



## Sustainability Report Practices in Indonesia: Context, Policy, and Readability

Iman Harymawan<sup>1\*</sup>, Fajar Kristanto Gautama Putra<sup>1</sup>, Tanaya Devi Kemala Agni<sup>1</sup>,  
Khairul Anuar Kamarudin<sup>2</sup>

<sup>1</sup>Universitas Airlangga, Indonesia, <sup>2</sup>University of Wollongong, Dubai, United Arab Emirates. \*Email: [harymawan.iman@feb.unair.ac.id](mailto:harymawan.iman@feb.unair.ac.id)

Received: 15 November 2019

Accepted: 20 February 2020

DOI: <https://doi.org/10.32479/ijeeep.8979>

### ABSTRACT

Considering sustainability disclosure become one important issue, while still there no universal agreement for the guidance, this study aims to examine Indonesia's Sustainability Disclosure trend using GRI as quantity dimension, KLD for the quality, and readability and PROPER to measure how well they communicate. This study uses a sample of 224 firm-year observation from 2013 to 2017 based on GRI database. Descriptive analytic employed to figure disclosure trend in general, year to year, and industry base, and Pearson to explain correlation between measurements. There are three important issue discovered in this research. First, Indonesia's sustainability disclosure is generally low but mixed among different proxies by the year, and SIC 2 as the best quantity disclosure and SIC 4 provides readable report. Second, we found a significant positive correlation between quantity and quality sustainability disclosure. Third, the result reveals an indication that PROPER award rely on corporate's environmental risk disclosure. This study limited to public company that issue Sustainability Disclosure hence sample relatively small. This research provides insight for firms to improve quantity and quality of firm's Sustainability Disclosure as development of trends is not optimized.

**Keywords:** Sustainability Report, Corporate Social Responsibility, Indonesia

**JEL Classifications:** Q51, Q56

### 1. INTRODUCTION

Since 2015, United Nation revamps the Millennium Development Goals (MDGs) into Sustainable Development Goals (SDGs), a closer analogue to international human rights and environmental agreements than their predecessors. Sustainability is about rational use of natural resources, in line with the principles of eco-efficiency, equity and social justice, (Martins et al., 2019) rather than only "going green."

It's no surprise that many large multinational corporations are paying increased attention to sustainability-oriented innovation. Faced with mounting challenges and pressure from stakeholders, company are searching for ways to do things differently while also seeking opportunities for growth (Bocken et al., 2014).

As sustainability become one important issue for corporate to consider, sustainability disclosure become tricky as no universal agreement on how sustainability should be disclosed. Extant sustainability reporting literature has researched who is reporting, what is reported, and how much is reported (Meng et al., 2014; Radu and Francoeur, 2017; Sriyani et al., 2016; Tian et al., 2016). Recognizing the fact that robust, reliable, and replicable sustainability quality assessment is problematic lot (Lo et al., 2017; Mattingly and Berman, 2006), this research aims to investigate on how sustainability disclosure trends in Indonesia using measures that used in prior corporate sustainability disclosure studies.

Based on our empirical results, Indonesia's quality disclosure increase year to year but still in minimum range. Using Pearson correlation, we found a significant positive correlation between

quantity and quality sustainability disclosure, and PROPER award may rely on environmental risk disclosure.

Consequently, this paper makes several contributions to the sustainability disclosure quality literature. First it provides trend analysis on how Sustainability Disclosure on Indonesian listed firms, which it shows mixed trends among different proxies. Second for firms, it can be used as fundamental for Sustainability Disclosure firm's policy. It provides insight for firms to improve quantity and quality of firm's Sustainability Disclosure as development of trends is not optimized.

## 2. LITERATURE REVIEW

In 2018 conceptual framework that devised by International Accounting Standards Board (IASB) states it contributes to IASB mission which is "develop standards that bring transparency, accountability and efficiency to financial markets around the world." Sustainability disclosure also part of corporate disclosure that shares same objective, to provide information to stakeholders. As sharing similar traits, sustainability disclosure shares same challenges which are its complex concept and has a multi-standard and subjective nature (Meng et al., 2014; Sriyani et al., 2016). Some literatures tend to focus on one dimension of disclosure quality (e.g., quantity, timeframe, readability) to provide rich understanding of reporting and disclosure quality.

