

Disclosures Via Internet Reporting: A Literature Review and Proposed Agenda for Future Research

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ABSTRACT

The disclosure of information in an annual report can be divided into statutory and regulatory requirements. Compared to mandatory disclosure, voluntary disclosure is a signal by companies that they have aligned their business objectives with existing business environments. However, there is still a lack of evidence on how disclosures via internet reporting could attract existing shareholders and potential investors. Therefore, this study has explored the selections, approaches, and current movement of the existing literature in examining factors of voluntary disclosures via internet reporting. The data analysed in this study have been collected through a review of Scopus (Elsevier) and the Web of Science (Clarivate Analytics), which resulted in a final sample of 36 articles published between 2010 and 2021. Articles on voluntary disclosures via internet reporting were sampled by screening for related titles, abstracts, and keywords. This study has applied the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) method. The analysis results revealed insights into how internet reporting has been studied. The most common theory that previous studies were grounded in was the agency theory. Stakeholder pressure, business environment, corporate governance and risk, and internal control were the most reported drivers of voluntary disclosure via internet reporting. Consequently, this study recommends that listed companies should voluntarily disclose pertinent information through internet reporting, as a medium of communication in this digital era.

Keywords: Internet reporting, voluntary disclosures, articles, companies, communication, databases

INTRODUCTION

The COVID-19 pandemic has exacerbated human suffering, destabilised the global economy, and disrupted the lives of billions when it affected the healthcare, environmental, and social sectors (Mofijur et al. 2021; Keh & Tan 2021). Among 2,031 firms listed in 15 European listed companies, COVID-19 has reduced the reliability of financial reports, which eroded investors' confidence in economic recovery (Lassoued & Khanchel 2021). The pandemic has also heightened public awareness of risks, for example, the effects of climate change that enforce the need for transparency and accountability in financial systems (Adams & Abhayawansa 2021). As a result, many firms, including those in the USA, have turned to digital platforms, with online sales channels outperforming offline ones (Bloom et al. 2021).

Amidst these challenges, voluntary disclosures through internet reporting have become increasingly important. As a key element of sustainability and transparency, they allow companies to demonstrate accountability that aligns with stakeholder expectations. The Global Reporting Initiative (GRI) standards have emphasized the need for companies to disclose both positive and negative outcomes for sustainable growth (Velte 2021). Despite the well-documented benefits of voluntary disclosures, there is a lack of empirical research on how internet reporting could enhance transparency and boost investor confidence.

Voluntary disclosure has evolved significantly, with researchers identifying its drivers and methodologies (Zaini et al. 2018; Zamil et al. 2021). Previous studies have even highlighted a significant gap in understanding how voluntary disclosures via internet reporting could influence corporate governance and stakeholder engagement (Sarquis et al. 2021). Despite the increasing demand for transparency, many firms still exhibit a lack of commitment to these practices, thus limiting the potential of internet reporting to address existing issues, such as timeliness, quality, and accessibility (Hashim 2011).

This study has explored the selections, approaches, and trends in the literature on voluntary disclosures via internet reporting. Specifically, it examined the following aspects: (a) research trends; (b) factors influencing voluntary disclosures; (c) theories that were used to study them; and (d) determinants of voluntary internet reporting. This study could contribute towards bridging the gaps in the existing literature, thus providing insights to policymakers, capital markets, and companies aiming to improve their digital reporting practices. The findings of this study have highlighted the emerging trends and key factors of digital reporting, including sustainability, corporate governance, and stakeholder information needs.

Over the decades, several studies have focused on samples from students, clubs, or associations (Elfeky 2017; Allport & Pendley 2010; Vitolla et al. 2021), with most concentrating on globally listed firms through qualitative and quantitative methods. While earlier studies noted that the quality of sources for information on voluntary disclosure was relatively low (Hashim 2011), recent research works have highlighted a shift. Information for investors and stakeholders

is no longer limited in annual corporate reports but also in various online resources available on corporate websites (Ariffin et al. 2021).

This paper has highlighted the role of voluntary disclosures through internet reporting in building trust and accountability in the digital era. By drawing on previous research, it offers a foundation for enhancing internet reporting practices that could help stakeholders navigate the complexities of digital disclosure. The structure of this paper is as follows: Section 2 reviews previous studies on voluntary disclosures in emerging markets; Section 3 outlines the research design; Section 4 presents the review results; Section 5 discusses the implications; and Section 6 concludes this review with key insights and directions for future research.

