



Financial Statement Informativeness and Intellectual Capital Disclosures: With Special Reference to the Listed Companies in Sri Lanka

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ABSTRACT

Growing demand for financial and non-financial information by the users of financial reports leads to an emphasis on the informativeness of financial statements. Thus, reporting reliable and relevant financial and non-financial information becomes vital, and investments in intellectual capital, being highly demanding information by the users, hold an important place in providing informative financial reports despite the lack of proper accounting recognition criteria in financial statements. Thus, our study aims to analyze the relationship between financial statement informativeness and intellectual capital disclosure in Sri Lanka. Financial Statement Informativeness was measured using the explanatory power of financial information in explaining market value. Content analysis of annual reports followed by a quantity and quality index of Intellectual Capital Disclosure was used to measure the Intellectual Capital Disclosures. A sample of 48 companies listed on the Colombo Stock Exchange that disclose Intellectual Capital was used, and empirical analysis was carried out using the Poisson regression method. A significant relationship between Financial Statement Informativeness and Intellectual Capital Disclosures has been found, suggesting that Financial Statement Informativeness plays a substantial role in providing disclosure on intellectual capital in financial reports. This study confirms to make managers aware of its significant and positive effect on financial statement informativeness in financial reports, given the importance of Intellectual Capital Reporting in mitigating the disparity of financial information. An important implication of the findings is that policymakers and regulators need to establish a uniform methodology for reporting Intellectual Capital to establish consistent disclosure practices.

Keywords: Colombo Stock Exchange, Financial Statement Informativeness, Intellectual Capital Disclosure, Poisson Regression

INTRODUCTION

As a result of the growing information needs of users of financial reports, emphasis should be placed on the informativeness of financial statements in the contemporary business world. Therefore, companies focus more on providing meaningful, reliable, relevant

information beyond their financial statements. Also, there is no doubt that successful companies tend to be forward-looking and manage and communicate the value of their companies beyond that captured by numbers alone. Value can be generated by intangibles that are not

always reflected in financial statements, and they are an integral part of fully understanding the performance of companies. Thus, investments in intellectual capital (IC), which cannot be captured by numbers, such as employee training and development, processes, customer relationships, brands, research and development, and other areas, are significant in providing informative financial reports.

However, despite the significance of IC assets, they are often unreported in financial statements. This is due to measurement difficulties and lack of proper accounting recognition criteria in financial statements. International Financial Reporting Standards (IFRS) do not even help redefine many concepts, principles, and valuation methods of IC assets (Zeghal & Maaloul, 2015). Cheng, Lin, Hsiao, and Lin (2010) report that although IC assets may constitute 80 percent of a company's market value, they often go unreported in financial statements. This non-recognition of IC in financial statements has led to the destruction of the value relevance of financial information in explaining market value (Lev & Zarowin, 1999). In a similar study, it is concluded that, due to a considerable amount of IC investments being expensed instead of capitalized, the relevance of earnings and book value of equity has declined in explaining stock prices of US companies (Brown, 1999).

However, in the 21st century, the disclosure requirements in financial reports increased worldwide due to a reduction in financial statements' ability to meet users' information demands. Therefore, among the disclosure requirements, disclosure on IC should be prioritized due to its relevancy in reflecting the performance of companies. Even in Sri Lanka, it has been noted that there is a trend and an interest in reporting IC qualitatively outside the

financial statements (Jayasooriya, Gunawardana, & Weerakoon Banda, 2015). However, certain authors argued that user groups of financial statements do not exert any pressure on firms to disclose IC in Sri Lanka as they are not mandated by accounting standards or other regulatory requirements. Rather, it is in the firm's interest to report such information to stakeholders to enhance its perceived value (Abeysekera, 2006). Therefore, there's an issue regarding the extent of Intellectual Capital Disclosure (ICD) in financial reports in Sri Lankan companies.

