

Sustainability Reporting to Integrated Reporting: The Relationship between Total Integrated Reporting Disclosure Quality (TIRDQ) and Firm Performance

Mira Susanti Amirrudin, Mazni Abdullah, Zakiah Saleh

Abstract: In 2013, the International Integrated Reporting Council (IIRC) calls the organisation to prepare its annual report following the IR Framework for a better reporting of financial and non-financial information and enable various users of the annual report to understand how the company creates its value. Considering the new implementation of IR, research should analyse the content of IR disclosures and the impact of reporting annual report based on IR framework 2013 towards the company's performance or value. It is important to emphasise that an IR does not merely combine two reports as one, but it is a way of communicating to various stakeholders about company's performance, strategy, governance and its external environment. Using the data of 360 firm-year observations of IR companies, this study examines the quality of IR by developing TIRDQ and identifies if there is any relationship between TIRDQ and firm performance. The finding provides evidence that companies preparing high-quality IR report show a significant positive relationship with firm performance. This research contributes by presenting empirical evidence about the benefits of IR Framework adoption. The TIRDQ score from this study will be necessary for IR preparers, policymakers and standard setters to assist in evaluating the capacity of IR as a tool for enhancing corporate reporting.

Keywords: Integrated Reporting, Disclosure Quality, Firm performance

I. INTRODUCTION

Given the new development of IR, García-Sánchez, Rodríguez-Ariza, & Frías-Aceituno (2013) emphasized that research should examine the actual contents of IR and the effect of IR reporting on firm performance or value. Previous studies on the early adopters of IR in South Africa show that there is an increase in disclosures of capitals information (Setia, Abhayawansa, Joshi, & Huynh, 2015; Solomon & Maroun, 2012). Studies also find that IR reports range in practices (Stent & Dowler, 2015) lengthy rather than concise and not following IR Framework (Wild & van Staden, 2013). According to Wild and van Staden, (2013), early reporters of IR are not achieving the standard of reporting required by

IIRC since there is no relevance Standard and Framework for IR. It seems that companies took the information revealed in a traditional Sustainability Reporting (SR) and put this information strategically on the IR to appear as if the organisation successfully integrated sustainability issues into the business (Clayton, Rogerson, & Rampedi, 2015). Stubbs and Higgins (2013) find that the organization's IR was essentially stapling the two reports, i.e., sustainability report and financial report together and renaming it as an IR, and this practice has not encouraged innovations in disclosure mechanism.

Similarly, a survey conducted by GRI on pioneers of IR in 2010 to 2012 shows that half of the published IR analyzed are a combination of the annual report and sustainability report together under one cover with a minimum cross-connection (GRI, 2013). Academicians and institutions argued out that IR could convey external benefits to the organization such as improving access towards capital market (Wild & van Staden, 2013), productive allocation of capital (IIRC, 2013d) lower cost of capital (IIRC, 2014) demonstrates how organization can create and sustain value (Watson & Monterio, 2011) and provides forward-looking information (Melloni, 2015). IR can bring internal benefits to the organization in the form of accelerating integrated thinking and therefore can lead to better management decision making (Brown & Dillard, 2015; Stubbs & Higgins, 2013, 2015). IR can reduce information asymmetry by signalling to investors that the objective of IR is to improve the quality of current reporting (IIRC, 2013). Since IR is widely accepted at international level by various firms and professional bodies, there is a need to study the implication of this new reporting framework towards firm performance.

The effect of IR on firm performance is indeed a valuable matter. Changing to IR is a costly decision, and there is a need to ensure that the benefits of IR outweigh its costs. Previous studies provide a mix of evidence between IR and firm performance. There is significant positive evidence between IR and Return on Asset (Albetairi, Kukreja, & Hamdan, 2018), IR and Tobin's Q (Lee & Yeo, 2015) and IR and cost of capital (Barth, Cahan, Chen, & Venter, 2017). On the other hand, Motavassel, Ansari,

