissions", "compliance" and "energy" were perceived as vital in the environmental category, while "customer health and safety", "customer privacy" and "compliance" were considered significant in the social category.*

Originality/value – *This study addresses the need for differing corporate sustainability guidelines for different nations and cultures, specifically within the Chinese context. It also contributes to the corporate sustainability literature by adding to our understanding of how financial analysts in China, as CSD report users, perceive aspects of sustainability.*

Keywords *China, Financial analysts, Sustainability, GRI, Corporate sustainability disclosure, Users' perception*

Paper type *Research paper*

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1. Introduction

While the economic development of China over the preceding decades has led to significant improvement in its national prosperity, it has also generated a considerable degree of concern about corporate sustainability. Corporate sustainability disclosures (CSD) are generally considered to be the most effective and efficient way for companies to facilitate the empowerment and acknowledgement of company stakeholders' quest for sustainability and to inform the society about their sustainability performance (Qian *et al.*, 2015). Because of the lack of comprehensive and effectively enforced CSD regulations, the growth of corporate sustainability practices in China extensively depends on voluntary disclosure practice (Zhang *et al.*, 2015). However, as companies have experienced pressure from stakeholders, many companies have

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recognised the importance of issuing corporate sustainability reports because of the severe environmental deterioration and significant social issues raised in tandem with the boost of the Chinese economy.

For example, the serious milk powder corporate scandals in mainland China have raised extreme concern regarding companies' social responsibility: in 2008, Sanlu Group added melamine into the formula of milk powder to boost the protein content. Infants who consumed this product were highly likely to develop kidney stones or even an illness that was fatal if seriously affected. Sanlu Group was one of the largest milk powder manufacturers and sellers in China for over 15 continuous years, and it was once the biggest taxpayer. The revelation of the scandal caused the failure and bankruptcy of Sanlu, and, more importantly, it destroyed people's confidence in the Chinese milk powder supply industry. The 300,000 victims triggered considerable social pressure, which consequently affected thousands of workers, causing them to lose their jobs (Nornha *et al.*, 2013). Society, as a result, had to bear this significant social cost.

As such, the unique context in China provides a significant setting to examine CSD perception from its users' end. The local Chinese community, in general, has relatively high societal acceptance towards CSD information. Under the Confucius perspective, maximising shareholders' value and financial profit should not be the only goal of making corporations sustainable (Liu and Anbumozhi, 2009). Xia *et al.* (2009) emphasised the idea of righteousness before profits and stated that the fundamental value of ethics should reflect the business values. Hence, concerns and actions should always be closely related to all of the customers' , employees' and shareholders' values, and sustainability information is in favour for the general community as Confucian culture has been embedded in the basis of modern corporate sustainability in Chinese companies (Zhu and Yao, 2008).

In addition, Chinese enterprises are increasingly pressured by numerous stakeholders and by the general public to engage in social and environmental sustainability. In particular, in China, the Shenzhen Stock Exchange (SZSE) and Shanghai Stock Exchange (SSE) have made a great effort to promote corporate governance initiatives in past years. Ho (2013) indicates that the rapid growth of these markets is significantly influenced by two essential pieces of legislation: the Company Law and the Securities Law, enacted in 1993 and 1998, respectively. The Company Law provides the legal requirement for the transformation of state-owned enterprises (SOEs) into private or listed enterprises. To conform to the two legislations, the stock exchanges in China have implemented guidelines for their listed corporations to take responsibility for their stakeholders. The SZSE issued the Corporate Social Responsibility (CSR) Guidelines for Listed Companies in 2006 and the SSE issued similar guidelines in 2008, and both stock exchanges begin to mandate CSR reporting in a subset of listed companies. However, the guidelines provide limited assistance to companies preparing for their disclosures. The lack of a prescribed reporting framework is, therefore, ambiguous and has led to large variations in reporting practice, such that users find the reports challenging to compare and use for decision-making (Zhang *et al.*, 2015). In addition, sustainability information can be used for window-addressing and causes heterogeneous expectation among investors. The subsequent noise increases stock price volatility and decreases firm values (Orlitzky, 2013). Given the local community in China is in favour for CSD information, particularly under the sustainability promotional strategy by the state government, CSD reporting companies are likely to be inadequately guided by the existent guidelines and generating information that increases the dispersion of the market expectation. However, limited research has examined what is expected from primary stakeholders and how the reporting companies should address such expectations. As such, in this study, we focus on financial analysts' perceived importance of CSD in the unique institutional setting of China.

2. Literature review and hypotheses development

2.1 The context of sustainability reporting in China

Sustainability reporting, which is also referred to as CSR reporting, focused solely on social issues at its very beginning stage in the early 1960s (Lin, 2010). Elkington (1994) suggested that there are six stages of CSD development, which include ignorance, awakening, denial, guilt reduction, displacement behaviour and tokenism, conversion and finally, integration. This was further extended and re-summarised by Dunphy *et al.* (2003). They developed more sophisticated concepts for each of the six stages of CSD development, which include rejection, non-responsiveness, compliance, efficiency, strategic proactivity and the sustaining corporation.

After the emergence of triple bottom line reporting, the number of companies that issued CSD increased, with different names to show different areas of focus. Reynolds and Yuthas (2008) explained this early stage of reporting sustainability as companies owing the duty to the society in which they are bonded with a social contract.

According to Freeman (1984), sustainability reporting is an approach for a company to identify its socially relevant behaviour, determine those to whom the company is accountable for its environmental and social performance and develop appropriate measures and reporting techniques. However, being sustainable or ecologically responsible is defined differently across cultures (Hofstede, 1980).

