

# Integrated Reporting Disclosure Level in Malaysian Public Universities: Signalling and Institutional Theories Perspective

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## Abstract

**Purpose:** This study intends to examine whether Research Universities (RUs) provide more Integrated reporting (IR) disclosure levels than non-Research Universities (RUs) in Malaysia. The evaluation is supported by signalling and institutional theories.

**Design/Methodology/Approach:** This research utilises quantitative content analysis of 16 public universities' annual reports in Malaysia from 2016-2018.

**Findings:** The result reveals that Malaysian RUs deliver better IR disclosure levels than non-RUs. RUs are expected to disclose a great deal as to communicate their accountability. Signalling theory shows that the RUs expose higher IR disclosure levels to signal their distinction and reputational edge in contrast to non-RUs. The hypothesis is in line with the institutional theory because RUs are compelled to report in a superior format because they are pressured to perform well and be ranked highly.

**Research Limitation:** This study is limited to the accessible annual reports of Malaysian public universities.

**Practical Implication:** The results provide insights for policymakers to adopt IR framework in the public sector, in this case - Malaysian public universities as to communicate the organizations' value creation to various stakeholders.

**Originality/Value:** This paper is among the few publications that study the financial reporting of public sectors in Malaysia, focusing on Malaysian public universities. Furthermore, this study is among the early studies investigating the trendy issue of the potential adoption of the IR approach in Malaysian public universities.

**Keywords:** Integrated reporting, research universities, non-research universities, signalling theory, institutional theory.

## 1.0 Introduction

The transparency and accountability of an organisation may be enhanced by a comprehensive document that combines all relevant informational components (Manes-Rossi, 2018). In recent years, Integrated reporting (IR) has emerged as a new benchmark in the financial reporting environment. IR is concerned with expressing a larger message about an organisation's strategy, governance, performance, and prospects within the context of its external environment in order to create value in the short, medium, and long-term (IIRC, 2017). A public sector organisation's value creation should prioritise public value production (Manes-Rossi, 2018). As a result, with their objective of providing public services to create value co-creation within society and offer stewardship responsibilities, adopting IR is appropriate for public sector organisations (Osborne, 2018). IR is vital for public sector organisations since they rely heavily on human capital, their activities entail social and environmental issues, as well as their objectives and outputs, are intangible (Iacuzzi et al., 2020).

The International Integrated Reporting Council (IIRC) forecasted that the IR initiative would satisfy government requirements and enable the public and stakeholders to evaluate financial and non-financial data in a single, comprehensive, and straightforward document (Villiers et al., 2014). Consequently, IR aims to provide insight into a company's resources and relationships, often known as the capitals, as well as how the organisation interacts with the external environment and the capitals to create value. The IIRC emphasises on six capitals: financial, manufactured, intellectual, human, social and interpersonal, and natural. None of these capitals can function independently. According to the IIRC (2013), companies should employ integrated thinking to translate the six capitals toward business plans to create value. As a result, IR is designed to sustainably explain integrated thinking techniques, be more transparent, and demonstrate the value creation process (IoDSA, 2016).

A literature review reveals that IR has evolved as a sort of future reporting that embraces the value-based reporting paradigm. This strategy is significant for the public sector because of the critical role that public sector organisations play in creating value for society in addition to their critical function in driving economic growth in their respective countries. Despite being in its infancy, global IR study does not ignore the public education sector. Higher Education serves a crucial role in both the development of human capital and the promotion of national growth. Consequently, institutions of higher education must adopt integrated thinking and consider IR as a future reporting framework.

All public universities in Malaysia other than the International Islamic Universities of Malaysia (IIUM) table their annual reports to the Parliament of Malaysia (Perbendaharaan

Malaysia, 2021: MoHE, 2017a). As statutory bodies in Malaysia, their annual reports communicate accountability on how public funds are used and report the key performance indicators of the Ministry of Higher Education (MoHE) (MoHE, 2017a). Their preparation of financial statements is under the monitoring of the Accountant General's Department of Malaysia and their financial statements are audited by the Auditor General's Department of Malaysia. The IIUM is established as a corporation under the Companies Act 1965. Therefore, the university submits its annual returns and financial statements to the Companies Corporation of Malaysia.

Transparency and accountability are emphasized for Malaysian public universities under Shift #5 Financial Sustainability in higher education as stated in the Malaysian Blueprint 2015-2025 for Higher Education (MoE, 2015). The Malaysian Code of Corporate Governance (MCCG) (2017, 2021) suggests IR is a voluntary approach and is encouraged to be applied by organisations in Malaysia (SCM, 2017, 2021). Although Malaysian public universities are not obligated to adopt the IR framework, para 2.8 MCCG (2017, 2021) explain good governance practices to be applied by listed companies and encourages non-listed entities, including public universities, to adopt good governance practices that include the adoption of IR framework. MCCG (2017, para. 11.2; 2021, para. G12.2) describes IR as a concise communication medium for communicating greater transparency and accountability in organisations. In delivering transparency and accountability, integrated thinking is required to translate the six capitals, namely financial, manufactured, intellectual, natural, human and social relationships, into business strategies to create value for the organisations. The extent of the IR disclosure level implies whether the universities are ready to adopt the IR framework in reporting.

