Firms' Characteristics And Integrated Reporting: Evidence From Sri Lanka

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Abstract- *Integrated Reporting (IR) has become a new reporting dimension in current financial reporting arena. Recently most of the companies around the world have adopted IR concept which some far beyond the sustainability reporting in their financial statements. Since IR is not yet mandatory requirement in Sri Lanka, companies adopt IR for their reporting in various levels with the assistance of Integrated Reporting Framework guidelines given by the International Integrated Reporting Council (IIRC). Therefore this study focuses to investigate whether firms' characteristics determine the level of IR adoption in companies listed in Colombo Stock Exchange (CSE). Objectives of this study were to analyze the level of IR adoption, examine the impact of Firms' characteristics on level of IR adoption. For this study, all IR adopted companies were selected as the sample. It was revealed that 61 companies have adopted IR for their reporting by 2016. Data was collected for the years 2016 and 2017 using annual reports of selected companies. Level of IR adoption was used as the dependent variable while structure related, performance related and market-related firms' characteristics of a firm were selected as independent variables. Structure related variables are firm's listed age, leverage and ownership dispersion. As the performance related variables, profitability, assets and total sales were considered. Market value, audit firm size and industry type were selected as market related variables. Regression analysis was employed to analyze the impact of firms' characteristics on level of IR adoption. Findings revealed that there is a significant impact of Firms' Age, Leverage, Ownership Dispersion, Total Assets, Total Sales and Industry type on level of IR adoption.*

Keywords- Colombo Stock Exchange, Firms' Characteristics, Integrated Reporting, Integrated Reporting Index, International Integrated Reporting Council

I. INTRODUCTION

Business world has been rapidly advanced and almost all people are willing to concentrate towards its future betterment. Hence the necessity of proper communication between entity and its stakeholders has been arisen and this emphasizes the reporting requirement in the business organizations. When considering the Accounting arena the reporting dimensions have been gradually evolved and it is still transforming for new aspects which gives superior disclosures**.** During last decades stakeholders mostly expect non-financial information as well as financial information. For an aid of this requirement the sustainability reporting has come out and it facilitated a separate report for demonstrating non-financial performance of the entity. Despite availability of information, many stakeholders were unable to use pertinently the disclosed information due to separation of reports. This is the point where the concept of IR is emerged so as to depict the holistic view of the entity. The movements towards the IR has arisen a criticism that the sustainability reporting is unable to demonstrate the holistic view of an entity. Stakeholders are not willing refer number of reports so as to take the view of the entity (Hoque, 2017).

IR is still an area of continuous development, where most country's requirements on reporting are regulated or implemented on a voluntary basis. The only exception so far is South Africa, the market leader in IR; it is the first country implementing obligatory requirements for listed companies. Companies listed on the Johannesburg Stock Exchange must provide an Integrated Annual Report or explain why they have not according to the King III Code of Governance Principles, performed the 'apply or explain' basis (PWC, 2013). Adoption of IR is not yet mandatory requirement in Sri Lanka also. Hence companies listed in Colombo Stock Exchange (CSE) voluntary adopt IR for their reporting aspects as per their own perception regarding IR. Since there is no standard guidance and regulations in national level in Sri Lanka regarding adoption of IR, companies adopt IR in various dimensions and in different levels. So it is important to discuss and investigate about the level of IR adoption and whether firms' characteristics affect to determine the level of IR adoption. IR is still scarcely diffused and companies rarely comply with all guidelines included in International Integrated reporting Framework (De Villiers et al., 2014). So the level of IR adoption is varying from company to company. SinceIR is a newly emerged concept, most research studies focus on basic of its adoption and surface of the concept. Especially it is rare to find an exhaustive study regarding level of adoption of IR and reasons for these differences in Sri Lankan context. So this study focus on investigating the factors that affect to determine the level of adoption of IR and association between firms' characteristics and IR adoption in companies listed in CSE while filling the empirical and contextual research gap.

The problem addressed in this study was, "Do firms' characteristics affect to the level of adoption of IR?".Therefore the objectives of this study were, to investigate the level of IR adoption andto find out the impact of firms' characteristics on level of IR adoption in listed companies in Sri Lanka.

II. LITERATURE REVIEW

2.1 Integrated Reporting

International Integrated Reporting Council (IIRC,2013) has defined IR as a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. IIRC is a global coalition of regulators, investors, companies, standard setters, the accounting profession and NGOs. Its mission to establish IR and thinking within mainstream business practice as the norm in the public and private sectors. This council has been officially established on 2nd August 2010. Up to now IIRC has played a vital role regarding the development and promotion of IR within business firms. And also it has already introduced a well-organized IRFramework. The IIRC is not a regulator or a standard setter. Thus, companies are exploring IR with the IIRC voluntarily.