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Golzar and Zarfsaz (2013), found that there is no significant relationship between IR and firm performance. IR adoption and understanding the impact of IR report is an under-researched area that is of significant interest to be explored (Adams, 2014; De Villiers et al., 2011; Eccles and Krzus, 2010). Most of the studies on IR disclosures are carried out in South African countries which require companies to mandatory disclosed IR for companies listed in Johannesburg Stock Exchange (Barth et al., 2017; Lee & Yeo, 2015; Zhou, Simnett, & Green, 2017). There is a need to assess whether the IR disclosures will have any impact on firm performance in voluntary reporting countries. To enhance the research between IR and firm performance, the objective of this study is to provide empirical evidence on the benefits of IR reporting both voluntary and mandatory reporting companies. This study draws a sample of IR companies from IIRC websites. A total of 120 companies from the year 2014 to the year 2016 (360 firm-year observations) is selected for this study comprises of companies from voluntary and mandatory reporting countries.

II. LITERATURE REVIEW

According to signalling theory (Spence, 1973), the primary objective of the corporate disclosure is to inform investors and analysts about the firm quality and value. Signalling theory suggests how a company gives signals to users through financial reports. This signal contains information about the results of managers’ activities to realise the owner’s wishes. The signals can be a firm’s performance, such as financial and annual reports or other information, which states the company's prospects are better than others. According to Oliveira, Rodrigues, and Craig (2006), signalling theory in organisations will signal news to investors and other stakeholders through voluntary disclosure

IR demonstrates how an organisation creates value through the connectivity of strategic objectives, risk, and performance (IIRC, 2013), and this requires the company to report in cohesive manners on their commitment to the value creation activities. Since the disclosure of IR is to inform the investors and analyst about the firm quality or value, this suggests that disclosure decisions in the IR involve reporting only relevant information about firm performance. Therefore, if the IR is

prepared by IR Framework 2013, this signalling the quality of the company towards their stakeholders and signal received is shown through firm performance.

A. Integrated Reporting Framework 2013

Table 1 shows that the framework for IR consists of fundamental concepts, guiding principles and content elements. The IR Framework introduces three fundamental concepts, which are the concept of the six capitals, the need to explain the organisation’s business model and the value creation and destruction over time. Capitals are categorised in the Framework as financial, manufactured, intellectual, human, social and relationships, and natural capital. Although the Framework does not mandate that all the capital as mentioned above categories apply to all organisations, it proposes that the categories as mentioned earlier be used as a guideline to ensure that the company does not ignore the capital it uses or affects.

In the context of IR, value is created through the business model of an organisation that takes input from the capitals and transforms it through business activities and interactions to generate results and outcomes that create or destroy value for the company, its stakeholders, community and the environment in the short, medium and long term (IIRC, 2013). The IR Framework 2013 guiding principles suggest the company to report on strategic focus and future orientation, connectivity of information, stakeholder responsiveness, materiality and conciseness, reliability, completeness and consistency and comparability (IIRC, 2013a). There are eight areas identified in the IR as a basis for its content elements. The importance of analysing the content elements of the Integrated Report lies in the fact that they are considered as essential factors of organisational value creation (IIRC, 2013).

TABLE 1:IR Framework

Fundamental concepts	Guiding principles	Content elements
1. Capitals <ul style="list-style-type: none"> • Financial • Manufactured • Intellectual • Human • Social and relationship • Natural 2. The Business Model 3. The Creation of Value over time	1. Strategic focus and future orientation 2. Connectivity of information 3. Stakeholder relationships 4. Materiality 5. Conciseness 6. Reliability and completeness 7. Consistency and comparability	1. Organisational overview and external environment 2. Governance 3. Business model 4. Risks and opportunities 5. Strategy and resource allocation 6. Performance 7. Outlook 8. Basis of presentation

B. Firm Performance Measurement

Firm performance can be viewed as how efficient an entity enhances its capabilities in generating earnings and increase shareholders’ wealth. This study employed four indicators that were commonly used in prior studies to measure firm financial performance. Firm performances will be based on

corporate financial performances such as Return on Assets (ROA) and Return on Equity (ROE), and market-based performances will be Return on Invested Capital (ROIC) and Tobin’s Q (TQ)(Bhattacharyya, 2014; García Jara, Cuadrado Ebrero, & Eslava Zapata, 2011).