LITERATURE REVIEW

According to the G20/OECD Principles of Corporate Governance statements, “...a strong disclosure regime that promotes real transparency is a pivotal feature of market-based monitoring of companies and is central to shareholders’ ability to exercise their shareholder rights on an informed basis. Experience shows that disclosure can also be a powerful tool for influencing the behaviour of companies and for protecting investors. A strong disclosure regime can help to attract capital and maintain confidence in the capital markets. The disclosure also helps improve public understanding of the structure and activities of enterprises, corporate policies, and performance for environmental and ethical standards, and companies’ relationships with the communities in which they operate” (p. 37–41) (Siems & Alvarez-Macotella 2015, as reported from the Organisation for Economic Co-operation and Development, OECD).

Several studies have investigated the trend of mandatory information disclosure around the world, which included a study on the Gulf Cooperation Council member states (Misirlioglu et al. 2021), the European Union markets (Fortuna et al. 2020), and regions of China (Liu et al. 2021). However, this trend has shifted focus to include the emerging markets. Argentina, Brazil, China, India, Indonesia, Mexico, Poland, South Africa, South Korea, Turkey, Egypt, Iran, Nigeria, Pakistan, Russia, Saudi Arabia, Taiwan, and Thailand have begun to focus on voluntary information disclosures, such as CSR reports (Adnan et al. 2018), governance mechanisms (Cotter et al. 2011), government ownership (Al-Janadi et al. 2016), specific firm characteristics (Albassam & Ntim 2017), ethics of voluntary disclosure (Madi et al. 2017), sustainability reporting (Hussain et al. 2018), and comprehensive literature reviews on voluntary disclosures (Zaini et al. 2018). Clarkson et al. (2006) found that the quantity of voluntary disclosures was less than the quantity of mandatory disclosures.

Voluntary disclosure is a signal for companies to align their business objectives with the existing business environments (Michelon et al. 2015). Barako et al. (2006) defined voluntary corporate disclosure as a process that is not stipulated by acts, rules, and regulations. In other words, any form of disclosure that is not deemed mandatory constitutes the definition of voluntary disclosure. As such, items within the range of the defining criteria of voluntary disclosure could appear in annual reports and on corporate websites, which could serve as references for management (Bujaki & McConomy 2002). Although the content of voluntary disclosure is an important source in complementing statutory disclosure, a comprehensive understanding of the complexities underpinning the actual practice of voluntary disclosure has been seemingly neglected by previous research (Hashim 2011).

After a series of mature development, the process of voluntary disclosure has been gradually directed to corporate websites. Voluntary disclosures via internet reporting allow shareholders to assess the emphasis and effectiveness of corporate governance systems in respective firms (Al-Janadi et al. 2016; Bujaki & McConomy 2002; Cotter et al. 2011; Zaini et al. 2018). Dos Santos et al. (2020) extended the work of previous studies on regulatory frameworks by analysing financial and non-financial determinants to improve the process of voluntary disclosures. According to Khoufi and Khrifech (2018), corporate websites as a unique tool for information disclosure would encourage flexible forms of data presentation and allow immediate, broad, and inexpensive communication with investors. As such, the results of previous studies on voluntary disclosures via corporate reporting have indicated a strong relationship between the determinants and their consequences in the process of voluntary disclosures.

Theoretical perspectives have not been given much attention, or largely covered in quantity, but often relatively weakly discussed. Healy and Palepu (2001) reported that there was a scarcity of underpinning theories on voluntary disclosure. Internet reporting disclosure is fundamentally grounded in two primary theoretical frameworks consisting of the agency theory and the signalling theory. The agency theory suggests that voluntary disclosure through internet reporting reduces information asymmetry between managers and shareholders, thereby, fostering trust and improving accountability (Healy & Palepu 2001). Recently, studies based on the stakeholder theory claimed that this theory was an appropriate postulation to explain integrated reporting as the final frontier of voluntary corporate disclosure (Sarquis et al. 2021). By providing stakeholders with timely and accessible information, internet reporting could mitigate the risk of misaligned interests between management and shareholders (Zaini et al. 2018). Nonetheless, among various voluntary disclosure theories, two major theoretical frameworks, namely the economic-based framework and the socio-political framework (Zaini et al. 2018), have garnered significant attention among researchers.