In China, CSD is mostly perceived to be a response to external government and public pressures on corporate management (Gao, 2009). The notion of corporate sustainability reporting was first proposed in 2006 in the amendment of the Company Law of the People's Republic of China, Article 5 of the General Law. Later in 2006, in the Chinese Communist Party Sixth Plenary Session, a national plan proposal was made to create a harmonious Chinese society with a focus on being socially responsible, particularly for business enterprises (Gao, 2010).

As a response to the national plan, the SSE and SZSE issued social reporting guidelines in 2006 and 2008, respectively, to create an appropriate system for corporate sustainability reporting. According to the SSE guidelines Notice for Better Reporting 2008 Annual Reports, a subset of industries that were listed in the Chinese financial market, including the SSE corporate governance sector, firms with shares listed overseas and financial companies, were mandated to prepare CSR reports alongside the annual reports. However, despite the introductions of a number of policies after the two stock exchange markets announced their guidelines, the meaning and definition of corporate sustainability were never specified. The guidelines also did not provide any indication of how to prepare and what to include in a CSD. While the CSR guidelines in China have initiated systematics rule and approaches to report CSR, the coverage and the specificity of the reports are still less comprehensive than those formulated in the Western context (Nornha *et al.*, 2013). The board indications from the CSR guidelines in China are provided below:

- "Listed companies are encouraged to disclose non-financial information in CSR reports.
- Non-financial information should be based on the triple bottom line namely, economic, social and environmental information.
- CSR reports should be endorsed by the Board of Directors and the Audit Committee.
- Areas and circumstances in which listed companies should compulsorily disclose environmental information are indicated.
- A new concept of social contribution value per share (SCVPS), a ratio used to measure the listed companies". (Nornha *et al.*, 2013, p. 32)

As suggested further by Nornha *et al.* (2013), the reporting companies could choose their own methods to calculate the related ratio under the guidelines, which was subjective and challenging for companies to follow. While the concept of corporate sustainability has become more commonly accepted in China, there has been no agreed-upon definition of it. Therefore, the standardisation and the regulations of corporate sustainability in China are in a great need of development (Bai *et al.*, 2015).

2.2 Global Reporting Initiative (GRI) guidelines in China

In China, the GRI (2013) guidelines are used as the basis of most sustainability reportings. In recent decades, GRI has attempted to provide comprehensive guidelines for CSD by setting indicators in corporate economic, environmental and social sustainability (Chauvey *et al.*, 2015). Firms that adopt GRI Sustainability Reporting Guidelines need to report their strategy in the company profiles, explain their management approach as to how they address corporate sustainability practices and disclose their company sustainability (economic, environmental and social) performance (Hahn and Lulfs, 2013). GRI, overall, provides companies with information on how and what to report in CSD.

While GRI provides such comprehensive sets of guidelines on CSR, it ultimately aims to enhance companies' information transparency and overall accountability. This has elevated the GRI Sustainability Reporting Guidelines to become the most commonly used framework internationally (Hahn and Lulfs, 2013). The KPMG Questionnaire into CSR (KPMG, 2008) examined the top 250 companies listed on the *Fortune* Global 500 and the 100 largest firms by revenue in 22 countries. The results showed that more than 75 per cent of companies from the *Fortune* Global 500 and 70 per cent of the 100 largest revenue firms applied the GRI. GRI is also considered practical for firms to use as report preparers are able to self-examine their own level of corporate sustainability performance.

As suggested by Brown *et al.* (2009), GRI is significant in terms of its "broad range of stakeholders" approach, as well as institutionalising multi-stakeholders on reporting and accountability. However, Drori *et al.* (2006) indicated that GRI is mostly presented by multinational companies on a global basis and international accounting firms have large influence on standardising the guidelines. Western multinational firms, therefore, help to set the agenda on corporate sustainability reporting based on their own interests (Vigneau *et al.*, 2015). It is suggested that "the guidelines' lack of universal applicability creates a perceived unfairness inherent in imposing Western standards of social behaviour and associated reporting practices" (Adams and McNicholas, 2007, p. 484).

Nevertheless, GRI remains highly authoritative globally because of its context, language, concepts and assumptions (Brown *et al.*, 2009). It has a significant role to highlight the importance of corporate sustainability reporting and has led to new practices of corporate sustainability and responsibility (Vigneau *et al.*, 2015). Hopkins (2004) also contends that the GRI guidelines include some aspects of the other popular environmental and social guidelines, such as the ISO 14000 and the global Sullivan principles.

2.3 Perceptions and motivations of sustainability in China

Early studies on the topic of perception of CSR in the Chinese context have broadly discussed the differential impact to measure CSR based on the Western and the Chinese definitions. Both Western and Chinese literature indicates that corporate sustainability is, to some degree, directly related to shareholders and companies values, as well as the need for the companies to be legitimate and ethical. Cultural differences have also created some different perceptions about corporate sustainability in the West and the East. Many studies, which were conducted in China, into Chinese culture and corporate sustainability, have explored the idea of profits from righteousness (Yi) principle, derived from Confucius.

Another stream of studies on CSR perception in China is generally focused on the potential of political interference and government intervention, and it examines the disclosure content to reveal the propensity for firms to report on government policies (Gao, 2011; Kuo *et al.*, 2012; Li and Zhang, 2010; Marquis and Qian, 2014). Kuo *et al.* (2012), based on a content analysis of Chinese data obtained from CSR reports, found that environmental sensitivity and ownership structures distinguish corporate environmental disclosures. Sensitive industries and government-owned firms are found to be more committed to providing environmental disclosures than less-sensitive industries and non-government-owned firms. They were also highly engaged in energy saving, carbon reduction, research and application of new techniques – beneficial activities that assist China in dealing with the global warming issue. Kuo *et al.*'s (2012) study also suggested that the Chinese government has an important role in promoting corporate CSR engagement.