### 2.1. Global Reporting Initiatives (GRI)

The Global Reporting Initiatives (GRI) shows a trade off with respect to ecological issues (Marimon et al., 2012). This study used GRI standard because is the most widely used for standard sustainability reporting according to a number of researcher (Skouloudis et al., 2009) and provide a harmonized, standardized, understandable, and objective report for all firms worldwide. We use GRI 4 to measure disclosure context of the firm.

### 2.2. Readability Index

The more comprehensive annual report, as indicated by Loughran and McDonald (2016), the most its influence wrong decision making by users. It may change users' perceptions and predictions about future corporation performance because of textual risk disclosure. Numerous study about correlation between readability index and performance has been conducted (Lo et al., 2017; Loughran and McDonald, 2016), but limited to sustainability report, so we consider to measure sustainability disclosure by readability index.

### 2.3. Kinder, Lydenberg, Domini Research and Analytics (KLD)

Kinder, Lydenberg, Domini (KLD) provide a set of environmental rank for corporation which divided by environmental strength and concern indicator (Mattingly and Berman, 2006). Environmental strength indicate the goodness of corporate environmental action, while environmental concern focus on disclosure of environmental risk caused by the firm. Refers to prior studies KLD, we measurement by dummy (Fernando et al., 2017; Lo et al., 2017).

## 2.4. PROPER Award

Since 2002, The Indonesia's Ministry of Environment has been conducted The Program for Pollution Control, Evaluation, and Rating (PROPER) to encourage firm implementation environment act, regulation compliance, and observe firm environmental performance. The Ministry of Environment regulation No 6/2013 rates corporate's environmental performance on the following colors from the best to the worst respectively; gold, green, blue, red, and black. This rate depends on corporate compliance on water, air, B3 waste, AMDAL, and ocean contamination control regulation which closely related to sustainability disclosure. This study used PROPER disclosure because mostly sustainability disclosure depends on their environmental performance (Kumar, 2017)

## 3. METHODOLOGY

### 3.1. Sample

We initially obtained from the Sustainability Disclosure Database a sample of 244 Indonesia's firm-year observations over period 2013-2017 from GRI database. In context of this research, we exclude (1) firms that not listed on the Indonesia Stock Exchange; (2) firms that do not issue a sustainability report; (3). The final sample consists of 110 firm-year observation with 33 firms.

### 3.2. Data Collection

We choose content analysis, a methodology widely adopted in Corporate Social Responsibility disclosure literature (Beck et al., 2010; Meng et al., 2014; Michelon et al., 2015), to assess the quality sustainability disclosure. Specifically, for PROPER, we are confirming each of our sample to list of award that published by official website of Ministry of Environment. Our Cronbach's Alpha test of our four measurement shows 71.06% percent, which is above the appropriate minimum acceptable level of 70% (Kalu et al., 2016), it provide that our internal consistency measurement of sustainability disclosure is reliable.

## 4. RESULTS AND DISCUSSION

### 4.1. An Overview of the Sustainability Disclosure Measurement Methods

Table 1 figures that in overall Indonesia has low Corporate Social Responsibility Disclosure (CSR) either from GRI, Readability, KLD, and PROPER. We acknowledged that in terms of quantity (GRI) has mean value closer toward minimum value rather than maximum value. For communication quality (Readability) shows also inadequate quality as the mean has closer toward maximum

**Table 1: Descriptive statistic**

	Mean	Median	Minimum	Maximum	Standard deviation
GRI	0.401	0.357	0.099	0.956	0.204
FKGL	23.364	23.303	27.295	18.727	1.622
FKRI	34.916	34.071	48.385	15.536	5.903
GFRI	27.433	27.372	31.773	21.798	1.748
SMOG	21.107	21.174	24.983	14.681	1.767
CLRI	23.996	23.898	29.531	19.869	1.216
KLD_S	0.468	0.485	0.030	0.758	0.169
KLD_C	0.487	0.400	0.800	0.200	0.164
PROPER	3.450	3.000	2.000	5.000	0.778