There is a dearth of research on Malaysian Public Universities reporting, despite the significant resources allocated to these organisations. The reporting is critical for the stakeholders' scrutinisation of public spending and value creation. Furthermore, one initiative to boost the performance of Malaysian public universities in par with global development is by establishing RUs. Thus, it is vital to examine the reporting of RUs as opposed to non-RUs reporting using the recent global framework, that is IR. Hence, this paper investigates whether RUs provide higher IR disclosure level than non-RUs. The next section is on literature review, followed by research methodology, research findings and, a section to discuss and conclude the issue.

## **2.0 Literature Review**

### **2.1 Integrated Reporting (IR)**

South Africa was the first nation to adopt IR as a concept, for future corporate reporting during the mid-1990s. The Institute of Directors in Southern Africa pioneered the notion of IR prior to the IIRC, the global organisation tasked with promoting IR as the standard for corporate reporting. The IIRC was initially constituted as a committee in August 2010 and subsequently evolved into an international coalition of accounting authorities, standard-setters, regulators, investors, and other stakeholders who seek to form a global compact of simple, easy-to-understand corporate reporting strands. IIRC pursues the core objective of disclosing an organisations' ability to create long-term value (IIRC, 2011). The IIRC Pilot Program (2011) gave companies space to experiment with IR, and after two years of extensive consultation processes, the International IR Framework was made available for companies worldwide

to voluntarily adopt as its corporate reporting framework in December 2013 (IIRC, 2013). IR is holistic, strategic and relevant, representing more meaningful reporting. In the business environment, corporate reporting is an essential instrument for decision-making. Companies are increasing their non-financial information disclosure. Companies can include IR as part of their business strategy. In fact, IR is the current endeavour designed to satisfy the stakeholders' aspirations for transparency. Vian et al. (2017) analysed 187 papers on government transparency from 1990 to 2015 to investigate whether transparency can achieve the variety of goals attributed to public sectors. The writers concluded that transparency is important for attaining goals such as enhancing involvement, financial management, and eliminating corruption. They discovered substantial evidence that transparency was indeed increased, contributing to new policies and improved civil society's capability. However, the effect on government accountability is unclear.

Initially, IR is meant to enhance transparency and accountability of companies reporting and now its application has spread into the public sector accounting and non-profit organisations (NGOs). The benefits of IR have been investigated by previous research. Tlili et al. (2019) researched the impact of IR on the value and relevance of organisational capital (OC) in South Africa from 2006 to 2015. This study demonstrated the substantial impact of applying IR directly to OC. Adopting IR would enhance the quality of information offered to capital providers and increase investors' access to diverse funds. It is supported by previous researchers describing that IR has a positive relationship with firm valuation (Lok & Phua, 2021). Consequently, IR increases investors' image of capital, enhances external information by enhancing investment efficiency, and contributes to an increase in future cash flow.

The worldwide acceptance of the IR framework has extended its applicability to the public sector. Globally, public sector entities are entrusted with delivering service and governance excellence without compromising financial, economic, social, and environmental sustainability. Apparently, IR is suitable to balance the reporting of a public sector entity in delivering their accountability (KPMG, 2012). IR introduces a reporting approach that perfectly aligns with stakeholder inclusivity, providing the public sector with a platform to contextualise risks and opportunities resulting from existing trends and upcoming challenges. The public sector entities can take advantage of IR by incorporating and communicating multiple avenues of capital. Moreover, qualitative data reflecting public sector entities' missions, visions, and forward-looking strategies that IR helps present in an integrated manner should be policymakers' focal point of attention.

Consequently, IR has also attracted the attention of researchers in regard to government-related institutions. According to Ramli (2019), IR is a principle-based reporting and a new reporting concept. This study aims to investigate the implementation of IR in Malaysian publicly traded enterprises. In addition, the study also examined whether there are differences in the IR between Government-linked Companies (GLCs) and non-GLCs listed in Malaysia. The findings show that both types of companies adopted IR in their annual reporting. However, the scores of GLCs are lower than non-GLCs. Research on IR has also been conducted in the public sector by applying the IR framework at the University of Udine, Italy (Iacuzzi et al., 2020). The results showed that IR was better fitted with the university's strategic aims. Additionally, the study supported IR as a means to improve co-creation value in public sectors. IR is suitably applied for public sectors as the nature of the public sector is to create public value for society, utilise a significant amount of human capital, and their products are intangible in nature.

Higher education institutions (HEIs) are important agents for the value creation of society. Regarding IR, Aras et al. (2022) analysed the extent of Yildiz Technical University (YTU), a public university in Turkey, which disclosed IR content elements. This indicates the presence of integrated thinking. In addition, this study aims to determine whether the features of HEIs institutions influence the level of disclosure adhering to the IR framework and how IR might increase the value creation for HEIs' stakeholders in the context of voluntary reporting. The YTU has set the standard for HEIs to disclose non-financial information and improve accountability mechanisms.