Content analysis is a method commonly used by the researcher to examine the relationships between various content elements in IR and firm performance. Lee & Yeo (2016) research on IR companies in South Africa found a positive relationship between IR disclosure score and firm value, and this shows that reporting annual report based on IR Framework gives benefits to the company. They also state that publishing IR can lessen information asymmetry between company and stakeholders.

Extending the research of Lee & Yeo (2016), Barth et al. (2017) conduct similar research by separating firm values into three components, namely liquidity, capital costs, and expected future cash flows in South African companies. The results showed that integrated reporting has a positive relationship with firm value, which is consistent with the findings of Lee & Yeo (2016). Also, Albetairi, Kukreja and Hamdan (2018) study of IR on the listed insurance companies found that there is wide variation in the disclosures of IR and use of non-uniform disclosures format. Furthermore, they found a positive and significant relationship between the business model, strategy and resource allocation with Return on Assets (ROA), while risk and opportunities and performance elements negatively, but significantly related to ROA. Barin (2016) found that there no significant evidence between IR and ROA and ROE. However, the sample size in his study is only six companies, and the panel data are for two years only.

Based on the above discussion, this study hypothesises the following:

H₁: There is a positive relationship between IR and firm performance

III. METHOD

A. Data Collection

The sample for this study comprises 120 companies listed from the IIRC websites and self-declared as IR reporters. There is no quality assessment conducted by IIRC on these IR reports. The quality of IR reports is measured by developing a Total Integrated Reporting Disclosures Quality (TIRDQ) Index consists of eight themes, and each theme consists of 10 items, and this creates a total of 80 items. Quality ratings for the IR report are based on Toms (2002), which measures the disclosure quality from 0 to 5. The maximum score of the IR

TABLE 3 presents the results of regression analysis between TIRDQ, firm performance and control variables.

report, therefore, will be 400. Firm performance in this study is based on accounting performance (ROA and ROE) and market performance (ROIC and TQ). Control variables in this study are based on the size of the company, board size, leverage, industry classification and year of IR report issued (2014, 2015 and 2016). Firm performance data and control variables data are collected from DataStream.

B. Research Model

The relationship between TIRDQ index and firm performance are tested using ordinary least square method. The model for the study is as follows:

$$FIRMPERF = \alpha + \beta_1 TIRDQ + \beta_2 SIZE + \beta_3 BSIZE + \beta_4 LEV + \beta_5 IND + \beta_6 YR + \epsilon$$

Where FIRMPERF is the ROA, ROE, ROIC or TQ of the company, α is the intercept, TIRDQ is the index represents the quality of IR report, SIZE is the Log₁₀ of company total assets, BSIZE is the board size of the company, LEV is the leverage of the company measured as long term debt of the company, IND is the binary number of 0 and 1 to represents financial and non-financial companies, YR represents the year annual IR report is published and ϵ is the error term.

IV. RESULTS AND DISCUSSION

A. Descriptive Statistics

The maximum score for Total Integrated Reporting Disclosure TIRDQ Index is 370, while the lowest at 160 with an average score of 265. Firm performance shows that there is a company in the sample has a negative ROA with -5.85% min, 15.89% maximum and 5.24% average. ROE shows a minimum return at -3.14%, maximum at 40.32% and min 13.3%. ROCE statistics show a min -9.73%, maximum at 31.89% and average at 9.44%. Tobin's Q (TQ) maximum measure is at 2.99 and the lowest at 0.04. This study includes industry classification (IND) and year (YR) as dummy variables to control for industry and time effects. The industry is classified into two areas, financial and non-financial industries. The year control variable is for the year IR report issued during the year 2014, 2015 and 2016. The other control variables are the size (measured based on the log of a total asset), board size (number of board members) and leverage.