Marquis and Qian (2014) examined corporate strategic response to government signals through CSR disclosure. They examined 1,600 listed firms between 2006 and 2009, and their results supported the findings of Kuo *et al.* (2012) that the Chinese government's signalling is a critical driver for corporate reporting, particularly for the SOEs that exert substantial political influence. Further, they found that the reporting companies are highly subjective to decoupling risk under specific monitoring mechanism. The expectation of policymakers drove the reported CSR practices.

Gao (2011) found that the listed companies in the Chinese financial market had, overall, a positive attitude to engage in CSR. Specifically, they found that SOEs have a higher tendency to engage in social issues through CSR than the non-SOEs. Gao (2011) suggested that political promotion on the ideology of CSR has important meanings for SOEs' CSR engagement. Further, industrial firms were also found to have higher propensities on CSR than service industries.

Through a discussion of the interplay of the global and national societal pressures in China, Hofman *et al.* (2017) suggested that CSR practices by Chinese firms are highly "state-led" and "local-driven". They discussed the multiplexity of the business system and its impact on the CSR concepts in the Chinese context. In particular, they examined the "authorisation capitalism" within the family owned small and medium firms, which suggested that the CSR engagement in these types of firms was oriented to local concern and driven by the local community's perception of the CSR.

2.3.1 Users' perceived importance of corporate sustainability disclosure in China. While existing literature in Chinese CSR has focused more on SOEs, there are also some limited studies that explore CSR practices at non-SOEs. Kuo *et al.* (2015), for example, suggested that there were no significant differences between environmental disclosure at SOEs and those at the privately owned enterprises. Based on an evaluation of 781 CSR reports between 2008 and 2010, they found the higher disclosure quality in CO2 and SO2 emission was predominantly because of the government-led national strategy; however, other social activities were better reported by privately owned firms.

From the theoretical point of view, signalling theory has been getting attention in corporate disclosure studies in recent years, because it assumes that people send and explain signals to reduce information asymmetry (Lin, 2010). The theory considers that information asymmetry typically exists in a capital market. Under this assumption, information obtained from the management level is considered as much more accurate and reliable than information obtained from the market (Shan and Taylor, 2014). Therefore, investors seek information transparency through corporate sustainability information; without it, they cannot respond quickly to make rational decisions about the most effective investment (Shan and Taylor, 2014). It is also assumed that CSD could lower companies' capital costs (Li *et al.*, 2013) as well as increase sales (Creyer, 1997), market share and brand value (Schaltegger and Burritt, 2005), because firms with a higher degree of sustainability engagement have

higher propensity to outperform the non-sustainability performing firms (Dhaliwal *et al.*, 2011).

Companies that disclose non-financial information signal their willingness to communicate with their stakeholders about sustainability issues that are unknown by the market (Yang, 2011), and companies produce stand-alone reports when the benefit of providing such disclosure outweighs the related costs. Companies with sound performance will deliver their positive image to the public and be distinguished examples among their peers.

The users of CSD, in general, include a broad range of company stakeholders, such as socially conscious customers, employees, non-governmental organisations, regulators, investors and financial analysts (Cordeiro and Tewari, 2015). In the context of China, signalling theory is relevant for evaluating the users' perception of CSD in China because most of the ordinary companies in China have no experience and are not willing to disclose voluntary sustainability information (Shan and Taylor, 2014). However, they have increasingly received significant pressure from the public, the government and industrial associations, to disclose.

For companies that have produced sustainability reports, and those that plan to do so, it is still not clear which sustainability indicators are considered important to disclose by the report users in China. Only if users perceive a strong and significant relationship between relevant indicators in sustainability reports and long-term corporate performance, they will find the data in the reports as useful. Therefore, understanding users' perceived importance of CSD is essential.

This provides motivations to us to assess the level of importance of the CSD in China from the users' perspective. Considering that GRI guidelines are mostly used in China for sustainability reporting, in this study, we use sustainability indicators listed on the GRI G4 Sustainability Reporting Guidelines to evaluate users' perceived importance of each of the indicators. Respondents in this study are asked to rate their perceived importance of each indicator using a five-point Likert scale from 1 to 5, with 1 being "very unimportant", 2 being "unimportant", 3 being "neutral", 4 being "important" and 5 being "very important". The data are accordingly analysed to reflect the users' perceived level of importance of the corporate environmental, economic and social information disclosures.

Accordingly, this study proposes the following set of hypotheses:

H1. CSD users in China perceive the level of importance of corporate sustainability information disclosure as high.

H1A. CSD users in China perceive the level of importance of corporate environmental information disclosure as high.

H1B. CSD users in China perceive the level of importance of corporate economic information disclosure as high.

H1C. CSD users in China perceive the level of importance of corporate social information disclosure as high.

2.3.2 Chinese report users' perspective on Global Reporting Initiative's sustainability indicators. While GRI guidelines are used as the basis of most sustainability reporting, there have been some concerns regarding the potentially different perceptions of the level of importance of the indicators listed on the GRI guidelines. Wang and Juslin (2009), for example, based on their literature study on terms of differences between the West and East contexts, claim that Western corporate sustainability concepts do not adapt well to the Chinese market, because they have rarely defined the primary reason for corporate sustainability. The ethic approach to the corporate sustainability concept does not take the Chinese reality and culture into consideration. They point out that corporate sustainability is a term that may be legitimately interpreted within the Chinese corporate culture. However, Confucianism and Taoism, which emphasise the "cultivation of virtue and morality, as well

as the core of its harmony notion" (Wang and Juslin, 2009, p. 446), offer a better understanding of corporate sustainability within the Chinese context.