Nevertheless, despite the adoption of IR, Rinaldi et al. (2018) identified the challenges in preparing IR, where the primary function of IR is to identify the most significant challenges, opportunities, strengths, and weaknesses faced by organisations. In this study, the challenges highlighted are a lack of awareness of the potential IR, various interpretations and applications of the new reporting framework by employees inside the business, excessive dependence on rules or guidelines, and a compliance-based approach to reporting. Tirado-Valencia et al. (2020) empirically analysed how the reports prepared by public sector enterprises are now adapting IR. Despite realising the benefits of integrated thinking in the IR framework, the results of the study indicate that integrated thinking has not been fully implemented in organisational reporting. According to Iacuzzi et al. (2020), IR is more incremental than a revolutionary transformation of existing arrangements and approaches. The analysis revealed that the vagueness, complexity, and inherent discrepancy between the IR concept and its operationalisation prompted the university to challenge and debate the IR approach and, ultimately, to reconceptualise and implement its own version that is better suited to its strategic goals, its intended audience, and its public entity status.

## 2.2 Theories of IR in HEIs

Several theories, including signalling, stakeholder, and institutional, have been used in the research of HEIs and IR. Adhikariparajuli et al. (2021) considered introducing signalling theory to investigate the notion that effective communication through integrated thinking can close the gap between an organisation and its stakeholders by increasing the IR disclosure level when examining higher education in Scotland, Northern Ireland, and Wales. The signalling theory presupposes that enterprises will indeed divulge information only when the advantages outweigh the costs, as providing the information is costly (E.Verrecchia, 2001). An organisation can bridge the gap between itself and its constituents by communicating effectively. In the context of higher education, there is an informational asymmetry largely in the advantage of universities. Adhikariparajuli et al. (2021) hypothesised, relying on the signalling theory, that if universities implement integrated thinking to signal to stakeholders how HEIs create value for society, this will be reflected in an upsurge in IR disclosure content and, therefore will raise their accountability. The results of this analysis revealed substantial growth in the trend and scope of IR disclosure levels. Formation of the HEI, implementation of the IR framework, and the size of the governing board are all statistically and positively associated with IR content elements disclosure. By completing this research, the results will be of interest to policymakers and regulators to assess the benefits of adopting integrated thinking in improving the level of transparency on IR content pieces. This insight may provide evidence for the possibility of mandatory IIRC guidelines implementation.

Stakeholder theory also serves as the foundation in IR studies (Ioana & Adriana, 2014). This theory explains the interaction between the organisation and its stakeholders. This idea is applied in IR study to highlight the management's responsibilities and accountability for providing stakeholders with relevant and valuable information. This is because, according to this principle, organisations or businesses should try to maximise the value of their various stakeholders. According to Freeman (1984), stakeholders can be any group or person who has the power to influence or who is affected by the accomplishment of the organisational aim. Donaldson and Preston (1995) argued that stakeholders are individuals who have sincere interests in business transactions. Since its origin, the stakeholder approach has grown to play a significant role in an organisation's efforts to boost performance from the lenses of society and various parties (Andriof & Waddock, 2002). This is in line with IR mandates to define an organisation's value by incorporating environmental, social, and governance factors in addition to financial and economic ones.

Additionally, the institutional theory provides a valuable framework for investigating sustainability reporting by discovering how institutions impose isomorphic pressure that compels members of society to implement similar patterns of conduct. These isomorphic forces include coercive, normative and mimetic pressures (e.g., mandating sustainability reporting), mimetic (e.g., smaller businesses imitating the practices of their larger counterparts), and normative pressures (e.g. the introduction of sustainability reporting standards). IR is a kind of sustainability reporting. The advent of legislation mandating the implementation of IR in South Africa, as evidenced by the King III and King IV reports, is an example of the coercive mechanism (Vaz et al., 2016). In addition, the founding of the IIRC and the release of the International IR Framework imposes normative pressure on companies, pushing them to employ effective IR practices (Maroun & Warren, 2017). Furthermore, organisations have been subjected to mimetic pressure as a result of successful organisations that have implemented efficient IR procedures and served as catalysts for others to follow in their footsteps (Vaz et al., 2016).

Institutional theory is utilised by Kılıç et al. (2020) to study if the institutional context is connected to the adoption of IR. This research uses the Fortune Global 500 list of companies as its sample. According to institutional theory, organisations respond to institutional constraints by acting in generally accepted manners to achieve legitimacy and appear legitimate to their stakeholders (Aerts et al., 2006). The study indicated that code law orientation and institutional quality strength are substantially connected with the IR of Fortune 500 firms. Additionally, the findings also bring significance to policymakers and various stakeholders such as the public, customers, press and civil organisations. Institutional theory is also utilised in Hassan et al. (2019) to examine the factors associated with the level of IR content elements in HEIs. They documented that pre-1992 UK HEIs were more pressured to disclose more on IR contents. The older universities are coerced to do as such in meeting societal expectations following the arguments from the institutional theory. This finding has led this study to examine whether the classifications of research and non-RUs are associated with the extent of IR disclosure level.