However, in recent years, to mitigate this complication, several initiatives have been taken by International Integrated Reporting Council (IIRC) to provide principles-based guidance for companies and other organizations to prepare integrated reports focusing on the ability to create value in the short, medium, and long term. These initiatives include reporting on a broad base of capital (financial, manufactured, intellectual, human, natural, social, and relationship) to ensure that organizations consider all forms of capital they use or affect. Thus, IR is recognized as a reporting tool that shows a holistic picture of the company (Ulupui, Murdayanti, Yusuf, Pahala, & Sakaria, 2020)

As a result, some Sri Lankan companies started preparing "integrated" annual reports based on the Integrated Reporting Framework (IRF) guidance. The entities that follow integrated reporting consist of IC disclosures as it's a fundamental concept under IRF. Other entities that do not follow integrated reporting may also report on IC, such as human capital since such reporting enhances the link between financial information and market value.

Therefore, this study aims to analyze the relationship between financial statement informativeness (FSI) and IC disclosure

(ICD) of entities listed on the Colombo Stock Exchange (CSE) in Sri Lanka.

The contribution of our study is two-fold. First, it provides new knowledge on the relationship between FSI and ICD to the existing findings and information on ICD in the Sri Lankan context. This can be used to assess the quantity and quality of ICD in entities listed on the CSE. Second, the findings of this study will be most beneficial to the corporate entities, including the management, parties involved in the valuation of entities, investors, shareholders, and all other stakeholders in determining the actual market value of entities for their decision-making purposes.

The rest of our paper is organized as follows. Section 2 reviews the concepts of financial statement informativeness and voluntary disclosure in past literature. Section 3 discusses the hypothesis development and the methodological choices made in this study. Section 4 shows the results obtained and their analyses. Section 5 concludes the study by highlighting the research implications and direction for future research

LITERATURE REVIEW

Financial statement informativeness refers to the accuracy of the information in a company's financial reporting system, such as the signal coming from earnings and book value of equity (Maaloul & Zeghal, 2015). If financial information is relevant and valuable and can make a difference in the decisions made by users of the company's financial statements, that information is said to be "informative" (Tasker, 1998; Hail, 2013).

The term "intellectual capital" is currently widely used among regulators, professional bodies, and academics (Xiao, 2008). Even though there's no proper definition of IC in previous literature, it is argued that IC comprises

three significant categories: human capital, structural capital, and customer (relational) capital (Wang & Chang, 2005). Riahi-Belkaoui (2003), defines human capital as capital that helps innovate new products and services, in addition to enhancing business processes and practices. Structural capital consists of the knowledge that belongs to the company in terms of inventions, strategies, technologies, data, culture, publications, systems, structures, organizational routines, and procedures. Customer capital comprises the company's value generated from its franchises, ongoing customer relationships, customer retention and defection rates, and per-customer profitability. However, as per the accounting standards, which are so restrictive, only a few items can be recorded in the company's balance sheet regarding the IC (Zeghal & Maaloul, 2015).

Nevertheless, according to a past research, Lev & Zarowin (1999) shows that the usefulness of company's financial statements and the relevance of financial information to investors has clearly declined over the past two decades from 1977 to 1996 by using a sample of US companies. The reason is companies' inability to recognize IC information in financial statements. It is also increasingly accepted that intangibles (such as IC) capitalization improves the "residual earnings" valuation framework. The residual earnings valuation framework equates a company's intrinsic value to its current book value plus the present value of residual earnings (Dietrich, et al., 1997). A similar study shows that by using evidence from highly IC-intensive US companies, the explanatory power (R^2) for the regression of stock price on earnings and book values has dropped from 1983 to 2000 (Dontoh, Radhakrishnan, & Ronen, 2004). As

highlighted above, Aboody and Lev (2000); Lev, Sarath, and Sougiannis (2005) argue that nonrecognition of IC information complicates the information asymmetry between a company's managers and owners and also it leads to the misvaluation of the company and its future earnings.