**Table 2: Descriptive statistic sustainability disclosure in Indonesia 2013-2017**

Panel A: CSRD by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	0.480	0.473	0.220	0.857	0.206
Year 2014 (29)	0.402	0.385	0.110	0.835	0.172
Year 2015 (29)	0.422	0.352	0.099	0.956	0.229
Year 2016 (25)	0.329	0.275	0.099	0.703	0.187
Year 2017 (5)	0.301	0.231	0.099	0.670	0.218
Panel B: FKGL by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	23.319	23.378	27.295	20.937	1.551
Year 2014 (29)	23.098	23.066	26.974	18.727	1.847
Year 2015 (29)	23.520	23.428	26.263	21.301	1.402
Year 2016 (25)	23.376	23.204	26.492	20.649	1.602
Year 2017 (5)	24.131	23.659	27.016	21.255	2.152
Panel C: FKRI by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	35.121	34.631	48.195	25.297	5.337
Year 2014 (29)	34.178	34.105	48.173	15.536	6.739
Year 2015 (29)	34.809	34.124	44.808	24.060	5.156
Year 2016 (25)	35.261	33.856	48.385	26.285	6.077
Year 2017 (5)	37.192	33.065	46.904	28.860	7.924
Panel D: GFRI by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	27.435	27.752	30.841	24.142	1.614
Year 2014 (29)	27.196	27.347	31.512	21.798	1.937
Year 2015 (29)	27.461	27.361	30.176	25.042	1.499
Year 2016 (25)	27.481	27.372	31.565	24.560	1.819
Year 2017 (5)	28.394	27.679	31.773	25.503	2.473
Panel E: SMOG by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	21.060	21.273	24.528	18.554	1.611
Year 2014 (29)	20.749	21.143	24.697	14.681	2.210
Year 2015 (29)	21.326	21.363	24.058	19.004	1.401
Year 2016 (25)	21.129	21.087	24.607	18.196	1.651
Year 2017 (5)	22.006	21.654	24.983	18.915	2.218
Panel F: CLRI by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	23.943	23.961	27.092	22.065	1.081
Year 2014 (29)	24.333	24.092	29.531	21.691	1.615
Year 2015 (29)	23.613	23.769	26.373	19.869	1.096
Year 2016 (25)	24.086	24.041	26.107	22.506	0.883
Year 2017 (5)	24.035	23.693	25.213	23.175	0.939
Panel G: KLD_S by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	0.424	0.409	0.030	0.758	0.185
Year 2014 (29)	0.459	0.424	0.121	0.758	0.162
Year 2015 (29)	0.488	0.485	0.182	0.758	0.157
Year 2016 (25)	0.487	0.515	0.152	0.758	0.173
Year 2017 (5)	0.509	0.576	0.152	0.636	0.201
Panel H: KLD_C by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (22)	0.482	0.400	0.800	0.400	0.118
Year 2014 (29)	0.469	0.400	0.800	0.200	0.171
Year 2015 (29)	0.497	0.400	0.800	0.200	0.166
Year 2016 (25)	0.496	0.400	0.800	0.200	0.174
Year 2017 (5)	0.520	0.400	0.800	0.200	0.268
Panel I: PROPER by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2013 (15)	3.667	3.000	2.000	5.000	1.047
Year 2014 (22)	3.318	3.000	2.000	5.000	0.716

(Contd...)