In contrast, signalling theory emphasizes that companies utilise voluntary disclosures to communicate their alignment with market expectations and enhance their reputation among stakeholders. This approach enables firms to signal their commitment to transparency and governance, particularly in competitive and regulated environments (Barako

et al. 2006). Moreover, socio-political frameworks have gained attention for their role in understanding how voluntary disclosures address external pressures, such as regulatory compliance and societal expectations. These frameworks underline the importance of improving the accessibility, timeliness, and quality of disclosures in fostering trust among diverse stakeholder groups (Khoufi & Khrifech 2018). Thus, this study has appraised the underpinning theories involving internal (within the firm) and external (outside the firm) aspects of companies in promoting voluntary disclosures.

The scope of this paper is relatively narrow. It is primarily concerned with voluntary disclosure in terms of corporate reporting on the internet. Additionally, only a few international comparative studies have concentrated on the practice of voluntary disclosures in developing countries, as most studies have focused their attention on larger descriptive datasets and developed nations (Zaini et al. 2018). In particular, the lack of consensus on the determinants of managerial decision-making in advocating voluntary disclosure has inhibited intensive investigation among corporates in emerging countries.

Haniffa and Cooke (2002) have highlighted the critical role of regulatory frameworks in promoting voluntary disclosure practices. However, this topic was not a primary focus of research until it gained prominence in more recent studies. Mokhtar (2017) proposed future studies to revisit older literature, while also incorporating emerging trends and new methodologies to better understand the evolving landscape of internet financial reporting. He noted that meta-analyses may oversimplify complex, context-specific factors across regions, industries, or time periods. This current research could help bridge these gaps in understanding the factors influencing the adoption and quality of internet financial reporting.

The aim of this study was to review the practice of voluntary disclosures from 2010 to 2021 around the world by concentrating on published documents in Scopus (Elsevier) and the Web of Science (Clarivate Analytics). The collection procedure for the literature review in this study involved identifying potential research papers, followed by categorising these studies through screening, eligibility analysis, and narrowing the related literature to the study theme. Thus, the reference sections of the sampled studies were cross-referenced. The direction for the literature review process was based on voluntary disclosures via internet reporting and the factors as the key guidelines in the selection process. Scopus (Elsevier) and the Web of Science (Clarivate Analytics) are highly recognised as reputable databases for academic documents. This study used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRIMA) 2020 guidelines to depict the search process for relevant literature (Page et al. 2021; Ishak & Jiun 2021). The selection process for the relevant studies consisted of five steps.

METHODOLOGY THROUGH SYSTEMATIC LITERATURE REVIEW

TABLE 1. The process of a literature review

Databases	Scopus (Elsevier)	Web of Science (Clarivate Analytics)
Search	Article Title, Abstract and Keywords	
Scope	"internet reporting" OR "corporate reporting" OR "company reporting" OR "online reporting" OR "corporate internet reporting" OR "company internet reporting" OR "finance reporting" OR "online corporate reporting" OR "company internet reporting" OR "company corporate reporting" OR "company online reporting" OR "internet finance reporting" OR "internet corporate reporting" OR "internet company reporting" OR "internet online reporting" OR "intellectual capital reporting"	
Subject	Business/Management, Economics/Econometrics and Accounting/Financial	
Duration	2010 to 2021	
Preliminary Sample	55	66
Filtering	internet reporting as the dependent variable voluntary disclosures	
Screening	Records after duplicates removed	
Aim	22	23
Eligibility	Studies included in qualitative synthesis Studies included in quantitative synthesis	
Removed article	1 (5)	2 (4)
Final Sample	17	19

Note: The process of a literature review followed the PRISMA (2020) with some adjustments (Page, McKenzie, Bossuyt, Boutron, Hoffmann, Mulrow & Moher, 2021).