As noted above, since most IC investments cannot be capitalized because of current accounting standards, several regulators and standard setters have recommended that companies voluntarily disclose IC information beyond the financial statements. Companies disclose IC information and non-financial information voluntarily in various reports, including annual reports (Mouristen, et al., 2003) and integrated reports (IIRC, 2013). The importance of IC information in enhancing the transparency between management and various stakeholders has motivated many companies to voluntarily disclose IC in the company's annual reports (Yi & Davey, 2010). According to Gamerschlag (2013), IC disclosures are helpful in decision-making and considered an essential driver of long-term corporate financial performance.

Furthermore, based on agency theory perspective, an argument exists for disclosing IC to reduce information asymmetry (Healy & Palepu, 2001). More recently, Bismuth & Tojo (2008) also show that reducing IC information asymmetry leads to a lower weighted average cost of capital (WACC) and higher market capitalization because IC information creates trustworthiness with stakeholders and promotes long-term view. According to Kim & Verrecchia (1994), voluntary disclosure reduces information asymmetry among informed and uninformed investors. They show that investors are confident about firms with a high exposure level and believe that their stock transactions occur at a fair

price, increasing liquidity in the firm's stock. A similar study highlights the negative relationship between low financial statement informativeness and the probability of company providing additional voluntary disclosures through conference calls (Tasker, 1998). Additionally, the companies with the lowest financial statement informativeness in the USA are the companies that voluntarily disclose Pro-forma earnings (Lougee & Marquardt, 2004). More recently, Ball, Hoberg, & Maksimovich (2013) found that Management Discussion and Analysis disclosures are more informative when the financial statements are less informative and vice versa.

However, in contrast to the negative relationship findings, Francis, Nanda, and Olsson (2008) shows that companies with high financial statement informativeness have a high level of voluntary disclosures in their annual reports than companies with low financial statement informativeness. This is interpreted by these authors as, when informativeness of financial statements is high, the willingness to voluntarily disclose is more, because the market may take non-disclosure as bad news and discount the value accordingly.

In consequence to the above, most of the research done in local context focused on ICD practices in annual reports of listed companies (Jayasooriya, Gunawardana, & Weerakoon Banda, 2015) and managerial perceptions regarding ICD practices of listed companies (Jayasooriya & Gunawardana, 2016). A similar study showed ICD trends between Sri Lanka and a developed nation Singapore, which highlighted the need for a uniform methodology in the ICD framework to establish consistent disclosure practices to compare firms globally for investor resource allocation (Abeysekera, 2008).

However, there are several guidelines and frameworks for the external reporting of IC (Abhayawansa, 2014). Normative IC disclosure frameworks were suggested in the early IC research in the early research (An, 2011). The recent literature regarding Integrated Reporting highlighted about six capitals, three of which are related to the IC categories (Beattie, 2013). It is also accepted that companies voluntarily disclose IC and non-financial information in a variety of reports, including annual, IC Mouristen, et al., (2003), sustainability Initiative, (2013), corporate social responsibility UNGC (2009) and integrated reports IIRC (2013). Specifically, from an IC perspective, there has been renewed interest in disclosing information about “capitals” in the latest development in corporate reporting integrated reports, which promotes the “creation of value over the short, medium and long-term” (IIRC, 2013). Consequently, one of the first studies to assess whether preparing an IR affects the level of IC disclosure shows that Integrated reporting leads to more IC disclosure, specifically to a greater variety of IC items disclosed and a greater emphasis on IC in the report (Wendy Terblanche, 2018).

The findings of the past studies lead us to develop the hypothesis for our study. According to Cohen (1992), Tasker (1998), Lougee and Marquardt (2004), Ball, Hoberg, and Maksimovich (2013), low financial statement informativeness leads to reporting on high disclosure of IC. In the contrary, Francis, Nanda, and Olsson (2008), shows that high financial statement informativeness indicates more expansive voluntary disclosure in annual reports. Therefore, based on the results of the previous studies, can conclude the relationship between financial statement informativeness and voluntary disclosure of extra financial information is generally mixed. Moreover, to the best of our knowledge, there are no studies on the

impact of financial statement informativeness on the voluntary disclosure of IC information in the Sri Lankan context. Therefore, this directly leads to the hypothesis of the study, based on the identifications in an international context.