Accordingly, there may be some of the indicators listed on GRI guidelines that are not relevant within the Chinese context, and hence, they are not considered as necessary by the Chinese report users. This study tries to evaluate whether it is indeed some differences in the way Chinese report users' perceived level of importance of sustainability information indicators listed in the GRI Sustainability Reporting Guidelines than what are intended by the GRI by including the indicators in the GRI guidelines.

In this study, we use a Likert scale of 4 being "important" as the basis GRI score for each of the GRI indicators and compare it with the respondents' mean values for each of the relevant indicators. A *t*-test is used to determine if there is any significant difference between two sets of scores, which indicates whether Chinese report users perceive the level of importance of sustainability information in GRI guidelines differently from what are intended by the GRI.

Thus, the following set of hypotheses is proposed:

H2. CSD users in China perceive the level of importance of sustainability information in GRI Sustainability Reporting Guidelines differently from what are intended by the GRI.

H2A. CSD users in China perceive the importance of environmental information indicators in GRI Sustainability Reporting Guidelines differently from what are intended by the GRI.

H2B. CSD users in China perceive the importance of economic information indicators in GRI Sustainability Reporting Guidelines differently from what are intended by the GRI.

H2C. CSD users in China perceive the importance of social information indicators in GRI Sustainability Reporting Guidelines differently from what are intended by the GRI.

3. Methodology

3.1 Questionnaire design

Billings and Halstead (2005) suggested that one of the best ways to obtain information about beliefs, behaviours, views and perceptions of individuals in the business world is to ask questions with closed ends. In this study, a Web-based questionnaire was designed based on sustainability indicators listed on the GRI G4 Sustainability Reporting Guidelines. The scale of GRI has been validated by Chow and Chen (2012), in which corporate sustainability construct was modelled in social, environmental and economic dimensions. To verify the measurement scale, they adopted exploratory factor analysis (EFA) and confirmatory factor analysis in structural equation modelling and confirmed the validity of the proposed GRI model. While Chow and Chen (2012) address the partial concerns of the validity of GRI from the preparer's end, their results are limited to interpret the perception from the report users. According to Brown and Deegan (1998), materiality within the sustainability report is used to be the way of potential organisational financial risks by address concerns from various stakeholders. It is imperative to consider corporate sustainability also from the report users' perception.

In our data collection, each respondent was asked to rate their perceived importance of each indicator using a five-point Likert scale from 1 to 5, with 1 being "very unimportant", 2 being "unimportant", 3 being "neutral", 4 being "important" and 5 being "very important". A five-point Likert scale was used because the scale is considered suitable to provide sufficient discrimination for most purposes and can be easily understood by respondents (Brace, 2004).

As the questionnaire was designed based on the structure of GRI G4 Sustainability Reporting Guidelines, there were 11 questions about environmental disclosure, 4 questions about economic disclosure and 28 questions about social disclosure. The questions were translated into Chinese with the assistance of professional translators. To ensure the accuracy of the translation, we wrote emails to the first 30 respondents who left their contact details at the end in our pilot study. We asked about their understanding of our questionnaires with the Chinese version of GRI attached. Overall the respondents found the questionnaires are well written, and we decided to continue the full sample data collection. Discrepancies, reliability and validity were studied and tested in a pilot test, which involved 30 financial analysts from China. Appropriate adjustments were made to suit the terms used in China and the local dialect and expressions in the language.

3.2 Sample data

In this study, financial analysts were used as the target respondents as corporate sustainability information has always been one of the valuable inputs for financial analysts to evaluate and to predict firm value (Lin, 2010). Lin (2010) suggested that financial analysts are experts who assess corporate policies and performance on various issues of sustainability in China and that financial analysts are considered to be the prime CSD users who influence other investors extensively. A good corporate sustainability reputation captured by financial analysts could improve companies' brand value and reputation, which in turn could enhance the appeal of firm's products to consumers (Brown and Dacin, 1997) and lead to increased sales (Dhaliwal, *et al.*, 2012).

Our sample responses were obtained in 2015, a time when President Xi initiated his leadership in China by imposing a higher degree of national sustainable development through the National Congress and the National Plan (Zhang *et al.*, 2018). Our target respondents were the financial analysts who worked at securities organisations that were registered on the China Securities Regulatory Commission (www.csrc.gov.cn). To approach the financial analysts as our study's respondents, we sent an email to 200 financial managers who worked at these registered security companies. Their contact information was obtained online. Each manager was also asked to distribute our Web-based survey URL to their financial analysts. We received 129 usable responses. Table I shows the demographic information of the respondents of the survey.

3.3 Data analysis

In this study, we build on and extend the work of Chow and Chen (2012). Chow and Chen (2012) have indicated the validity of the scale by GRI from the report preparers' end. We did a validity test by applying the EFA to explore the perceived importance of corporate sustainability reporting from the report users' perceptive. EFA is commonly used for interpreting self-reporting questionnaires which have been widely used in existing perception and motivation-based CSR research (Dincer and Dincer, 2012; Firmialy and Nainggolan, 2018; Hayton *et al.*, 2004; Latif *et al.*, 2018; Sheng and Chen, 2010). We performed EFA because it reduces a large number of reflective and latent measures into a smaller set (Hair *et al.*, 1995); hence, it confirms the dimensions defined by the GRI and fosters our hypotheses testing in the later part of the study. EFA also provides the significance of validity for the construct under the GRI based on our questionnaires (Hayton *et al.*, 2004).