### **2.3 Research of HEIs in Malaysia**

Presently there is a paucity of studies regarding reporting HEIs within the Malaysian context. For example, Ismail and Bakar (2011) evaluated selected Malaysian Public Universities (MPUs) to identify the extent of disclosing accountability information through

annual reports and websites. Using a disclosure index, the authors highlighted that MPUs disclose relevant information in the annual reports but exhibited a comparatively low disclosure level on their websites. Furthermore, longstanding and respectable MPUs released more information in their annual reports and on their webpages than freshly founded MPUs. Therefore, the state must mandate increased accountability disclosure in MPUs' annual reports and on their webpages. Acknowledging the significance of the information, the government may wish to amend the current minimum disclosure rules to incorporate more pertinent accountability data. In addition, because the nature and activities of public universities differ from those of other government statutory entities, the study advises that the disclosure required items to be changed to incorporate information directly connected to the operations and demands of university stakeholders. Basically, the government should implement distinct disclosure rules for various sorts of statutory entities Ismail and Bakar (2011).

Similarly, Basnan et al. (2016) suggested that annual reports should be comprehensive by incorporating financial and non-financial data, suggesting the development of an accountability reporting framework for MPUs. The study also highlighted varying importance levels of accountability put forward by different groups of stakeholders of a public university. The outcomes further corroborate Patton's (1992) assertion that a complex public sector environment with various dimensions of responsibility may result in varying information and disclosure requirements. This recommends that, for accountability purposes, a wide variety of information should be reported to meet the information needs of various stakeholder groups. The literature review suggested IR as a future reporting tool that embraces the concept of value-based reporting. This approach is essential for the public sector due to the critical role of organisations in creating value for society, thereby generating the countries' economic growth.

## **2.4 Synthesis of Literature**

Based on the preceding review of relevant literature, the role of IR in the public sector has been increasingly important in communicating the value creation of organisations to various stakeholders. In line with this development, the accountability and transparency of HEIs globally have also been enhanced through reporting using the IR framework. The study of Malaysian public universities with regards to financial reporting is very limited and unexplored despite the critical role of these organisations in moulding human capital and simultaneously utilise a significant amount of public resources. The context of RUs and reporting is not examined in prior research. Thus, within the context of Malaysia, it is essential to examine whether RUs disclose more IR content elements than non-RUs in discharging accountability and transparency to various stakeholders. The above review reveals that signalling and institutional theories are able to explain the hypothesis proposed by this paper.

## **2.5 Hypothesis Development**

Global RUs have assumed a more significant role in society, primarily because they represent the most important knowledge resources (Singh & Allen, 2006). Additionally, RUs have become the quickest means for the government to advance the nation towards a knowledge-based economy and achieve greater prosperity (N. Ramli et al., 2013). As the economic value of new knowledge, its application, and its commercialisation grows, so does the significance of the competence and performance of RUs. Consequently, Malaysian public universities are divided into RUs and non-RUs. The Malaysian RUs are Universiti Malaya, Universiti Sains Malaysia,

Universiti Kebangsaan Malaysia, Universiti Putra Malaysia and Universiti Teknologi Malaysia. The primary objectives of the RUs are to be a leader in innovation, to establish and enhance centres of excellence in prioritised areas of the country, to produce world-class research outputs, to generate high-impact research publications, to attract graduate students of high calibre, and to provide a research-friendly environment (MoHE, 2004). In the new hierarchical university model, the Malaysian government has increased its financial support for RUs aimed at research administration, research activities, RUs incentive grants, quality assurance, and specialised research services such as intellectual property rights, patenting, and repository (MoHE, 2004). Therefore, RUs are anticipated to be more highly regarded and ranked than non-RUs in accomplishing government goals.

From the above, it can be said that signalling and institutional theories are able to explain the expectation of RUs to disclose more IR disclosure levels than non-RUs. IR disclosure comprises many voluntary disclosures, including non-financial information. According to the signalling theory, since RUs are perceived as better performed and possess higher expectations, these organisations can use voluntary disclosures as a signalling device to indicate that they are better quality organisations in line with the explanations by Spence (1973) and Cohen et al. (2012). Albertini (2018) demonstrated that French companies typically provide details on capital appreciation in IR, suggesting that management employs IR to emphasise the superior quality of the organisation. Frias-Aceituno et al. (2014) also suggested that based on the signalling theory, profitable organisations differentiate themselves from low-quality companies using IR to reduce their cost of capital and maintain or improve their company value. A similar argument can be applied in this case where RUs are considered as elitists, differentiating themselves by disclosing better quality reporting in terms of IR disclosure level.