Thus, the hypothesis of the study is developed as follows,

H1. There is a significant relationship between financial statement informativeness and IC disclosures of listed companies in Sri Lanka.

METHODOLOGY

Research Design

A quantitative approach is chosen for the study owing to the nature of the research problem. All listed companies who disclose the intellectual capital information in 2019 excluding the banking, insurance and finance sectors are included for the analysis. Poisson regression is applied for the data analysis considering the nature of the dependent variable of the study.

Econometric Identification

To achieve the research objectives, we developed the below two equations for the quantity of IC and Quality of IC.

$$QtyIC_i = \beta_0 + \beta_1 FSI_i + \beta_2 size_i + \beta_3 ROA_i + \beta_4 GRW_i + \beta_5 LEV_i + \epsilon_i \dots \dots \dots (1)$$

$$QlyIC_i = \beta_0 + \beta_1 FSI_i + \beta_2 size_i + \beta_3 ROA_i + \beta_4 GRW_i + \beta_5 LEV_i + \epsilon_i \dots \dots \dots (2)$$

Where,
 Qty IC_i = Index measuring the quantity of IC disclosure for company i , Qly IC_i = Index measuring the quality of IC disclosure for company i , FSI_i = Financial statement informativeness for company i ,

$SIZE_i$ = Size of the company i , ROA_i = Performance of company i , GRW_i = Sales growth of company i , LEV_i = Leverage ratio of company i

Measuring the IC Disclosure Variable

To measure the IC disclosure variable, the content analysis method is used. This method involves analyzing the corporate annual reports of companies listed on the Colombo Stock Exchange (CSE) to extract financial and non-financial, qualitative, and quantitative data of IC. The data extracted from the annual reports were coded using a coding sheet, which attributed scores to create indices for measuring the IC disclosure variable.

Content analysis of annual reports is mainly used in analyzing the IC disclosures for developing the indices of IC. The annual reports which include IC under the categories of human capital, structural capital and relational capital is mainly analyzed on a sentence analysis basis. The IC information used was mainly extracted from the sub-category of the heading *Capital Management Review* of annual reports. However, since there is no common procedure or common area, the details of IC were extracted from the following areas of annual reports as well. They are *Management Discussion and Analysis*, *Corporate Social Responsibility*, *Supplementary Information*, *Creating Value for Stakeholders*, and a separate area named *Intellectual capital* as well.

IC Disclosure Indices

Firstly, to measure the IC disclosure variable, the major task is to develop a suitable disclosure index comprising items of IC information that are expected to be disclosed in annual reports. As stated by Steenkamp, & Northcott (2007), it is better to adopt previously used categories as far as possible to enhance comparability with other studies but with reservation. Also, Husin (2012) suggests that it is more appropriate to

read the whole annual report so that relevant information which does not meet the original set of IC items and indicators can be added to the index to avoid doing a partial content analysis (Beattie, 2004).

However, in this study, a list of IC items to look for in annual reports is determined first. To do this, a precise classification of categories and subcategories (items) for IC is developed based on past research papers. As stated by Abeyssekara & Guthrie (2005), clustering of IC items into sub-categories provides a useful explanation in relation to the content of their IC categories.

In this study, two indices are built to measure the IC disclosure variable. One index is on the basis of disclosure quantity and the other index is on the basis of disclosure quality.

Index for Measuring IC Disclosure Quantity

The first index is based on the volume or frequency of IC disclosure. Recording only that an IC sub-category is mentioned at least once is a very partial analysis of the amount of IC disclosed in annual reports. Therefore, the extent to which the IC disclosures are repeated is also of interest. In this regard, even though this involves redundancy, repetition is a communication strategy used for emphasis and reinforcement and shows the importance given by management to these messages (Beattie & Jones, 2001). Therefore, this importance introduced by a reporting entity to different categories of information is assumed to be reflected by the extent/quantity of information disclosed (Krippendorff, 2004).