To test our hypotheses, we adopted *t*-tests to confirm the level of importance based on our questionnaire results. *t*-tests are commonly used to determine if there is any significant difference between two sets of scores. A one-sample *t*-test is often considered when only a single sample of the participants and the questions are used to determine whether the

Table I Respondents' profiles ($N = 129$)

Demographic variables	*Frequency*	*(%)*
Gender		
Male	61	47.3
Female	68	52.7
Location		
Beijing	55	42.6
Shenzhen	31	24
Jilin	43	33.3
Education		
Below undergraduate level	4	3.1
Undergraduate degree	67	51.9
Postgraduate degree	55	42.6
PhD	3	2.3
Years of experience		
Less than 2 years	45	34.9
3-4 years	14	10.9
5-6 years	40	31
7-8 years	16	12.4
9 years and more	14	10.9

mean of the population from which the sample is drawn is the same as the hypothesised mean (Hair *et al.*, 1995). In this study, one-sample *t*-test was adopted because the mean value drawn from the users' perceived importance of each type of sustainability disclosure was compared with the level of importance intended by GRI (i.e. the value of 4 as per the Likert scale used).

4. Results and analysis

4.1 Exploratory factor analysis

Based on the definition of the sustainability items from GRI, we prepared reflective indicators in the questionnaires in terms of environmental indicators, economic indicators, social indicators – labour and decent work, social indicators – human rights, social indicators – society and social indicators – product responsibility. The estimation of the EFA results is presented in Table II. Unsurprisingly, EFA reveals six underlying dimensions, which are consistent with the sustainability definition by GRI. We follow the similar approach of Latif *et al.* (2018) in the critical assumption of EFA. Firstly, our correlation matrix shows that all items were significant at $p < 0.001$ level. Interestingly, we detect that "environment grievance" in the environmental indicator construct has a relatively low factor loading of 0.134. One explanation is that there were limited ways of environmental grievance in the Chinese context because of the lack of government monitoring controls over corporate environmental performance (Chen *et al.*, 2017). Additionally, our result also suggests the suitability of factors with Bartlett's test of sphericity ($\chi 2 = 3698.805$, df = 946 and $p < 0.01$) that measures the probability of the correlation matrix with other components, where the Kaiser–Meyer–Olkin (KMO) measure is 0.849 at 0.01 significance level. Lastly, we accounted for 51.885 per cent of the variation in our data based on the six factors yielded from the scales based on EFA. We further performed a reliability test, in which our Cronbach's alphas are substantially above the critical value of 0.7. Based on the results from EFA, our results overall show sufficient convergent validity in each construct, which allows us to perform the following *t*-tests for hypothesis testing.

Table II Estimation of exploratory factor analysis

Items	*Environmental indicators loadings*	*Economic indicators loadings*	*Social indicators (labour and decent work) loadings*	*Social indicators (human rights) loadings*	*Social indicators (society) loadings*	*Social indicators (product responsibility) loadings*
1.Water	0.545					
2. Effluents and waste	0.696					
3. Emissions	0.805					
4. Compliance	0.570					
5. Energy	0.557					
6. Supplier environmental assessment	0.543					
7. Material usage	0.645					
8. Biodiversity	0.498					
9. Environmental overall sustainability	0.575					
10. Products and services	0.484					
11. Environmental grievance	0.134					
12. Transportation	0.656					
Cronbach's alpha = 0.878						
13. Economic performance		0.714				
14. Market presence		0.529				
15. Indirect economic impacts		0.692				
16. Procurement practices		0.689				
Cronbach's alpha = 0.813						
17. Occupational health and safety			0.608			
18. Labour/management relationship			0.812			
19. Training and education			0.568			
20. Equal remuneration for women and men			0.738			
21. Employment			0.726			
22. Diversity and equal opportunity			0.517			
Cronbach's alpha = 0.859						
29. Child labour				0.564		
30. Security practice				0.505		
31. Forced or compulsory labour				0.676		
32. Non-discrimination				0.900		
33. Freedom of association and collective bargaining				0.484		
34. Indigenous rights				0.526		
35. Investment				0.483		
36. Human rights grievance mechanisms				0.663		
37. Assessment				0.900		
38. Supplier human rights assessment				0.809		
Cronbach's alpha = 0.875						
39. Compliance					0.554	
40. Anti-corruption					0.490	
41. Grievance mechanism for impacts on society					0.528	

(*continued*)

Table II

Items	*Environmental indicators loadings*	*Economic indicators loadings*	*Social indicators (labour and decent work) loadings*	*Social indicators (human rights) loadings*	*Social indicators (society) loadings*	*Social indicators (product responsibility) loadings*
42. Anti-competitive behaviour					0.497	
43. Public policy					0.545	
44. Local community					0.584	
45. Supplier assessment for impacts on society					0.493	
Cronbach's alpha = 0.825						
46. Customer health and safety						0.587
47. Customer privacy						0.684
48. Compliance						0.554
49. Product and service labelling						0.909
50. Marketing communications						0.398
Cronbach's alpha = 0.794						
Percentage of variance explained	20.541	2.843	13.836	6.670	3.687	4.307
Cumulative percentage	20.541	22.384	37.220	43.890	47.578	51.885
KMO ($p < 0.01$)	0.849					
Bartlett's test of sphericity, χ^2 (df = 946, $p < 0.01$)	3694.805					

4.2 Perceived importance of the environmental indicators

Table III presents the mean values and the results from the *t*-test for environmental indicators, sorted by their mean values from the highest to the lowest. Five indicators are found to be statistically significant at 0.01 level: "water", "effluents and waste", "emissions", "compliance" and "energy" with mean values of 4.51, 4.48, 4.46, 4.35 and 4.20, respectively. The results suggest that CSD report users in China perceived these five indicators more important than what were intended by the GRI. The *t*-test for the other seven indicators shows no significant results.