According to scholars of the institutional theory, institutional pressures are the cause of organisational procedures, structures, and practices (Maroun & Warren, 2017). In the case of RUs, they are formed with the government's aspiration thus, they are subjected to government pressure to perform, driving them to incorporate their performance in the reporting. Furthermore, they are allocated with a significant amount of resources. Resource reliance results in coercive pressure, resulting in an organisation that effectively controls the resources to constrain other institutional activities that rely on them (Hoque, 2018). Typically, coercive isomorphism results from laws, rules, or social forces that compel organisations to conform to the requirements (Maroun & Warren, 2017). Since RUs are established with many expectations from the government, that is, the institution that controls them, as well as from the society, it is likely that RUs disclose higher IR disclosure levels to conform to coercive pressure from the controlling institutions and to be socially acceptable. Accordingly:

**H1: RUs provide higher IR disclosure level than Non-RUs.**

### **3.0 Methodology**

This analysis is based on 16 out of 20 public universities in Malaysia for the years 2016-2018. The total observation for this study is 48 public universities' annual reports, which explains 16 public universities' annual reports being studied each year. These 16 public universities annual reports are available for three years. The annual reports are sourced from various online mediums and personal requests from the institutions. The sample size is similar to earlier

studies in this area, despite the small sample size (Manes-Rossi, 2018; Tirado-Valencia et al., 2020). This sample size is sufficient for the investigation because it is exploratory in nature and it considers taking almost the whole population of public universities in Malaysia. The results of this study could provide other public sector organisations, particularly HEIs, with ground-breaking knowledge.

Following prior research in this sector, this study analysed content quantitatively, which is often applied to study organisational disclosure (Gunarathne & Senaratne, 2017). An observational method and an analysis of the text in organisations' annual reports are used to determine the index score. By using content analysis, annual reports may be replicated, their intended audience can be understood, and the disclosures made by for-profit and non-profit organisations can be scrutinised (Krippendorff, 2004). HEIs studies frequently utilise content analysis to examine voluntary organisational disclosure (Hassan et al., 2019).

The IR disclosure index used in this study is from Hassan et al. (2019) and was taken from the 2013 IIRC framework, where eight content areas are utilised as the foundation for the framework: governance, value creation model, risk and opportunity, strategy and resource allocation, performance, outlook, and basis for preparation and presentation, in addition to an organisational evaluation and the external environment. The details of the IR disclosure index can be referred to in Appendix 1 in Hassan et al. (2019, pp. 874–876). By referring to this index, each content areas consists of 7 detail items. Thus, each content area can score a maximum of 21 (7X3), while the maximum total score for 8 content areas is 168 (8X21).

The disclosure index score for this study was developed using the weighted scoring approach. Each disclosure item was given a weight to account for the variation in each disclosure to calculate the disclosure items' magnitude (Hassan et al., 2019). The weighted scores are as follows;

“0 = No disclosure; 1 = Descriptive disclosure without any link to strategy, governance, performance and prospect; 2 = Descriptive disclosure with link to strategy, governance, performance and prospect compared with past information; 3 = Descriptive disclosure with link to strategy, governance, performance and prospect compare with past, current and future outlook (Hassan et al., 2019).”

The limitation of using the weighted scoring approach is to deal with judgement in giving the scores for each content area. This research addresses this limitation by following the procedure suggested by Potter and Lehvine-Donnerstein (1999), as cited in Moggi et al. (2019), using two coders to assign scores to ensure the weighted scores are reliable. Should there is any disagreement, the two coders would discuss the scores until an agreement is reached. In that case, the absolute scores given in this study cannot be compared to those in other studies, for example, with the UK sample in Hassan et al. (2019), as judgement varies with different coders. Hence, the analysis is limited to the trend and behaviour comparison.

To determine whether there are significant differences between the level of IR disclosure level, disclosure index and the university classifications, the T-test and Mann-Whitney U test were conducted for the total disclosure as well as the individual themes. A t-test is employed in hypothesis testing to analyse whether the IR content element differs between disclosure index for RUs from non-RUs. The t-test is a parametric test of means difference. Therefore, the

assumption of data in the t-test are independent data; normal data distribution and homogeneity of variance. Alternatively, Mann-Whitney U is analysed to see whether there are variations in group medians if the dependent variable is ordinal or continuous and the data is not normally distributed. This analysis can also be used as the nonparametric substitute for the independent t-test to compare differences between RUs and non-RUs. For robustness of analysis, both methods have been used in this analysis.

#### 4.0 Results Analysis

The normality distribution analysis shows that all the data are normal, evidenced by low skewness and kurtosis, except for the content of Strategic Resource Allocation. Both the t-test and Mann-Whitney U tested this matter effectively. The results of both tests are displayed in Table 1 below.

#### Linking disclosure items to University Classification of RUs and Non-RUs

**Table 1: Connection Between IR Disclosure Level and RUs/NRUs**

	RUs		Non-RUs		T-test		Mann Whitney U Test	
<i>IR disclosure level (disclosure index components)</i>								
	Mean	STD	Mean	STD	T	P-value	Z	P-value
Total IR disclosure score	82.80	7.789	73.27	10.690	-3.096	0.003	-3.362	0.001
(1) Organisational Overview and External Environment (OEE)	15.07	1.033	13.18	1.758	-4.643	0.000	-3.530	0.000
(2) Governance (GVN)	5.33	1.718	3.30	1.447	-4.249	0.000	-3.483	0.000
(3) Value Creation Model (VCM)	12.13	2.386	10.97	1.357	-2.152	0.037	-2.631	0.009
(4) Risk and Opportunity (RO)	8.60	2.501	7.70	3.423	-0.914	0.365	-1.119	0.263
(5) Strategy and Resource Allocation (SRA)	11.07	2.890	12.33	1.797	1.859	0.069	-1.254	0.210
(6) Performance (PM)	12.40	1.805	9.42	1.714	-5.484	0.000	-4.363	0.000
(7) Outlooks (OLK)	10.60	2.131	9.24	2.862	-1.638	0.108	-1.931	0.054
(8) Basis of Preparation and Presentation (BPP)	7.60	1.993	7.12	2.484	-0.655	0.515	-1.570	0.116