The first index for disclosure is therefore calculated as:

$$\text{Quant_IC} = \frac{\text{Total number of items disclosed about IC}}{\text{Total number of items disclosed about IC}}$$

Index for Measuring IC Disclosure Quality

Consequently, the content analysis of IC disclosure is only about investigating the volume of disclosures is potentially misleading, when it is the credibility or quality of disclosure that is important (Toms, 2002). Further, certain authors, including Hasseldine, Salama, & Toms (2005), pointed out that content analysis measuring the volume of disclosures is insufficient for the purpose of identifying underlying relationships. Content analysis with a quality-adjusted method is emphasized, in which disclosures are counted but also weighted to reflect their likely significance (Hasseldine, Salama, & Toms, 2005). However, there is no generally accepted theory to predict users' information needs and there is an absence of an appropriate generally accepted model for the selection of the items of information to be included in a disclosure index to determine the quality of the information in any corporate annual report (Beattie & Thomson, 2007). However, based on the prior study recommendation of Maaloul & Zeghal (2015), this study developed an index for measuring quality, based on the orientation of information disclosed on IC, such as historic/ forward-looking orientation and quantitative/ qualitative orientation. As illustrated graphically in the following figure, for each sentence containing IC information the following scores were attributed.

- Score 1: If the sentence contains qualitative historic information on IC.
- Score 2: If the sentence contains quantitative historic information on IC.
- Score 3: If the sentence contains qualitative forward-looking information on IC.

- Score 4: If the sentence contains quantitative forward-looking information on IC.

The second index is therefore calculated as:

$$Qual_IC = \text{Sum of scores assigned}$$

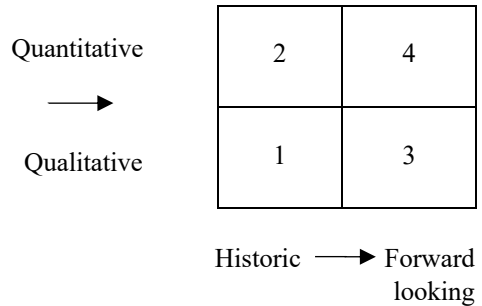


Figure 2: ICD Quality index

To ensure that the index captured quality not the quantity of disclosure, an item (disclosure) disclosed by the company only once is considered, even if it was repeated several times in the report (Oliveira, Rodriguez, & Craig 2006; Jones 2007). It is accepted, that if the information is more quantitative and forward-looking the better it's quality. Therefore, the heaviest weight is assigned for score 4 which is quantitative and forward-looking.

Measuring the Financial statement informativeness (FSI) variable

The financial statement informativeness (FSI) is examined in terms of value relevance (Maaloul & Zeghal, 2015). In this study, the determination coefficient (R²) is used because of its relevance. The adjusted R² is estimated by using the following linear regression formula.

$$P_i = \beta_0 EPS_i + \beta_1 BVS_i + \beta_2 EPS_Neg_i + \epsilon_i$$

Where,

P_i = Stock price for company *i* at the end of the year, *EPS_i* = earnings/loss per share for company *i*, *BVS_i* = Book value of equity per share for company *i*,

$EPS_Negiq = 1$ if the EPS is negative, otherwise 0

When the adjusted R^2 is high, it indicates that financial information has a significant influence in explaining variation in stock price. Simply, this shows the association between reported earnings and stock returns is high which increases investor demand. Moreover, the financial information is “informative” which is useful for decision makers. In contrast, when the adjusted R^2 is low, it shows that the financial statement informativeness is low, indicating that variation in stock price is not greatly explained by financial information presented in financial statements. Information can be explained by other non-financial information such as intellectual capital that is not taken into financial statements.

However, in our study, the data for this equation is estimated for each company in a time series, using quarterly data over a period of 8 years (8 years \times 4 quarters = 32 observations) for each company, to determine the financial statement informativeness. Here, the assumption is that past financial statement informativeness is a reasonable proxy for the current financial statement informativeness (Lougee & Marquardt, 2004)

Sampling Design

The population represents all the listed companies on Colombo Stock Exchange (CSE) in 2019. However, companies listed in the sector of bank, finance, and insurance are excluded initially due to different accounting rules applied to those companies. Then from the initial sample, companies that do not disclose IC is excluded as some observations in the dependent variable would be zero otherwise. In addition to that, the companies who have not published their annual reports for the recent 08 years is also excluded, given that the financial

statement informativeness variable is calculated for each company over the past 08 years.