2.2 Empirical Findings on Integrated Reporting

At the emergence of the IR concept, most researchers focused to analyse the comparison of sustainability reporting and IR to evaluate and emphasis the difference between these two concepts and the superiority of IR concept (Jensen and Berg, 2012;Soyka, 2013;Makiwane, 2013; Dragu and Tudor, 2013; Zyl, 2013; James, 2013; Aceituno et al., 2014). Then researchers turned to investigate regarding the background of IR adoption, its connectivity with other related areas and responsible parties for adopting IR for business entities.(Aceituno et al.,2013; Lai et al.,2016; Arrubla and Grima, 2016; Garcia et al., 2015; Villiers et al., 2017; Rensburg and Botha, 2013; Serafeim, 2014). After establishing IR in business organizations, practitioners and scholars focused to investigate the value relevance of IR in order to ensure the newly adopted concept add value to the entity.(Kosovix and Patel, 2013; Yeo et al., 2014; Lee at al., 2015; Martinez, 2016). Recently researchers more likely to examine practical applicability of IR, level of IR adoption or the quality of IR adoption and how business model of entity consist with IR concept and its value creation.(Mervelskemper and Streit, 2017; Fasan and Mio, 2017; Lodhia and Stone, 2017; Tweedie et al.,2017)

Buitendag et al., (2017) investigated that how firm characteristics such as industry type, firm size, profitability and corporate governance characteristics affect on excellence in IR. Findings revealed that the type of industry has a significant effect on adoption on IR. Results confirm that an entity whose business has an effect on the environment will produce a more detailed integrated report legitimizing its business, compared with an entity that does not affect the environment. It was seen that larger entities have better resources to allocate to the integrated report and therefore produce a better report. It was also found that entities that are more profitable tend to produce integrated reports. Results for the corporate governance characteristics showed that entities with more females and directors of colour provided better integrated reports than their counterparties. This study has used top 100 entities listed on JSE for the financial years ending in 2013, 2014 and 2015.Comparison of categorical variables, mixed-model repeated measures ANOVA and generalized estimating equations were applied as analyse methods.

Jensen et al.,(2012) have investigated that, determinants of traditional sustainability reporting versus IR in an institutional approach. This paper examines possible county specific variables which may predict the prevalence of IR models in favour of more traditional models. As the independent variables, investor protection, level of expenditure, awareness of corporate responsibility and self-expression have been considered. Findings revealed that all variables have significant positive relationship with IR. So this researcher has suggested expanding or shifting his model with contingency theory by using different variables relevant to firm characteristics such as size, profit and ownership etc. According to that research paper this study can be considered as an expansion of previous research in another context.

Pistoni et al.,2018 found that most companies report IR but its quality is low. Further it states that firms follow the IR framework, but scarce information is disclosed on aspects such as capital, the business model, strategic priorities, and the value creation process; more attention is given to the IR form than to its content. The purpose of this study was to assess the quality of integrated reports issued by firms. 116 integrated reports have been used as the sample and a scoring model and an IR Scoreboard (IRS) has been developed to measure the quality of integrated report. The time period was 2013 and 2014.

III. METHODOLOGY

3.1 Population

All IR adopted companies which are listed in Colombo Stock Exchange were the population for this research study.

3.2 Sample

Population was considered as the sample. It was revealed that 61 companies have adopted IR for their reporting purposes by 2016

3.3 Data Collection

Data was collected for the years 2016 and 2017 using annual reports of selected companies. Annual reports were downloaded through CSE website.

3.4 Data Analysis Techniques

Regression Analysiswas used to analyzed the data. E-Views version 9.0 was used to run the data

3.6 Hypotheses

Hypotheses were developed as follows;

H_1 -: There is a significant impact of firms' listed age on level of IR adoption.

H_2 -: There is a significant impact of leverage on level of IR adoption.

H_3 -: There is a significant impact of Ownership Dispersion on level of IR adoption.

H_4 -: There is a significant impact of Profitability on level of IR adoption.

H_5 -: There is a significant impact of Total Assets on level of IR adoption.

H_6 -: There is a significant impact of Total sales on level of IR adoption.

H_7 -: There is a significant impact of Market Value on level of IR adoption.

H_8 -: There is a significant impact of Audit firm size on level of IR adoption..

H_9 -: There is a significant impact of Industry type on level of IR adoption..