The total observation for the above analysis is 48 universities' annual reports that consist of 16 universities' annual reports for each year between 2016 -2018. As there are 5 RUs in Malaysia, for each year, the sample consists of 5 RUs' annual reports and 11 non-RUs' annual reports. Thus, the final sample for the three years (2016-2018) consists of 15 RUs' annual reports and 33 non-RUs' annual reports. From Table 1 above, apparently, the mean of the total score for RUs (82.80) is almost half of the maximum total score (168). As seen by a significant difference in the T-test results for both the overall scores and most individual theme scores, the results reported in Table 1 demonstrate that Malaysian RUs generally have higher IR disclosure levels than non-RUs. The T-test and Mann-Whitney test both have significant results for the total content element (T-test p = 0.003 and Mann-Whitney p = 0.001). For individual theme results, the results are significantly better for RUs (M = 15.07, SD = 1.033; M = 5.33, SD = 1.033; M = 12.40, SD = 1.805) compared to Non-RUs (M = 13.18, SD = 1.758;

M = 3.30, SD = 1.447; M = 9.42, SD = 1.805) for theme OEE, GVN and PM respectively at 1% significance level (T-test  $p = 0.000$  and Mann-Whitney  $p = 0.000$ ). RUs (M = 12.13, SD = 2.386), compared to non-RUs (M = 10.97, SD = 1.357) demonstrated significantly better VCM disclosure, T-test  $p = 0.037$  and Mann-Whitney  $p = 0.009$ . On the other hand, non-RUs reported more SRA (M = 12.33, SD = 1.797) compared to Rus (M = 11.07, SD = 2.89) at 10% level.

From this analysis, it is revealed that when compared to non-RUs, Malaysian RUs tend to offer better IR disclosure levels. RUs are expected to disclose a lot since they need to stand out to compete and obtain the benefit of reputation (Veltri & Silvestri, 2015). Signalling theory explains that the RUs disclose more IR contents to signal about their operation and they are in a better position than their counterpart. This conjecture is also in line with the institutional theory that RUs are expected to perform better and be in the high rankings thus, they are coerced to report in a better form. This finding is parallel with Hassan et al. (2019) who discovered that older universities (pre-1992) in the UK report more IR disclosure content than younger (post-1992) universities in the UK. Hassan et al. (2019) posit that pre-1992 universities engage IR and thinking to gain support from various parties in the environment. The findings also reveal that both types of universities disclose less about governance. The institutional theory also explains mimetic isomorphism, where specific organisations adopt a new system without understanding the clear vision and mission of doing that. The approach is merely to mimic other organisations, for example, by appointing the board of directors. This finding prompts public universities to revisit and clarify the role of board of directors in reporting.

## 5.0 Discussion and Conclusion

This study compares the level of IR disclosure between Malaysian RUs and non-RUs. The IR practices adopted in the paper are based on the IIRC framework, which consists of eight elements of IR disclosure. The findings of this study showed that RUs have a higher level of IR represented by the total IR content. The results indicate that Malaysian RUs embrace IR disclosure better compared to non-RUs. The RUs disclose better information in four elements out of eight IR disclosure: organisational overview and external environment, governance, value creation model and performance. Malaysian non-RUs, on the other hand, provide better disclosure concerning strategy and resource allocation than RUs.

The study's results have three main implications for practice, theory and policy. First, the implication in practice is learning and understanding the IR concepts, framework and disclosure level. Based on the results, RU disclosure levels are generally better than non-RUs. Thus, the non-RUs should learn and understand the concept and framework of IR from RUs to ensure better reporting in the future. This can be done through the sharing and exchanging of knowledge between the preparers of the IR. Sharing knowledge on the best practices of IR disclosure can encourage healthy competition. The university should avoid mimetic approach without proper understanding and embrace IR for strategic positioning, viability and sustainability. Furthermore, the university preparers should also enhance their disclosure in the other four disclosure contents of IR: risk and opportunity, strategy and resource allocation, outlook, and basis for preparation and presentation. Incorporating integrated thinking in the preparers' minds can help enhance the disclosure of IR practices. This element is currently

lacking, evident by means of the total score for both RUs and non-RUs, which are less than half of the total maximum score.