Table 1: Sample

<u>Population</u>	
No. of listed companies in CSE in 2019	298
<u>Exclusions</u>	
Bank finance and insurance sector	(70)
Companies that do not disclose IC	(171)
Companies who have not published their annual reports for recent 08 years	(9)
Sample	48

Data Analysis Tools

Since the dependent variables in equations are count data, which do not include negative values (because measurement of data was in the number of occurrences of an event), the linear regression method should not be applied (Maaloul & Zeghal, 2015). Therefore, in this study, the Poisson Regression Method is used to estimate the two equations (Zeghal, Mouelhi, & Louati, 2007; Cerbioni & Parbonetti, 2007). According to Kennedy (2003), this method is considered the best approach to process count data. Finally, the data were analysed using the Statistical Package for the Social Sciences software (SPSS). Following the majority of previous research, this study is based on a single year, i.e. 2018, because disclosure policies for a company are considered relatively constant over the years (Botosan, 1997) and thus, this is considered to be cross-sectional research.

FINDINGS

Results of Index measuring Quantity of IC

The results of the ICD index measuring quantity of IC, indicate that companies in

Sri Lanka reports an overall standard level of disclosure in all categories of IC. Based on the outcome of the index, human capital has emerged as the most reported category. Relational capital was the second most reported category. However, the least reported was the structural capital. Table 02 shows the overall results by intellectual capital category.

Table 02: ICD frequency

IC Category	Frequency
Human capital	5861
Relational capital	4344
Structural capital	1974

Results of Index measuring Quality of IC

Based on the outcome of the quality index, the most reported score from the index was Score 1 which is the Qualitative historic information category. The second most reported score was Score 2 which is the Quantitative historic information category. The least reported score was Score 4 which is the Quantitative forward-looking information category. Therefore, based on the results of the quality index, can conclude that IC disclosure quality in Sri Lankan companies is found to be very low as quantitative forward-looking information is zero in almost all the companies in the sample as shown in Table 3.

Table 03: Weightage of ICD quality index

Score	Weightage
Score 1: Qualitative historic	/ 7147
Score 2: Quantitative historic	/ 2702
Score 3: Qualitative forward-looking	/ 1030
Score 4: Quantitative forward-looking	/ 0

Descriptive Statistics

Table 04 presents the means, standard deviations, medians, minimum and maximum values of all the dependent, independent and control variables of both models based on Poisson regression. The mean of the index measuring the quantity of IC disclosure (*Quantity IC*) is approximately 337 and varies between 82 and 700 for information disclosed on IC in the annual reports of Sri Lankan listed companies. Moreover, the mean of index measuring the quality of IC disclosure (*Quality IC*) is approximately 220 and varies between 46 and 500 for scores assigned to the information disclosed on IC.

In addition, the tables show the mean of the independent variable of financial statement informativeness (FSI) measured using the determination coefficient (adjusted R²) from the linear regression of stock price on earnings and book value is as 29%. The coefficient varies between 0.4% and 80%.

Table 04. Descriptive Statistics

Variab les	N	Mea n	Std. Devi ation	Mini mum	Maxi mum
Quanti ty IC	48	337. 2448	161. 2761	82	700
Qualit y IC	48	219. 5306	100. 4591	46	500
FSI	48	0.29 17	0.20 73	0.00 4	0.803 0
Size	48	9.93 76	0.67 00	8.50 22	12.71 06
Perfor mance	48	0.05 07	0.06 37	- 0.12	0.289 6
Growt h	48	0.03 66	0.29 25	- 0.92	0.720 3
Levera ge	48	0.31 48	0.63 75	0.00 03	4.457 6

Multivariate Analysis

The hypothesis was tested using a multivariate analysis by estimating the Poisson (1) and (2) regression equations.