3.7 Operationalization

Table 01 : Operationalization of Dependent and Independent Variables

Variable	Dimension	Indicators	Measures
Dependent Variable	Level of IR adoption	Degree of adoption of IR guidelines stated in International Integrated Reporting Framework	IR Index
Independent Variables	Structure related	Firm's listed age (AGE)	Number of years from listed year up to 2016
		Leverage (LEV)	Total Debt to Total Equity
		Ownership dispersion (OD)	% of Individual shareholdings
	Performance related	Profitability (ROA)	Return on Assets (ROA)
		Total Assets (ASST)	Natural logarithm value of Total Assets
		Total sales (SALES)	Natural logarithm value of Total Sales
	Market related	Market Value (MV)	Natural logarithm value of Market value
		Audit Firm Size (ASIZE)	Big four 1, Non-big four 0
		Industry type (IND)	Banking Sector 1, Non-banking 0

3.8 Research Model

$$IR = a + \beta_1 AGE + \beta_2 LEV + \beta_3 OD + \beta_4 ROA + \beta_5 ASST + \beta_6 SALES + \beta_7 MV + \beta_8 ASIZE + \beta_9 IND$$

Where,

IR	=	IR Index
a	=	Constant
β_{1-9}	=	Regression coefficients for respective variables
AGE	=	Firm's listed age
LEV	=	Leverage
OD	=	Ownership dispersion
ROA	=	Return on Assets
ASST	=	Total Assets
SALES	=	Total sales
MV	=	Market Value
ASIZE	=	Audit Firm Size
IND	=	Industry type

3.9 IR Index

Building a self-constructed index and selecting the items gives a great possibility of disclosure (Kosovic and Patel, 2013). This approach is used frequently in academic research hence there is no certified theoretical guideline for selecting the items.

In order to measure IR score of the company, self-constructed index was used. This author's self –constructed index was developed as per the IIRC-2013 framework (section 4 page 24). There are main eight content elements that an integrated report should include as per the IIRC-2013 framework. Disclosures under each content element have been considered when developing IR index.

To measure the disclosure equation 03 was applied.

$$SC_j = \frac{\sum_{i=1} X_i}{TS_j} \quad \text{Equation 01}$$

SC_j = Total scores complied for each company
X_i = Summation of disclosure of complying item for each company
TS_i= Total Summation of complied items of index

To assess the value of each item the binary model, 1 or 0 was applied, to determine if the information was disclosed or not. If the items were disclosed in the index, each item was given a value of one, and if not, a value of zero. The disclosure information was checked from annual reports and all index items were checked individually. A total of the index scores for each company and year were calculated in order to convert the scores receiving the scored ratio for each company. The sample of 48 companies' integrated annual reports in 2015 and 2016 are associated with the index, with 8 main categories divided into subcategories, providing a total of 31 items. The encoding, 1 or 0, has been done systematically and the same approach has been used in every company's information disclosure. This implies that the coding for each company has been equally treated; decreasing the subjectivity using the same technique.

IV. RESULTS AND DISCUSSIONS

4.1 Effect of firms' characteristics on level of adoption of IR

Table 2. Regression Analysis

Variable	Coefficient	Prob.
C	0.641604	0
AGE	0.001475	0.0243
LEV	0.083098	0.0333
OD	0.000255	0.0274
ROA	-0.001045	0.1265
ASST	-0.013992	0.0364
SALES	0.01646	0.0329
MV	-9.47E-05	0.9907
ASIZE	0.030398	0.3763
IND	0.078483	0.0039
R-squared	0.227066	
Prob. (F-statistic)	0.000489	

Table 2 depicts the statistical significance of each independent variable and its contribution to the model. With using table 2 result, research model can be demonstrated as follow.

IR = 0.642 + 0.001AGE + 0.083LEV + 0.000OD – 0.001ROA – 0.014ASST + 0.016SALES – 9.470MV + 0.030ASIZE + 0.078IND

Firm's age, leverage, ownership dispersion, firm's assets, firm's sales and industry type have probability values 0.02,0.03,0.02,0.03,0.03,0.03 respectively which are lower than 0.05. Since these variables have probability values less than 0.05, it can be concluded that Firm's age, leverage, ownership dispersion, firm's assets, firm's sales and industry type have significant effect towards the level of IR adoption. That means, these variables are capable enough to affect the dependent variable significantly. Firm's age has a positive coefficient of 0.001 which means that, when firm's age increases by one year, the level of IR adoption increases by 0.001 units. Leverage has a positive coefficient of 0.083 which means that, when leverage increases by one unit, level of IR adoption increases by 0.083 units. ROA has a negative coefficient of 0.001, but this variable is not significant in the model as per the probability value. Assets has a negative coefficient of 0.014 which means that, when assets increases by one unit, level of IR adoption decreases by 0.014 units. Sales has a positive coefficient of 0.016 which means that, when sales increases by one unit, level of IR adoption increases by 0.016 units. Market value and Audit firm size havenegative and positive coefficients of 9.470 and 0.03 respectively, but this variables are not significant in the model as per the probability values. Industry type has a positive coefficient of 0.078 which means that, when industry type change from non-banking to banking sector, the level of IR adoption increases by 0.078 units.