PHASE ONE: DOCUMENTS IDENTIFICATION

Firstly, in terms of the identification of potential research papers, the researchers started the data collection by accessing the Scopus (Elsevier) and Web of Science (Clarivate Analytics) using the institutional public libraries of the Universiti Utara Malaysia, Sintok, Kedah and Universiti Teknologi MARA, Merbok, Kedah, Malaysia. For the string search, the paper focused on specific keyword areas limited to specific scope based on the article title, abstract, and keywords identification (Table 1).

Meanwhile, the related documents for the study comprised Business/Management, Economics/Econometrics, and Accounting/Financial subject areas. Hereafter, the keyword showed that the earliest studies on the internet reporting started in 2010 for both Scopus (Elsevier) and Web of Science (Clarivate Analytics). Rigorous protocols were applied to identify documents related to the studies. The first phase of the documents showed that 55 documents from Scopus (Elsevier) and 66 from Web of Science (Clarivate Analytics). At the first phase, out of 121 documents, only 45

documents were extracted and analysed due to duplication between Scopus (Elsevier) and Web of Science (Clarivate Analytics).

At the second step, we filtered based on the source titles and the final document based on 36 articles for this paper. Hereafter, the paper categorized the document quality and reputation based on the SCImago ranked, H-index, CiteScore, and SCImago Journal and Country Rank (SJR) 2020 (Roldan-Valadez et al. 2019).

PHASE TWO: SCREENING

Thirdly, the next step was to conduct preliminary screening which only merges Scopus (Elsevier) and Web of Science (Clarivate Analytics) with the studies of voluntary disclosures via internet reporting and limited to open access documents that can be read, retrieved, and downloaded by the researchers, time period limited to the latest publication from 2010 to 2021 - a ten year observation to ensure the topic was relevance and suitable for the future studies, the main variables in this paper must be from the internet reporting and documents examined must be from the research articles. After screening, only 45 articles were relevant and suitable for further investigation. The coverage years of from 2010 to 2021 was adopted since the time frame is still relevant for voluntary disclosures practice among worldwide. Our paper differs from Zaini et al. (2018), by excluding non-financial journals such as Journal of Clean Production, Journal of Commerce and Management, and Environmental Management and Health that are beyond the scope of the study.

PHASE THREE: ELIGIBILITY

Fourth, as mentioned, the preliminary sample articles after screening recorded 45 articles comprised Scopus (Elsevier) and Web of Science (Clarivate Analytics). Subsequently, the research proceeds with the eligibility process to identified studies in the literature comprised qualitative synthesis (interview methods) and quantitative synthesis (meta-analysis). From 2010 to 2021, the trends shown the movement between quantitative and qualitative methodology. However, only one article concentrate on the meta-analysis via internet reporting based on the search of the databases.

PHASE FOUR: DOCUMENTS FOR REVIEW

Fifth and lastly, we also selected the papers and categorized them according to the authors, year of publication, source title and specifically focused on the research aim, voluntary disclosure context, tested variables, theory related, method of analysis, the sample of the studies and findings and discussion of the research as synthesis analysis. A final total of 36 articles was accumulated and then integrated the analyse the findings of studies globally on internet corporate reporting. Table 2 shown the general findings for analysed.

GENERAL FINDINGS

TABLE 2. Categorisation of the articles from Scopus (Elsevier) and Web of Science (Clarivate Analytics) for analysed