For "effluents and waste", "emissions" and "compliance", the perceptions of the respondents were consistent with the recent trend of carbon offsets and carbon emissions

Table III Mean value and *t*-test for environmental indicators (sample size $N = 129$, scale value 1-5)

	Mean	Std deviation	t	Sig
Water	4.51	0.626	9.276	0.000***
Effluents and waste	4.48	0.651	8.389	0.000***
Emissions	4.46	0.718	7.233	0.000***
Compliance	4.35	0.669	5.922	0.000***
Energy	4.20	0.722	3.170	0.002***
Supplier environmental assessment	4.10	0.759	1.509	0.134
Material usage	4.10	0.769	1.488	0.139
Biodiversity	4.09	0.820	1.181	0.240
Environmental overall sustainability	4.07	0.731	1.084	0.280
Products and services	4.06	0.647	1.089	0.278
Environmental grievance	4.04	0.861	0.512	0.610
Transportation	3.91	0.861	−1.227	0.222

Notes: *t*-test at 95% confidence interval; ***significant at 0.01 level

in many major cities in China, which has gradually gained significant international attention. Carbon offset refers to a monetary investment that abates greenhouse gas emission or sequesters carbon from the atmosphere, which is used to compensate for greenhouse gas emission from companies' own activities. To combat severe air pollution, Beijing, for example, has had "APEC-blue" sky, because the government temporarily shut down the industrial area in Hebei.

The overall mean value for environmental indicators is 4.20 (out of 5). Hence, *H1A* was supported, and the overall *t*-test result partly supported *H2A*.

4.3 Perceived importance of the economic indicators

Table IV presents the mean values and the results from the *t*-test for economic indicators, sorted by their mean values from the highest to the lowest. "indirect economic impacts" and "procurement practices" are found to be statistically significant at the 0.01 level, while "market presence" is found to be significant at the 0.05 level. The *t*-test for "economic performance" shows no significant result.

Interestingly, the mean values for all four indicators are below the test value of 4, suggesting that all economic indicators were not perceived to be as important as they were intended to be in the GRI guidelines. The overall mean value for economic indicators is 3.79 (out of 5). Hence, both *H1B* and *H2B* were not supported.

4.4 Perceived importance of the social indicators

4.4.1 Social indicators – labour practice and decent work. Table V presents the mean values and the results from the *t*-test for social indicators in the sub-category of labour practice and decent work, sorted by their mean values from the highest to the lowest.

"Occupational health and safety" is found to be statistically significant at 0.01 level and it has a mean value of 4.22, indicating that the CSD report users in China perceived this indicator as more important than what was intended by the GRI. In contrast, "Employment"

Table IV Mean value and *t*-test for economic indicators (sample size *N* = 129, scale value 1-5)

	Mean	Std deviation	t	Sig
Economic performance	3.94	0.758	−0.929	0.354
Market presence	3.87	0.754	−1.985	0.049**
Indirect economic impacts	3.69	0.716	−4.920	0.000***
Procurement practices	3.64	0.827	−4.896	0.000***

Notes: *t*-test at 95% confidence interval; **significant at 0.05 level; ***significant at 0.01 level

Table V Mean value and *t*-test for social indicators – labour practice and decent work (sample size *N* = 129, scale value 1-5)

	Mean	Std deviation	t	Sig (2-tailed)
Occupational health and safety	4.22	0.739	3.335	0.001***
Labour/management relationship	4.04	0.744	0.592	0.555
Training and education	3.98	0.770	−0.229	0.820
Equal remuneration for women and men	3.94	0.925	−0.762	0.448
Employment	3.86	0.715	−2.216	0.028**
Diversity and equal opportunity	3.81	0.891	−2.373	0.019**

Notes: *t*-test at 95% confidence interval; **significant at 0.05 level; ***significant at 0.01 level

and "Diversity and equal opportunity" are found to be statistically significant at 0.05 level, but their mean values are less than the *t*-test value, meaning that they are considered less important. The *t*-test for the other three indicators shows no significant results.

The overall mean value for social indicators in the sub-category of labour practice and decent work is 3.98 (out of 5), which is very close to the test value of 4.

4.4.2 Social indicators – human rights. Table VI presents the mean values and the results from the *t*-test for social indicators in the sub-category of human rights, sorted by their mean values from the highest to the lowest. Nine out of the ten human rights indicators are found to be statistically significant at either the 0.05 or 0.01 level. However, the mean values show that some indicators are considered more important, while the others are considered less important.

With regards to indicators that were perceived as more important than what were intended by GRI, "child labour" and "security practice" obtained higher mean values than the *t*-test value of 4. In contrast, "non-discrimination", "freedom of association and collective bargaining", "indigenous rights", "investment", "human rights grievance mechanisms", "assessment" and "supplier human rights assessment" are perceived as less important by the CSD report users in China than they were intended to be by GRI. The *t*-test for "forced or compulsory labour" shows no significant result.

The overall mean value for social indicators in the sub-category of human rights is 3.89 (out of 5), which is quite close to the test value of 4.

4.4.3 Social indicators – society. Table VII presents the mean values and the results from the *t*-test for social indicators in the sub-category of society, sorted by their mean values from the highest to the lowest.

"Compliance" is found to be statistically significant at 0.01 level and it has a mean value of 4.16, indicating that the CSD report users in China perceived this indicator as more important than what was intended by the GRI. In contrast, "anti-competitive behaviour", "public policy", "local community" and "supplier assessment for impacts on society" are found to be statistically significant at either 0.01 or 0.1 level, but their mean values are less than the *t*-test value, meaning that they are considered less important. The *t*-test for the other two indicators shows no significant results.