**Table 2: (Continued)**

Panel I: PROPER by SIC and year					
Observation year	Mean	Median	Minimum	Maximum	Standard deviation
Year 2015 (21)	3.381	3.000	2.000	5.000	0.740
Year 2016 (19)	3.421	3.000	3.000	5.000	0.607
Year 2017 (3)	4.000	4.000	3.000	5.000	1.000

**Table 3: Descriptive statistic based on industry**

Panel A: CSRD by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	0.471	0.412	0.264	0.703	0.173
SIC 1 (35)	0.435	0.396	0.099	0.956	0.217
SIC 2 (15)	0.516	0.418	0.110	0.835	0.278
SIC 3 (17)	0.363	0.363	0.099	0.560	0.151
SIC 4 (20)	0.326	0.291	0.099	0.659	0.149
SIC 5 (9)	0.359	0.352	0.209	0.571	0.113
SIC 8 (4)	0.401	0.357	0.099	0.956	0.204
Panel B: FKGL by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	22.987	22.522	25.323	21.468	1.618
SIC 1 (35)	23.457	23.204	26.974	21.255	1.600
SIC 2 (15)	23.701	23.531	27.295	21.650	1.647
SIC 3 (17)	24.041	24.118	26.368	21.598	1.170
SIC 4 (20)	22.519	22.846	25.599	18.727	1.713
SIC 5 (9)	23.503	23.596	27.016	21.301	1.726
SIC 8 (4)	23.364	23.303	27.295	18.727	1.622
Panel C: FKRI by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	34.018	31.818	44.337	27.413	6.015
SIC 1 (35)	35.444	34.252	48.385	28.062	5.576
SIC 2 (15)	33.977	34.105	48.195	15.536	6.943
SIC 3 (17)	37.636	37.254	44.808	28.690	5.048
SIC 4 (20)	32.456	33.118	43.570	18.727	5.890
SIC 5 (9)	35.588	34.124	46.904	29.000	5.421
SIC 8 (4)	34.916	34.071	48.385	15.536	5.903
Panel D: GFRI by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	26.857	26.179	29.949	25.032	1.750
SIC 1 (35)	27.584	27.411	31.565	25.131	1.689
SIC 2 (15)	27.716	27.579	30.841	25.534	1.525
SIC 3 (17)	28.261	28.103	30.804	25.854	1.390
SIC 4 (20)	26.434	26.513	29.767	21.798	1.862
SIC 5 (9)	27.645	27.372	31.773	25.384	1.843
SIC 8 (4)	27.433	27.372	31.773	21.798	1.748
Panel E: SMOG by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	20.612	19.994	23.206	19.005	1.641
SIC 1 (35)	21.210	21.176	24.697	18.716	1.666
SIC 2 (15)	21.674	21.605	24.528	19.118	1.559
SIC 3 (17)	21.842	21.816	24.261	19.523	1.165
SIC 4 (20)	20.060	20.653	23.203	14.681	2.173
SIC 5 (9)	21.278	21.363	24.983	18.969	1.791
SIC 8 (4)	21.107	21.174	24.983	14.681	1.767
Panel F: CLRI by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	23.839	24.126	24.845	22.353	0.850
SIC 1 (35)	23.875	23.887	25.544	19.869	1.075
SIC 2 (15)	23.677	23.311	27.092	22.461	1.131
SIC 3 (17)	24.361	24.092	26.373	21.691	1.226
SIC 4 (20)	24.185	23.354	29.531	22.413	1.838
SIC 5 (9)	24.053	23.891	25.213	23.046	0.682
SIC 8 (4)	23.996	23.898	29.531	19.869	1.216

(Contd...)

**Table 3: (Continued)**

Panel G: KLD_S by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	0.548	0.515	0.424	0.636	0.080
SIC 1 (35)	0.520	0.545	0.030	0.758	0.155
SIC 2 (15)	0.588	0.606	0.424	0.697	0.091
SIC 3 (17)	0.403	0.364	0.212	0.758	0.210
SIC 4 (20)	0.388	0.409	0.152	0.606	0.141
SIC 5 (9)	0.407	0.394	0.303	0.576	0.095
SIC 8 (4)	0.468	0.485	0.030	0.758	0.169
Panel H: KLD_C by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	0.600	0.600	0.800	0.400	0.189
SIC 1 (35)	0.531	0.400	0.800	0.200	0.175
SIC 2 (15)	0.573	0.600	0.800	0.200	0.128
SIC 3 (17)	0.388	0.400	0.600	0.200	0.165
SIC 4 (20)	0.430	0.400	0.600	0.200	0.117
SIC 5 (9)	0.400	0.400	0.400	0.400	0.000
SIC 8 (4)	0.487	0.400	0.800	0.200	0.164
Panel I: PROPER by SIC and year					
	Mean	Median	Minimum	Maximum	Standard deviation
SIC 0 (10)	3.100	3.000	2.000	4.000	0.568
SIC 1 (27)	3.704	3.000	2.000	5.000	0.912
SIC 2 (11)	3.455	3.000	3.000	5.000	0.688
SIC 3 (17)	3.529	3.000	2.000	5.000	0.874
SIC 4 (4)	3.250	3.000	3.000	4.000	0.500
SIC 5 (9)	3.000	3.000	3.000	3.000	0.000
SIC 8 (2)	3.450	3.000	2.000	5.000	0.778