Estimating Equation 1

The results of the Poisson regression regarding the relationship between the financial statement informativeness and the quantity of IC disclosure appear in Table 05 and Table 06.

As shown in Table 05, the omnibus test, which tests whether the explained variance in a set of data is significantly greater than the unexplained variance overall, shows that the overall model for the equation seems satisfactory, as all ratio chi-square ratio probabilities are statistically significant at 1% significance level.

As per the results in table 06 parameter estimates, the IC disclosure is statistically significant with financial statement informativeness (FSI) at 1% significance level. Regarding control variables, the results show that, IC disclosure (Quantity IC) is statistically significant with the company size (SIZE), its performance (ROA) and its leverage at 1% significance level. Also, IC disclosure is statistically significant with growth at 10% significance level.

However, when considering the coefficient estimates, the results show a statistically significant positive relationship between financial statement informativeness (FSI) and IC disclosure (Quantity IC). This can be explained in the following manner: when the financial statement informativeness is low in companies, the disclosure of IC in quantity is also low and vice versa in companies in the Sri Lankan context. Regarding the control variables, the results of coefficients show that IC disclosure is positively and significantly correlated with the company size (SIZE),

company performance (ROA), growth, and leverage respectively. Therefore, the results are consistent with the previous studies that the level of IC disclosure increases with the company’s size Bozzolan, Favotto, & Ricceri (2003), Striukova, Unerman, & Guthrie (2008), its performance (Cerbioni, 2007), its growth (Garcia-Meca, Parra, Larran, & Martinez, 2005) and leverage levels (Gerpott, Thomas, & Hoffmann, 2008).

Table 5: Omnibus Test – Model 1

Likelihood Ratio Chi- Square	df	Sig.
936.692	5	0.000***

Note: ***Significant at the 1% significance level

Table 06: Parameter Estimates – Model 1

$$\text{Quant } IC_i = \beta_0 + \beta_1 FSI_i + \beta_2 SIZE_i + \beta_3 ROA_i + \beta_4 GRW_i + \beta_5 LEV_i + \mu_i$$

Variables	β	Std. Err or	Hypothesis Test		
			Wald Chi-Square	df	Sig.
Intercept	2.768	0.157	572.605	1	0.000***
FSI	0.326	0.0380	73.603	1	0.000***
Size	0.276	0.0111	615.912	1	0.000***
Performance	2.483	0.1289	371.060	1	0.000***
Growth	0.048	0.0287	2.750	1	0.097*
Leverage	0.197	0.0106	348.313	1	0.000***
Scale	1 ^a				

Notes: *, *** represent significance levels of 10% and 1% respectively.

Estimating Equation 2

The results of the Poisson regression regarding the relationship between financial statement informativeness (FSI) and the quality of IC disclosure appear in Table 07 and Table 08. As the results of the omnibus test appears in Table 11, the overall model for the regression equation is deemed satisfactory as all ratio chi-square ratio probabilities are statistically significant at 1% significance level.

As per the results in Table 08 parameter estimates, the IC disclosure (Quality IC) is statistically significant with financial statement informativeness (FSI) at 1% significance level. Regarding control variables, the results show that, IC disclosure (Quality IC) is statistically significant with the company size (SIZE), its performance (ROA) and its leverage at 1% significance level. Also, IC disclosure is statistically significant with growth at 10% significance level.

However, when considering the coefficient estimates, the results show a statistical significant positive relationship between financial statement informativeness (FSI) and IC disclosure (Quality IC). This can be explained in the following manner: when the financial statement informativeness is low in companies, the disclosure of IC in quality is also low in companies and vice versa in the Sri Lankan context. Regarding the control variables, the results of coefficients show that IC disclosure is positively and significantly correlated with the company size (SIZE), company performance (ROA) and leverage respectively. However, the association between IC disclosure (Quality IC) and growth is significantly negative in the whole sample. Accordingly, it seems that, in the companies that voluntarily disclose more information on IC, the growth level is low and vice versa.