The R^2 value was 0.227 of this model. This indicates that 23% of the variation in level of IR adoption is explained by the variables in the model. So the fitness of the model is only 23%. The F-statistics (prob> chi 2) prove the efficiency of the estimated models at 1% level of significance and the value was 0.00049.

4.2 Level of IR adoption

Self-constructed index reflects the level of IR adoption of each company. In another words, IR index depicts how well companies comply with disclosure elements under the IR framework which was articulated by IIRC. Following shows the index statistics.

Mean Value of the index	0.784274
Minimum Value of the index	0.451613
Maximum value of the index	0.967742

The mean value indicates that averagely the Sri Lankan Companies have incorporated 78 % of the IR elements. Even though companies publish integrated report the level of adoption of IR elements into the report is little bit lower. They say that they have adopted IR for their reporting, but the reality is they just only disclose only some elements.

4.3 Summary of Hypotheses Testing.

H_1 -: There is a significant impact of firms' listed age on level of IR adoption- **Accepted**

H_2 -: There is a significant impact of leverage on level of IR adoption- **Accepted**

H_3 -: There is a significant impact of Ownership Dispersion on level of IR adoption-**Accepted**

H_4 -: There is a significant impact of Profitability on level of IR adoption- **Rejected**

H_5 -: There is a significant impact of Total Assets on level of IR adoption- **Accepted**

H_6 -: There is a significant impact of Total sales on level of IR adoption- **Accepted**

H_7 -: There is a significant impact of Market Value on level of IR adoption- **Rejected**

H_8 -: There is a significant impact of Audit firm size on level of IR adoption- **Rejected**

H_9 -: There is a significant impact of Industry type on level of IR adoption- **Accepted**

V. CONCLUSION

This study aimed to investigate the impact of firms' characteristics on level of adoption of IR & measure the level of IR adoption in listed companies in Sri Lanka. Findings revealed that some firms' characteristics affects to determine the level of IR adoption. Firms age is significantly affect toward the level of IR adoption and it shows a positive relationship with level of IR adoption. That means more the firm is older more the level of IR adoption. Well established firms with long history very much aware about their value creation process and qualitative aspects through its long term experiences. And newly emerged firms often try to capture the market and concentrate mostly towards the earnings and its growth. Such companies may rarely comply with all elements in the IR framework when preparing integrated report. This may be a reason for the positive relationship of these two variables. Firms with high level of leverage tend to disclose more of IR elements in their integrated report. When increasing external obligations firms pay more attention towards its' stakeholders perception towards the persistence of that company. So such companies always try to look perfect when they communicate with its stakeholders. Thus companies try to provide a best quality integrated report while complying more IR elements. Firm's asset also significantly affect towards the level of IR adoption but it has a negative relationship. So firms with high assets value should pay more attention towards their integrated report and ensure that they have disclosed enough IR elements in order to call them as integrated reports. There is a significant impact of total sales on level of IR adoption. Results revealed that the higher the sales higher the level of IR adoption. So firms with lower level of total sales should carefully review their integrated report and try to disclose more IR elements while complying IR framework. The firms in banking sector adopt IR more than firms in non- banking sectors. So non- banking sector companies should revise their integrated reports and make an effort to comply with all IR elements. Further findings revealed that averagely the Sri Lankan Companies have incorporated 78 % of the IR elements in their integrated reports. The maximum level f index is 96%. That means no company is comply fully with IR framework elements. Pistoni et al.,2018 found that most companies report IR but its quality is low. Further it states that firms follow the IR framework, but scarce information is disclosed on aspects such as capital, the business model, strategic priorities, and the value creation process; more attention is given to the IR form than to its content. This is the issue of voluntarily disclosers. The findings revealed that no company in Sri Lanka 100% comply with IR framework elements. If it is a mandatory requirement then all entities may anyhow comply with IR framework 100%. For an example accounting standards; except the certain exemptions firms fully comply with whole standard. So entities should try to offer a high quality integrated report with complying all elements in IR framework. And also regulatory bodies should consider and pay their attention to make this IR as a mandatory requirement in Sri Lanka as its add value to the company.(Kosovix and Patel, 2013; Yeo et al., 2014; Lee at al., 2015; Martinez, 2016). If it becomes a mandatory requirement then firms will offer a high quality integrated report instead of so called integrated report.

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