The second implication is the theoretical implication. This study utilised the signalling theory to explain the expectation of the hypothesis. The result supports the conjecture that RUs deliver better quality IR disclosure levels to signal their superior performance than non-RUs. In addition, the institutional theory was employed to explore the idea that the disclosure practice of IR by universities is influenced by isomorphic pressures, including coercive isomorphism, mimetic and normative. According to institutional theory, coercive pressure is when organisations are pressured or influenced by authority or regulatory bodies to comply or to behave in a certain way while normative pressure results from practice or norms specified by the industry, professional body or society. Mimetic pressure happens when an organisation engages in a competition seeking superior performance.

The research findings suggest that Malaysian universities are not pressured by coercive isomorphism in the IR practice because IR is optional and voluntary. However, RUs are coerced to afford better IR disclosure levels to meet the government's expectations to have high-performance capability. RUs are also coerced in resource reliance as they are given large public funds to achieve excellent performance in the academic line globally, hence more IR disclosure communicates their accountability. Malaysian RUs are pressured or influenced by normative pressure, which is their desire to prove to stakeholders that their existence is legitimised to gain stakeholders' buy-in and acceptance. Additionally, the universities are also pressured by mimetic pressure, that is, the desire to copy the behaviour of others, in this case, evidently by the governance component. The low disclosure of the governance component indicates that they do not really understand the purpose and concepts of governance in universities but follow what others have done in form.

Third, the result of the study reveals that non-RUs are lacking in relation to IR. To ensure non-RUs' IR practices are at par with their counterpart, the policymaker, in this case, the Ministry of Higher Education should encourage all higher educational institutions, both public and private, to incorporate IR concepts and frameworks in their reports. Setting up non-mandatory policies or regulations on IR is preferable to mandatory ones to encourage a culture of transparency. This will allow universities to be more innovative and creative. However, if policies and regulations are rigid, it will limit the universities' creativity and innovativeness. Accordingly, the principle-based IR framework for public universities is recommended to guide and educate on how to enhance reporting of public universities' value creation.

There are several limitations to the study. The sample involved in the study can be considered small. However, the number of higher educational institutions in Malaysia is small in terms of the number of universities, with limited data availability. To expand the scope of future research on this topic, it may be beneficial to include a wider range of public and private universities to make more comprehensive comparisons.

The variable of focus in the study is mainly on IR content based on the IR framework because the study aims to examine the level of IR disclosure practices among Malaysian public universities. As such, future research may look at the association between the characteristics of the university, like size, age, and university specialisation /classification and the level of IR disclosure among universities. Other factors such as quality of disclosure and

performance of the university could also be considered if the researcher is interested in examining the association between IR disclosure practices and other dependent variables, as discussed previously.

All data with respect to the content of IR are collected from the annual reports of the respective universities. Although data in the annual report can be considered valuable and reliable, the data is recognised as historical and past (obsolete) data. Future research on the same topic should also include data or information from the universities' websites which can be considered to be more updated than data from the annual reports.

The present study adopts a quantitative research approach using content analysis. This technique of data collection is appropriate to be used for this kind of research. Nevertheless, suppose the researcher wishes to gain a better understanding from the preparer's perspective, a qualitative research approach using an interview is a more appropriate tool if the researcher is interested in exploring the preparers' human aspect (behavioural aspect). Understanding the preparers' behaviour (psychology aspect) might reveal the intention and motivation behind the reason for adopting IR. This is important because the actual concept of IR requires integrated thinking on the part of the preparers, which subsequently contributes to enriching the value creation of the universities.

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## Appendix 1

**Table A1: Integrated Reporting Disclosure Level**

	0	1	2	3**	Source of index
<b>Organisational Overview and External Environment (OEE)</b>					
OEE1					IR framework 2013; BUFDG (2016), Low et al., (2015)
OEE2					IR framework 2013; BUFDG (2016)
OEE3					IR framework 2013; BUFDG (2016), Gallego-Alvarez et al., (2011)
OEE4					IR framework 2013; BUFDG (2016), Low et al., (2015)
OEE5					IR framework 2013; BUFDG (2016), Gallego-Alvarez et al., (2011)
OEE6					IR framework 2013; BUFDG (2016), Sanchez et al., (2009)
OEE7					IR framework 2013; BUFDG (2016)
<b>Governance (GVN)</b>					
GVN1					IR framework 2013; BUFDG (2016), Ntim et al., (2017)
GVN2					IR framework 2013, BUFDG (2016), Ntim et al., (2017)
GVN3					IR framework 2013; BUFDG (2016)
GVN4					IR framework 2013; BUFDG (2016)
GVN5					IR framework 2013; BUFDG (2016)
GVN6					IR framework 2013; BUFDG (2016)
GVN7					IR framework 2013; BUFDG (2016)
<b>Value Creation Model-Business Model (VCM)</b>					
VCM1					IR framework 2013; BUFDG (2016)
VCM2					IR framework 2013; BUFDG (2016), Low et al., (2015)
VCM3					IR framework 2013; BUFDG (2016)
VCM4					IR framework 2013; BUFDG (2016)
VCM5					IR framework 2013; BUFDG (2016), Gallego-Alvarez et al., (2011)

(continued)