Table 07: Omnibus Test – Model 2

Likelihood Ratio Chi- Square	df	Sig.
391.068	5	0.000***

Note: *** Significant at the 1% significance level

Table 8: Parameter Estimates – Model 2

$$\text{Qual } IC_i = \beta_0 + \beta_1 \text{ FSI}_i + \beta_2 \text{ SIZE}_i + \beta_3 \text{ ROA}_i + \beta_4 \text{ GRW}_i + \beta_5 \text{ LEV}_i + \mu_i$$

Variables	β	Std. Error	Hypothesis Test		
			Wald Chi-Square	df	Sig.
Intercept	3.3	0.148	504.30	1	0.000
	36	6	0		***
FSI	0.2	0.047	22.056	1	0.000
	23	5			***
Size	0.1	0.014	157.48	1	0.000
	81	4	6		***
Performance	2.3	0.157	214.87	1	0.000
	14	9	8		***
Growth	-	0.034	3.077	1	0.079
	0.0	5			*
Leverage	0.1	0.013	216.55	1	0.000
	91	0	8		***
Scale	1 ^a				

Notes: *, *** represent significance levels of 10% and 1% respectively.

CONCLUSION

This study examines how the financial statement informativeness of annual reports of companies listed on CSE influences the quantity and quality of IC disclosure. Therefore, the aim of the study is to analyze the relationship between FSI and IC disclosure. By using a sample of 48 listed companies in CSE, the study predicted a significant relationship between FSI and IC disclosure. Specifically, the study analyzed the extent of IC disclosure in relation to FSI with the introduction of

IRF by IIRF in Sri Lankan listed companies.

Thus, the results teach several lessons. *First*, the empirical findings show that there is a significant relationship between FSI and IC disclosure. More specifically, the findings suggest that FSI plays a major role in providing disclosure on IC in financial reports. *Second*, the results show a statistically significant positive relationship between FSI and IC disclosure. This means when the FSI is low, the disclosure on IC is also low and vice versa. *Third*, ICD index of quantity shows that among the three capitals human capital is the most reported capital while structural capital is the least reported capital in Sri Lankan companies. Also based on the quality index of IC, it indicates that the quality of IC disclosure in relation to quantitative form and future orientation seems to be very low in Sri Lankan companies.

The study may have several practical implications. *First*, this study implies feedback to regulators and standard-setters to assess the current application of their current frameworks and guidelines for the voluntary disclosure of IC. *Second*, IC disclosure is a significant means on conveying high quality within the corporate industry. Therefore, human capital, relational capital, structural capital is considered to be important elements of firm's competitive strategies and the way this is communicated holds a significant place.

This research contributes to the IC disclosure literature by investigating how FSI may have influenced IC disclosure to reduce information asymmetry. In addition, this study contributes to the current debate about the measurement of the quality of IC disclosure in which other researches could also use the index developed in this study to assess the quality of IC disclosure.

Although this study supports and complements the current literature there are some methodological limitations. *First*, it only examines annual reports. A significant amount of IC information could be found in other corporate communications. *Second*, it suffers from the subjectivity that is inherent in the use of content analysis such as using sentences as the unit of analysis. *Third*, high subjective judgments when categorizing IC disclosure into indices. Perhaps, the volume and nature of IC disclosure are based on various coding rules adopted and the subjective judgment of the coder in applying them. This means it is not clear in many instances which IC sub-category the disclosure has to be allocated to. This makes it difficult to compare across studies and interpretations. *Fourth*, including a quality index measure in which having no standard quality measure recognized in IC disclosure literature brings some measurement difficulties. Also, due to the time constraints, analyzing only the capital management area in annual reports which include human, relational, and structural capital cause to miss of a relative amount of IC information.

Future research could investigate the disclosure of IC information in other corporate areas, such as the company's website, press releases, conferences, and prospectuses. *Second*, there is a future research opportunity to investigate the impact of using different quality IC disclosure measures on the same data set to understand whether they reveal significantly different results. *Third*, it opens future research to be transparent and accountable in analyzing IC information for comparisons of findings across studies. This help to address the problems of comparability across IC disclosure studies and also it would provide real practical examples of the IC concept.

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