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

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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

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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, Lyndenberg, 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 (CSRD) 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 s		•	RD 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	0.332	0.099	0.703	0.187	
Year 2017 (5)	0.301	0.231	0.099	0.670	0.218	
			GL 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 23.428	26.974 26.263	18.727 21.301	1.847	
Year 2015 (29)	23.520	23.428			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: FK	RI 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	
	37.192					
Year 2017 (5)	37.192	33.065	46.904	28.860	7.924	
			RI 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	
			OG 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: CL	RI 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	1.015	
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	
real 2017 (5)	24.055			23.173	0.939	
			D_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: KLI	D_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	
1001 2017 (3)	0.520			0.200	0.200	
			PER 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 of								
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			
510 0 (1)			FKRI by SIC and year	10.727	1.0==			
	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 2 (15) 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			
		34.124	46.904	29.000	5.421			
SIC 5 (9)	35.588							
SIC 8 (4)	34.916	34.071	48.385	15.536	5.903			
			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)	21.270	21.174	24.983	14.681	1.767			
510 0 (4)	21.107		CLRI by SIC and year	14.001	1.707			
	Mean	Median	Minimum	Maximum	Standard deviation			
SIC 0 (10)	23.839	24.126	24.845	22.353	0.850			
SIC 0 (10) SIC 1 (35)	23.839		25.544		1.075			
		23.887		19.869				
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: P	ROPER by SIC and year	r					
	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	1.000							
	(0.805)								
FKRI	0.025	0.876***	1.000						
	(0.792)	(0.000)							
GFRI	-0.037	0.965***	0.905***	1.000					
	(0.701)	(0.000)	(0.000)						
SMOG	-0.056	0.970^{***}	0.760^{***}	0.938***	1.000				
	(0.561)	(0.000)	(0.000)	(0.000)					
CLRI	-0.021	0.071	0.376***	0.185^{*}	-0.076	1.000			
	(0.826)	(0.463)	(0.000)	(0.054)	(0.431)				
KLD_S	0.225**	0.047	0.084	0.059	0.033	0.079	1.000		
	(0.018)	(0.624)	(0.383)	(0.542)	(0.735)	(0.410)			
KLD_C	-0.401^{***}	-0.047	-0.052	-0.027	-0.025	-0.020	-0.440^{***}	1.000	
	(0.000)	(0.624)	(0.590)	(0.778)	(0.793)	(0.833)	(0.000)		
PROPER	0.065	-0.020	-0.141	-0.092	-0.006	-0.097	0.165	-0.228^{**}	1.000
	(0.569)	(0.857)	(0.213)	(0.417)	(0.959)	(0.390)	(0.145)	(0.042)	

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 CSRD measurement. It may be implies Indonesia applies lower standard for CSRD 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 CSRD 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.