**Table 4: Pearson correlation**

	CSRD	FKGL	FKRI	GFRI	SMOG	CLRI	KLD_S	KLD_C	PROPER
CSRD	1.000								
FKGL	-0.024 (0.805)	1.000							
FKRI	0.025 (0.792)	0.876*** (0.000)	1.000						
GFRI	-0.037 (0.701)	0.965*** (0.000)	0.905*** (0.000)	1.000					
SMOG	-0.056 (0.561)	0.970*** (0.000)	0.760*** (0.000)	0.938*** (0.000)	1.000				
CLRI	-0.021 (0.826)	0.071 (0.463)	0.376*** (0.000)	0.185* (0.054)	-0.076 (0.431)	1.000			
KLD_S	0.225** (0.018)	0.047 (0.624)	0.084 (0.383)	0.059 (0.542)	0.033 (0.735)	0.079 (0.410)	1.000		
KLD_C	-0.401*** (0.000)	-0.047 (0.624)	-0.052 (0.590)	-0.027 (0.778)	-0.025 (0.793)	-0.020 (0.833)	-0.440*** (0.000)	1.000	
PROPER	0.065 (0.569)	-0.020 (0.857)	-0.141 (0.213)	-0.092 (0.417)	-0.006 (0.959)	-0.097 (0.390)	0.165 (0.145)	-0.228** (0.042)	1.000

P-values in parentheses, \*P<0.1, \*\*P<0.05, \*\*\*P<0.01

value which means in average Indonesia Sustainability Report not easily to be read for common people. As for qualitative measurement (KLD), even KLD Strengths mean shows closer toward its maximum value but it nets off by KLD Concerns mean that closer also toward its maximum value. Last but not least, effective communication indicator (PROPER) shows that different result with other CSR measurement. It may be implies Indonesia applies lower standard for CSR for listed firms.

Second, we divided our main sample according to the year to determined trend of sustainability disclosure. Based on Table 2,

we observe that the average quantity of CSR according to GRI Index tends to decrease even though increase from 2014 to 2015. Our subsamples on readability index fluctuate from 2013 to 2017, and show sustainability report 2017 as least readable report. But, according to KLD Database Indicator, we found a progressive improvement on firms' environmental performance, either strength or concern, and PROPER Rank continuously raise from 2014 to 2017.

And for the last, we consider that sustainability disclosure may influenced by firm industry, so we divided the sample into seven

subsamples based on IDX industry base to Table 3. We exclude SIC 6 because many of prior study didn't employee it and relative risky. In addition, we also exclude SIC 7 because they do not issue sustainability report. SIC 2 disclose much context based on GRI, while SIC 4 provides the least. SIC 4 provides the most readable reports. The best quality disclosure are SIC 2 and SIC 0. All of industry basically have a good average on PROPER, but the highest is owned by SIC 1.

## 4.2. Correlation between Sustainability Disclosure Measurement Methods

Based on Table 4 that provides Pearson correlation result, there are two important issue that we can address related to CSRD issue in Indonesia. First that CSRD measurement based on quantity (GRI) and quality (KLD) has significant relationship. It means that Indonesia's Sustainability Report has similar trends in terms of quantity and quality. Second the conclusion that we can conclude is based on correlation between KLD and PROPER. Uniquely, KLD Strengths has not significant correlation while KLD Concerns has negative significant correlation with PROPER. It indicates on how PROPER awards mostly based on how environmental risk disclosure (KLD Concerns) of firms rather than environmental friendly act disclosure (KLD Strengths).