B. Correlation and Regression

TABLE 2 shows the correlation between TIRDQ and firm performance and

TABLE 2: Pearson Correlation analysis

	TIRDQ	ROA	ROE	ROIC	TQ	SIZE_	BSZ	LEV	YR	IND
TIRDQ	1	.435**	.341**	.345**	.355**	.213**	0.026	0.1	-.204**	0.069
ROA		1	.697**	.636**	.528**	.105*	-0.036	.197**	0.008	.278**
ROE			1	.740**	.377**	.168**	0.083	.170**	0.006	0.073

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ROIC	1	.463**	.163**	0.007	0.091	0.071	0.081
TQ		1	0.097	-0.084	.180**	-0.018	.348**
SIZE			1	.130*	-0.073	-0.038	-0.087
BSZ				1	0.049	0.041	-.195**
LEV					1	-0.039	.360**
IND						1	-0.008
YR							1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The result from correlation analysis shows that TIRDQ has a positive significant correlation ($r=0.435$, $p<0.01$) with firm performance, Return on Asset (ROA), positive significant correlation ($r=0.341$, $p<0.01$) with Return on Equity (ROE), positive significant correlation ($r=0.345$, $p<0.01$) with Return on Invested Capital (ROIC) and positive significant correlation ($r=0.355$, $p<0.01$) with Tobin's Q (TQ). There is

also a significant positive correlation between TIRDQ and size of the company ($r=0.213$, $p<0.01$) but significant negative correlation (-0.204 , $r<0.01$) with the year of the report. Subsequent regression analyses are performed on the TIRDQ and firm performance to identify the relationship. The analysis is divided into four models (ROA, ROE, ROIC and TQ).

TABLE 3: Regression results

Accounting Performance					Market Performance			
ROA			ROE		ROIC		TQ	
	Model 1		Model 2		Model 3		Model 4	
	B	t-stat	B	t-stat	B	t-stat	B	t-stat
TIRDQ	0.046	8.82**	0.081	6.1475**	0.076	6.6783**	0.006	6.7290**
SIZE	0.25	0.97**	1.39	2.1285*	1.173	2.069*	0.061	1.35
BSZ	-0.022	-0.394	0.157	1.0989	-0.037	-0.297	-0.009	-0.95
LEV	0.026	1.68**	0.104	2.5956*	0.035	1.01	0.003	0.912
IND	2.384	4.3798**	0.577	0.417	1.018	0.847	0.569	5.9735**
YR	0.555	2.1885**	0.997	1.5473	1.651	2.9522**	0.054	1.224
R ²	0.268		0.156		0.155		0.24	
Adj R ²	0.255		0.142		0.14		0.227	
Min ViF	0.822		0.822		0.822		1.05	
Max VIF	1.217		1.217		1.217		1.202	
F	21.5230**		10.8801**		10.7604**		18.6188**	

The result shows that there is a significant positive relationship between TIRDQ and accounting performance (ROA and ROE). The relationship is a significant positive relationship between TIRDQ and ROA at 1% confidence interval for Model 1 ($F=21.5230$, $p<0.01$) and R^2 at 26.8%. In Model 2, TIRDQ shows a significant positive relationship with ROE at 1% confidence level ($F=10.8801$, $p<0.01$) with R^2 at 15.6%. Size of the company, leverage, industry and year are showing a significant relationship in the relationship between TIRDQ and ROA while the size of the company and leverage shows a significant relationship between TIRDQ and ROE.

The regression analysis between TIRDQ and market performances (ROIC and TQ) also shows a significant positive relationship. In Model 3, the result is

significant at a 1% confidence level ($F=10.7604$, $r<0.01$) and TIRDQ, size of the company and year showing a significant relationship. In Model 4, the relationship is significant at a 1% confidence level ($F=18.6188$, $r<0.01$) with R^2 at 24%. In Model 4, TIRDQ and industry classification is showing a significant relationship.

V. CONCLUSION

Overall, the results between TIRDQ and firm performance show a significant positive relationship. The result confirmed with the previous findings that higher IR quality would improve firm performance and firm value (Barth, Cahan, & Venter, 2015; Lee & Yeo, 2015). Higher quality of IR report will signal to the investors of high-quality information which indirectly shows better internal decisions, and this is rewarded through the increase in firm performance. This result shows that, on average, the benefits of reporting good quality of IR report will rewards company in the accounting return and market return. These results also supported the objective of IIRC that the company reporting IR will be able to create values over time(IIRC, 2013).

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