The overall mean value for social indicators in the sub-category of society is 3.91 (out of 5), which is quite close to the test value of 4.

4.4.4 Social indicators – product responsibility. Table VIII presents the mean values and the results from the *t*-test for social indicators in the sub-category of product responsibility, sorted by their mean values from the highest to the lowest. Four out of the five product

Table VI Mean value and *t*-test for social indicators – human rights (sample size $N = 129$, scale value 1-5)

	Mean	Std deviation	t	Sig (2-tailed)
Child labour	4.16	0.833	2.113	0.037**
Security practice	4.16	0.852	2.067	0.041**
Forced or compulsory labour	4.10	0.799	1.433	0.154
Non-discrimination	3.84	0.882	−2.096	0.038**
Freedom of association and collective bargaining	3.81	0.788	−2.681	0.008***
Indigenous rights	3.81	0.798	−2.648	0.009***
Investment	3.79	0.757	−3.140	0.002***
Human rights grievance mechanisms	3.78	0.838	−2.941	0.004***
Assessment	3.78	0.875	−2.819	0.006***
Supplier human rights assessment	3.62	0.912	−4.732	0.000***

Notes: *t*-test at 95% confidence interval; **significant at 0.05 level; ***significant at 0.01 level

Table VII Mean value and *t*-test for social indicators – society (sample size *N* = 129, scale value 1-5)

	Mean	Std deviation	t	Sig. (2-tailed)
Compliance	4.16	0.659	2.806	0.006***
Anti-corruption	4.03	0.800	0.440	0.662
Grievance mechanism for impacts on society	4.01	0.765	0.115	0.909
Anti-competitive behaviour	3.88	0.725	−1.822	0.071*
Public policy	3.81	0.830	−2.652	0.009***
Local community	3.76	0.758	−3.601	0.000***
Supplier assessment for impacts on society	3.71	0.773	−4.217	0.000***

Notes: *t*-test at 95% confidence interval; *significant at 0.1 level; ***significant at 0.01 level

Table VIII Mean value and *t*-test table for social indicators – product responsibility (sample size *N* = 129, scale value 1-5)

	Mean	Std deviation	t	Sig (2-tailed)
Customer health and safety	4.36	0.748	5.415	0.000***
Customer privacy	4.31	0.727	4.846	0.000***
Compliance	4.25	0.662	4.257	0.000***
Product and service labelling	4.08	0.777	1.134	0.259
Marketing communications	3.83	0.802	−2.416	0.017**

Note: *t*-test at 95% confidence interval; **significant at 0.05 level; ***significant at 0.01 level

responsibility indicators are found to be statistically significant at either the 0.01 or 0.05 level. The mean values show that three indicators are considered more important, while one indicator is considered less important.

"customer health and safety", "customer privacy" and "compliance" are found to be statistically significant at 0.01 level with mean values of 4.36, 4.31 and 4.25, respectively. These indicate that the CSD report users in China perceived this indicator as more important than what was intended by the GRI. On the other hand, "marketing communication" is found to be statistically significant at 0.05 level, but its mean value is less than the *t*-test value, meaning that it is considered less important. The *t*-test for "Product and service labelling" shows no significant result.

The overall mean value for social indicators in the sub-category of society is 4.17 (out of 5), which is higher than the test value of 4.

4.4.5 Overall social indicators. The overall mean value for social indicators is 3.96 (out of 5), which is very close to the *t*-test value of 4. Hence, *H1C* can be considered as supported, and the overall *t*-test result partly supported *H2C*, with various detailed results for the indicators.

4.5 Overall perceived importance of the sustainability disclosure

The overall mean value for all indicators of sustainability disclosure is 4.10 (out of 5), which is higher than the *t*-test value of 4. Hence, *H1* is supported, and the overall *t*-test result partly supported *H2*, with various detailed results for the indicators.

5. Discussion

In general, our findings of the users' perceived importance of CSD indicate that the importance of CSD perceived by the report users in China was partially different from what was intended by GRI. The degrees of difference varied across disclosure categories. Our findings show evidence that there are moderate differences in the Chinese report users'

perceived importance of environmental, economic and social disclosures from what were intended by the GRI. Environmental disclosure, with an overall mean value of 4.20 (out of 5), was perceived as more important by the users than what was intended by the GRI. Social disclosure, with an overall mean value of 3.96 (out of 5) can be considered as having the same level of importance by the users as what was intended by the GRI and, lastly, economic disclosure with a mean value of 3.79 (out of 5), was perceived as less important by the users than what was intended by the GRI.

As shown in Table IX, our results overall show consistency with the existing literature in the context, whereas partial differences are apparent comparing with Western individualistic contexts. Looking closer, environmental indicators that received a high level of perceived importance often relate to the most publicly concerning issues, such as energy, water, emission, effluents and waste in environmental disclosure in China. The results are consistent with literature both in China and Western countries. Lu and Abeysekera (2017) and Chow and Chen (2012) both used Chinese data and found that effluents and waste, emission, compliance and energy are significant from report preparers' end. In our case, as the data were collected in 2014, a series of promotion on the corporate sustainability development was fostered by President Xi because of the change in leadership. While there is no mandatory requirement on corporate sustainability reporting, environmental control such as carbon emission reduction and energy saving have been incorporated in the National Plan and have been continuously promoted in the national Congress Zhang *et al.* (2018). This can also be influenced by the 12th Five Year Sustainability Plan by the Chinese government, in which companies were encouraged to disclose use of material, energy consumption and general environmental performance. Although adherence to the plan is on a voluntary basis, seemingly users wanted to see information regarding these areas being disclosed in annual and sustainability reports.