No	Authors	Year	Sample	Countries	Abstract Keywords	Cited by Scopus (Elsevier)
1	Hasan & Taha Islam	2021	Top 100 Non-Financial Companies	Bangladesh	Internet reporting	3
2	Xiang & Birt	2021	Top 100 Australian Companies	Australia	Voluntary disclosure, financial reporting, internet reporting	6
3	Vitolla, Raimo, Rubino & Garzoni	2021	80 Football Clubs	European	Disclosure, internet reporting	2
4	Bananuka	2020	40 Financial Services Firms	Uganda	Internet financial reporting	16
5	Waweru, Mangena & Riro	2019	Our-Year Period from Companies	Kenya and Tanzania	Corporate internet reporting	13
6	Sandhu & Singh	2019	140 Indian Companies	India	Voluntary disclosure, web-based reporting	8
7	Metushi & Fradeani	2019	200 Albanian Companies	Albania	Reporting	1
8	Ariff, Bin-Ghanem & Hashim	2018	152 Listed Financial Companies	Gulf Cooperation countries	Internet penetration	4
9	Ahmed, Mardini, Burton & Dunne	2018	18 Users and Preparers	Egypt	Internet	11
10	Manes Rossi, Nicolò & Tartaglia Polcini	2018	Italian Public Universities	Italy	Online disclosure	48
11	Ahmed, Burton & Dunne	2017	172 Non-Financial Listed	Egypt	Internet reporting	17
12	Khan, Ismail, Mardani, Zavadskas & Kaklauskas	2017	308 Questionnaires	Malaysia	Internet	4
13	Lodhia & Stone	2017	N/A	Mexico	Internet, integrated reporting	43
14	Filzen & Schutte	2017	55,949 Data	Multi region	Financial reporting	4
15	Khalil & Maghraby	2017	76 Egyptian Companies	Egypt	Internet reporting	11
16	Mokhtar	2017	59 Research Papers	Multi region	Internet reporting, web-based reporting	23
17	Bin-Ghanem & Ariff	2016	152 Listed Financial Companies	Gulf Cooperation countries	Internet financial reporting	26
18	Turmin, Hamid & Ghazali	2016	310 Companies	Malaysia		
19	Appiah, Amankwah & Adu Asamoah	2016	31 Private Insurance Companies	Ghana	Internet reporting	1
20	Turmin, Hamid & Ghazali	2016	380 Companies	Malaysia	Corporate internet reporting	1
21	Che Ku Kassim, Taib A., Nasir, Ahmad, Musman & Arifin	2016	52 Questionnaires to The Local Government	Malaysia	Web reporting	3
22	Bowrin	2015	65 Companies	USA	Internet reporting	10

23	Turmin, Hamid & Ghazali	2015	80 Companies	Malaysia	Corporate internet reporting	2
24	Ahmed, Tahat, Burton & Dunne	2015	119 Of the Surveyed Companies	Egypt	Corporate internet reporting	11
25	Biswas & Bala	2015	316 Responses	Bangladesh	Internet	2
26	Joseph, Pilcher & Taplin	2014	113 Countries	Multi region	Sustainability reporting	30
27	Botti, Boubaker, Hamrouni & Solonandrasana	2014	32 Firms	France	Financial reporting	19
28	Momany, Al-Malkawi & Mahdy	2014	127 Companies Listed	Jordan	Internet	16
29	Yusuf	2013	84 Companies	Nigeria	Internet financial reporting	10
30	Miniaoui & Oyelere	2013	132 Companies	UAE	Internet financial reporting	6
31	Bozcuk	2012	All Firms Listed	Turkey	Internet	6
32	Bhasin	2012	39 Corporations	India		
33	Ojah & Mokoaleli-Mokoteli	2012	44 Countries	Multi region	Financial disclosure	16
34	Oyelere & Kuruppu	2012	132 Companies	UAE	Internet financial reporting, corporate communication	21
35	Uyar	2011	4 Companies	Turkey	Internet, reporting	23
36	Allport & Pendley	2010	Ninety-Seven Business Students	USA	Internet financial reporting	10

From the table, only a few of the literature of voluntary disclosures via internet reporting that had studied similar countries. For instance, three studies were from Bangladesh, two studies were from Gulf Cooperation countries, two studies were from USA, four studies were from Egypt, five studies were from Malaysia, four studies were from the multi-region, as well as two were from UAE articles. The trends show that for 2010 to 2021, Asian researchers endeavoured published articles related to voluntary disclosure via internet reporting. Table 2 also shows that the studies examined the voluntary disclosures via internet reporting in Malaysia from the period of 2010 to 2017, that comprised of the questionnaires and secondary data analysis. Hot topics among Asian researchers were on listed companies and local government sector. For the past two recent years, Bangladesh, Uganda, Australia, and European countries have moved towards voluntary disclosures via internet reporting. The document entitled “*Exploring the Link Between Institutional Pressures and the Timeliness of Corporate Internet Reporting: The Case of an Emerging Economy*” published in 2021 had been downloaded 17 times since 11 October 2021. Even though European Union (EU) did not dominate the literature of voluntary disclosure via internet reporting, however, as mentioned by Khan (2022), researchers around the world currently pay attention on the EU Directive 2014/95 regulations, that focus on mandatory reporting of non-financial information via internet. This is aligned with the emphasis on United Nations’ Sustainable Development Goals (SDGs).