## 5. CONCLUSION

Empirical results in this research show that trend Indonesia's sustainability disclosure is generally low. However, if we divided our sample into the year, quality disclosure based on KLD and PROPER increase year to year. SIC 2 do the best disclosure on quantity and quality, but SIC 4 win the communication. Using Pearson correlation, we prove a significant positive correlation between quantity and quality sustainability disclosure, and PROPER award may rely on environmental risk disclosure. We acknowledge some limitation in this research, i.e. limited content analysis in KLD measurement, a relatively small sample, and limited to public companies issuing Sustainability Report.

## REFERENCES

- Beck, A.C., Campbell, D., Shrives, P.J. (2010), Content analysis in environmental reporting research: Enrichment and rehearsal of the method in a British-German context. *The British Accounting Review*, 42(3), 207-222.
- Bocken, N.M.P., Short, S.W., Rana, P., Evans, S. (2014), A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42-56.
- Fernando, C., Sharfman, M., Uysal, V. (2017), Corporate environmental policy and shareholder value: Following the smart money. *Journal of Financial and Quantitative Analysis*, 36, 1-29.
- Kalu, J.U., Buang, A., Aliagha, G.U. (2016), Determinants of voluntary carbon disclosure in the corporate real estate sector of Malaysia. *Journal of Environmental Management*, 182, 519-524.
- Kumar, T. (2017), Achieving sustainable development through environment accounting from the global perspective: Evidence from Bangladesh. *Asian Journal of Accounting Research*, 2, 45-61.
- Lo, K., Ramos, F., Rogo, R. (2017), Earnings management and annual report readability. *Journal of Accounting and Economics*, 63(1), 1-25.
- Loughran, T., McDonald, B. (2016), Textual analysis in accounting and finance : A survey. *Journal of Accounting Research*, 54(4), 1187-1230.
- Marimon, F., del Mar Alonso-Almeida, M., del Pilar Rodríguez, M., Alejandro, K.A.C. (2012), The worldwide diffusion of the global reporting initiative: What is the point? *Journal of Cleaner Production*, 33, 132-144.
- Martins, V.W.B., Rampasso, I.S., Anholon, R., Quelhas, O.L.G., Filho, W.L. (2019), Knowledge management in the context of sustainability: Literature review and opportunities for future research. *Journal of Cleaner Production*, 229, 489-500.
- Mattingly, J., Berman, S. (2006), Measurement of corporate social action: Discovering taxonomy in the kinder lydenburg domini ratings data. *Business Society*, 45, 20-46.
- Meng, X.H., Zeng, S.X., Shi, J.J., Qi, G.Y., Zhang, Z.B. (2014), The relationship between corporate environmental performance and environmental disclosure: An empirical study in China. *Journal of Environmental Management*, 145, 357-367.
- Michelon, G., Pilonato, S., Ricceri, F. (2015), CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical Perspectives on Accounting*, 33, 59-78.
- Radu, C., Francoeur, C. (2017), Does innovation drive environmental disclosure? A new insight into sustainable development: Does innovation drive environmental disclosure? *Business Strategy and the Environment*, 26(7), 893-911.
- Skouloudis, A., Evangelinos, K., Kourmousis, F. (2009), Development of an evaluation methodology for triple bottom line reports using international standards on reporting. *Environmental Management*, 44(1), 298-311.
- Sriyani, C., Lokuwaduge, D.S., Heenetigala, K. (2016), Integrating environmental, social and governance (ESG) disclosure for a sustainable development: An Australian Study. *Business Strategy and The Environment*, 26, 438-450.
- Tian, X.L., Guo, Q.G., Han, C., Ahmad, N. (2016), Different extent of environmental information disclosure across chinese cities: Contributing factors and correlation with local pollution. *Global Environmental Change*, 39, 244-257.