With regard to social disclosure, it is notable that "product responsibility" indicators generally received a high level of perceived importance. Product responsibility is another area of concern in China, because of prior severe food product faults and the milk powder scandal in the community. In comparison with existing research (Chow and Chen, 2012; Lu and Abeysekera, 2017), product safety on customer health was broadly found as an essential factor perceived by report preparers. It is evident that the concerns and the fear of product safety in China are far from resolved. While other social items (e.g. occupational health and safety, employment, security practice, indigenous rights, investment and compliance) also show high consistency with prior literature, the majority of the social related sustainability information was not perceived importantly because of their exclusion from regulations and the voluntary nature in the Western context (Amaral and La Rovere, 2003; Baumgartner and Ebner, 2010; Chow and Chen, 2012; Erol *et al.*, 2009; Hussey *et al.*, 2001; Lindgreen *et al.*, 2009; Lu and Abeysekera, 2017).

Economic disclosure was perceived as less important in comparison with the other two types of disclosures. Information included in economic disclosure presents a measurement of the economic outcomes of a company and the effect and relevance of these outcomes on a broad range of stakeholders. As most of the economic disclosure can be obtained from the annual reports, it may be considered less relevant within the context of sustainability reporting, in comparison with the other two types of disclosures. However, economic disclosures were perceived to be much more important in the Western settings (Amaral and La Rovere, 2003; Baumgartner and Ebner, 2010; Erol *et al.*, 2009; Hussey *et al.*, 2001; Lindgreen *et al.*, 2009; Murillo-Luna *et al.*, 2008; Rueda-Manzanares *et al.*, 2008; Sharma *et al.*, 2007). This is consistent without discussion in Section 2.1 that the Western context considers sustainability as a way to stretch the wealth creation, thereby producing the long-term sustainable economic performance (Zhang *et al.*, 2018). In our results, we detected negative associations, which indicate that economic information is considered less attractive because the disclosures may have been released in financial reports.

Table IX Significant corporate sustainability disclosure items

CSR items	*Amaral and La Rovere (2003)*	*Baumgartner and Ebner (2010)*	*Erol* et al. *(2009)*	*Hussey* et al. *(2001)*	*Lindgreen* et al. *(2009)*	*Murillo-Luna* et al. *(2008)*	*Rueda-Manzanares* et al. *(2008)*	*Sharma* et al. *(2007)*	*Lu and Abeysekera (2017)*	*Chow and Chen (2012)*
Environment										
Water	✓	✓		✓	✓	✓	✓	✓	✓	
Effluents and waste	✓	✓		✓	✓	✓	✓	✓	✓	✓
Emissions	✓	✓		✓	✓	✓	✓	✓	✓	✓
Compliance			✓	✓	✓	✓			✓	✓
Energy		✓	✓	✓		✓	✓	✓	✓	✓
Economic										
Market presence	✓	✓	✓	✓	✓	✓		✓	✓	✓
Indirect economic	✓	✓	✓	✓					✓	✓
Procurement practices	✓			✓					✓	✓
Social – labour and practice and decent work										
Occupational health and safety	✓	✓	✓	✓	✓				✓	✓
Employment	✓	✓	✓	✓	✓				✓	✓
Diversity and equal opportunity			✓		✓				✓	✓
Social – human rights										
Child labour									✓	
Security practice	✓	✓	✓	✓	✓				✓	✓
Non-discrimination									✓	✓
Freedom of association and collective bargaining									✓	
Indigenous rights	✓	✓	✓		✓				✓	✓
Investment	✓	✓	✓		✓				✓	✓
Human rights grievance mechanisms									✓	
Assessment			✓		✓				✓	✓
Supplier human rights assessment										
Social – society										
Compliance	✓	✓	✓		✓				✓	✓
Anti-competitive behaviour									✓	
Public policy									✓	
Local community	✓	✓	✓						✓	✓
Supplier assessment for impacts on society									✓	
Social – product responsibility										
Customer health and safety	✓	✓	✓	✓	✓				✓	✓
Customer privacy									✓	
Compliance									✓	✓
Marketing communications									✓	

6. Conclusion

This study provides some evidence of the Chinese report users' perceptions on the importance of GRI indicators of sustainability disclosure. Because of the unique cultural and political background that influence companies in China, our results offer significant

relevance to existing research into China's corporate sustainability or social responsibility practices and reporting mechanisms. We found that the Chinese concerns on corporate sustainability are partially different from the Western context-based literature, as well as that from the GRI. The national pursuit of sustainability development engaged by the government has an inevitable influence to change and lead corporate stakeholders' perception of corporate sustainability. The government as a dominance among social actors has a substantial impact on societal acceptance towards corporates, which has gradually embedded in the Chinese culture. We urge future research to consider the political, cultural and policy impact on society's expectation when analysing the scope and the extent of corporate sustainability reporting in the Chinese context, especially when comparing results again the Western-based studies.

Our study is subjected to the following limitations. Firstly, this study has limited the collection of its data from financial analysts in China who are considered as prime CSD users. It is suggested that future research may include other relevant report users to further enhance the findings. Secondly, respondents' perceptions may change over time, and hence a follow-up survey may be necessary to measure the response in a long-run. Thirdly, the differences in the perceived importance of CSD in different countries is possible to be linked with the levels of their development. Because of the political system in China, corporate stakeholders' perceptions may be considerably influenced by state government. Hence, it could be important for future research to address this concern by including multi-national perceptions for comparisons.

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