Additionally, the studies explored voluntary disclosures through internet reporting, including the impact of website design on the perceived credibility of internet financial reporting, reflecting a shift towards adopting internet-based voluntary disclosure practices. Since then, from 2011 to 2012, an additional five articles related to the voluntary disclosures via internet reporting were published. These literature on voluntary disclosure via internet reporting from Scopus (Elsevier) and Web of Science (Clarivate Analytics) has focused on abstract keywords “internet reporting, internet financial reporting and financial reporting” as presence of voluntary disclosure (Hasan & Islam 2021; Xiang & Birt 2021; Vitolla et al. 2021, Bananuka 2020; Ahmed et al. 2017; Filzen & Schutte 2017; Mokhtar 2017; Bin-Ganem & Ariff 2016; Appiah et al. 2016; Bowrin 2015; Botti et al. 2014; Yusuf 2013; Oyelere & Kuruppu 2012; Uyar 2011; Allport & Pendley 2010).

Besides that, the theories that were applied in the reviewed literature are classified and reported in Table 3. There were 16 different theories used to explain the linkage with voluntary disclosures via internet reporting. In general, the agency theory was the most common theory (15 articles, 29 percent) followed by signalling theory (9 articles, 17 percent) and legitimacy theory, stakeholder theory, institutional isomorphism theory (4 articles, 8 percent respectively). The remaining articles in the study were not grounded in any specific theories. Out of 36 articles, one article utilized four theoretical lenses, seven articles utilized three theories, seven articles utilized two theories and 14 articles applied one theory in their studies. Importantly, this study supports the statement that agency theory as the most common theory employed in the study of the factors behind voluntary disclosures via internet reporting. This finding benefits future researchers in building their theoretical framework in further studies of voluntary disclosure.

TABLE 3. Categorisation according to theories used to explain voluntary disclosures via internet reporting

Theory	Inter-related with other theories per article	Frequency used per article	Percentage (%)
Agency	√	15	28.30
Signalling	√	9	16.98
Legitimacy	√	4	7.55
Stakeholder	√	4	7.55
Institutional Isomorphism	√	4	7.55
Innovation Diffusion	√	3	5.66
Technology Acceptance Model	√	2	3.77
Political Cost	√	2	3.77
Information Choice	√	2	3.77
Entity	√	2	3.77
Voluntary Disclosure	×	1	1.89
Reputation Risk Management	×	1	1.89
Efficient Market	×	1	1.89
Decision Usefulness	×	1	1.89
Cost Benefit Analysis	×	1	1.89
Media Richness	×	1	1.89
Total		53	100.00

Note: √ indicated the theory been used inter-changed with another theory per article, × indicated the theory standalone per article.

Previous research with voluntary disclosure via internet reporting mostly were grounded on agency and signalling theories (Table 3). We also found that few studies have focused on the risk and internal control and country atmosphere (6 studies) respectively. This paper provides an avenue direction on which variables can be explored in the future and the most significant variables factors that have contributed to the voluntary disclosures via internet reporting. From the timeframe, we also found that most of the studies on voluntary disclosures via internet reporting started from 2016 to 2019. Aligned with Jones and Xiao (2003), the internet had become important in the dissemination of corporate information. For instance, from 2020 to 2021, the specific factors on this topic kept increasing as reported in the table 2.

MAIN FINDINGS

The following Table 1 summarises the categorisation of the relevant factors of voluntary disclosures via internet reporting. This table presents the findings based on the main factors (stakeholder pressure, business environment, corporate governance, risks, internal control, corporate value, and media pressure), inclusive of specific factors. The extracted papers on this topic were examined from periods of 2010 to 2011, 2012 to 2015, 2016 to 2019, and 2020 to 2021. In total, 152 items were recorded, analysed, and classified based on the results (significant, either positive or negative, or in-significant value). Based on the detailed literature review, this study has documented promising indicators of several relevant variables that could contribute to the importance of voluntary disclosure through internet reporting.