		0	1	2	3**	Source of index
VCM6	Student and staff satisfaction and student employability after graduation (SES)					IR framework 2013; BUFDG (2016), Low et al., (2015)
VCM7	Organisational change adoption and staff training and development (OCSD)					IR framework 2013; BUFDG (2016), Low et al., (2015)
<i>Risk and Opportunity (RO)</i>						
RO1	Identifying significant Risk and Opportunity (IRO)					IR framework 2013; BUFDG (2016)
RO2	Set of significant RO and net risk (SRNR)					IR framework 2013; BUFDG (2016)
RO3	Risk managing process (RMP)					IR framework 2013; BUFDG (2016)
RO4	Significant opportunity for value creation (SOVC)					IR framework 2013; BUFDG (2016)
RO5	Opportunity seeking procedure and utilization for institution's benefit (OSPB)					IR framework 2013; BUFDG (2016)
RO6	Risk monitoring, mitigate and reporting system (RMMR)					IR framework 2013; BUFDG (2016)
RO7	Disclosure of source of risk, opportunity and institutional affordability towards those (SRIO)					IR framework 2013; BUFDG (2016), Gallego-Alvarez et al., (2011)
<i>Strategy and Resource Allocation (SRA)</i>						
SRA1	Short, medium and long-term objectives (SMLS)					IR framework 2013; BUFDG (2016), Gallego-Alvarez et al., (2011)
SRA2	Current and planned institutional strategies (CPS)					IR framework 2013; BUFDG (2016)
SRA3	Resource allocation plans to implement strategy (RAIS)					IR framework 2013, BUFDG (2016), Gallego-Alvarez et al., (2011)
SRA4	Financial sustainability for short, medium and long term (FS)					IR framework 2013; BUFDG (2016), Gallego-Alvarez et al., (2011)
SRA5	Performance measurement for short, medium and long term (PM)					IR framework 2013; BUFDG (2016)
SRA6	Sector wise institutional differentiation and reflection in strategy (IDRS)					IR framework 2013; BUFDG (2016)
SRA7	Intellectual capital utilization for revenue maximization (ICRM)					IR framework 2013; BUFDG (2016), Sanchez et al., (2009)
<i>Performance (PM)</i>						
PM1	Strategic objectives for the period and its achievement (SIA)					IR framework 2013; BUFDG (2016)
PM2	Balance and complete view of performance (BCP)					IR framework 2013; BUFDG (2016)
PM3	Institutional performance towards strategic, financial and environmental issue (IPEI)					IR framework 2013; BUFDG (2016)
PM4	Institutional performance towards all resources of institution based on (IPRB)					IR framework 2013; BUFDG (2016); Sanchez et al., (2009)
PM5	Relationship between key stakeholders and respond towards their legitimate needs (SHR)					IR framework 2013; BUFDG (2016)

(continued)

		0	1	2	3**	Source of index
PM6	Linkage with past, current and future outlook performance (PCFP)					IR framework 2013; BUFDG (2016)
PM7	Carbon emission and sustainability activities and its financial impact (CESA)					IR framework 2013; BUFDG (2016)
<i>Outlook (OLK)</i>						
OLK1	Institutional expected external environment (IEEE)					IR framework 2013; BUFDG (2016)
OLK2	External environments` impact for all resources (EEIR)					IR framework 2013; BUFDG (2016)
OLK3	Respond towards critical challenge and uncertainties (RTCCU)					IR framework 2013; BUFDG (2016)
OLK4	Institution`s strengths, weakness and market position to tackle external environment (SWMP)					IR framework 2013; BUFDG (2016)
OLK5	Legal and regularity requirement that institution need to comply (LRIC)					IR framework 2013; BUFDG (2016)
OLK6	Tackling challenge and uncertainties for short, medium and long term (TCU)					IR framework 2013; BUFDG (2016)
OLK7	Interrelationship between institution`s objectives, external source and any forecast or assumption if any (IOEA)					IR framework 2013; BUFDG (2016)
<i>Basis of Preparation and Presentation (BPP)</i>						
BPP1	Content of report decision process and the individuals involved on this (RCPI)					IR framework 2013; BUFDG (2016)
BPP2	Disclose the individuals involved in preparation and review the report (RPR)					IR framework 2013; BUFDG (2016)
BPP3	Materiality identification and measure framework (MIMF)					IR framework 2013; BUFDG (2016)
BPP4	Any uncertainty for data used for report preparation (DUC)					IR framework 2013; BUFDG (2016)
BPP5	Material matter identification process (MIP)					IR framework 2013; BUFDG (2016)
BPP6	Materiality identification, measurement and prioritization (MIMP)					IR framework 2013; BUFDG (2016)
BPP7	How institutions focus on value creation form material matter (IFM)					IR framework 2013; BUFDG (2016)

Notes: \*This disclosure index is adapted from the IIRC report (2013). \*\*No disclosure = 0, Descriptive disclosure without any link to strategy, governance, performance and prospect = 1, Descriptive disclosure and link with all strategy, governance, performance and prospect compared with historic position = 2, Descriptive disclosure linked with all strategy, governance, performance and prospect compared with historic, present and future position = 3