TABLE 4. Categorisation of factors to explain voluntary disclosures via internet reporting

Independent variables		2021-2020	2019-2016	2015-2012	2011-2010	Results			
*Factors examined	Specific factors	Item	Item	Item	Item	No.	Sig (+)	Sig (-)	NonSig
Proxy: Stakeholder pressure	Analysts	√				2	2	-	-
	Foreign listing		√	√	√	3	2	-	1
	Firm age		√			7	1	1	5
	Stockbroker advice			√		2	-	1	1
	Relative pressure			√		2	2	-	-
						16	7	2	7
Proxy: Business environment	Industry type		√	√		6	1	1	4
	Sector		√	√		3	1	1	1
	Organization size		√			4	2	-	2
	Government support		√			1	1	-	-
	Announcements			√		2	1	-	1
						16	6	2	8
Proxy: Corporate Governance	Board independent	√	√			4	2	-	2
	Foreign ownership	√		√		3	3	-	-
	Government ownership	√	√	√		3	3	-	-
	Public ownership	√	√	√		6	4	1	1
	Family ownership		√	√		2	1	1	-
	Duality	√	√	√		5	2	-	3
	Board size	√	√			4	2	-	2
	Investors	√				1	1	-	-
						28	18	2	8
Proxy: Risk and internal control	Isomorphic forces	√	√			2	2	-	-
	Intellectual right	√				1	1	-	-
	Materiality		√			1	-	1	-
	Legal environment			√		2	-	-	2
						6	3	1	2

Note: (*) Factor examined were classified based on authors classification. ROE means return on equity, ROA means return on assets, AC means audit committee.

Source: Authors' Own (2022).

Among the common indexed keywords on voluntary disclosure were sustainability, the internet, information dissemination, social and environment, knowledge, communication, sustainability development, environmental policy, social policy, and government policy. The reviewed literature also showed that common analysis methods consisted of descriptive statistics, experimental designs, correlation, and regression analysis. Previous studies also preferred secondary data collection and samples from firm observations. To understand the thematic growth of literature on voluntary disclosures via internet reporting, this study performed a categorisation of factors that have contributed to this form of disclosures. Based on the analysis of the Web of Science (Clarivate Analytics) and Scopus (Elsevier) databases, the topic of voluntary disclosures via internet reporting has grown rapidly over the years. With the advances of technology and accessibility, the need for internet reporting has increased (Jones & Xiao 2003).

In addition, the discipline of governance and accounting must be relevant and market-driven. The findings of this study have also shown that corporate governance has evolved over time and could bring a promising future for researchers.

The findings of this study have highlighted the increasing significance of voluntary disclosures through internet reporting in enhancing transparency and stakeholder engagement. Empirical evidence suggested that internet reporting has served as an effective tool for mitigating information asymmetry and fostering trust among shareholders and potential

investors (Healy & Palepu 2001; Zaini et al. 2018). This observation aligned with the principles of the agency theory, which underscore the importance of reducing conflicts of interest between managers and shareholders. Although this study has shown that internet reporting has become a critical medium for voluntary disclosures, there exists a notable variation in its adoption across different regions and industries.

This study has also found that while internet reporting offers opportunities for real-time, cost-effective communication, its effectiveness depends heavily on the quality, timeliness, and accessibility of the disclosed information (Barako et al. 2006). Furthermore, the integration of socio-political frameworks into voluntary disclosures suggests a shift in focus from mere regulatory compliance to addressing broader stakeholder expectations, including environmental and social concerns (Adams & Abhayawansa 2021). By critically synthesising these findings, this study has contributed to the discourse on digital transparency, while also highlighting areas that might require further exploration for a holistic understanding of voluntary disclosure practices. The following Table 2 lists the proposed directions that could be taken by future researchers.

AN AGENDA FOR FUTURE RESEARCH

Future research direction, based on the compilation documents, is shown in Table 5. We divided the future research directions based on the periods of 2010 to 2015 and 2016 to 2020. During the period of 2010 to 2015, prior researchers suggest for further exploration on the cause and effect of voluntary disclosure information by considering uniqueness variables (ie corporate governance) and complex testing variables as suggested by Miniaoui and Oyelere (2013). Additionally, to have a better understanding of the landscape disclosures via internet reporting, sample observation can be extended by considering longitudinal study and comparing between emerging and developed nations (Joseph et al. 2014).

In comparison, for the period between 2016 to 2020, the future research from the sampled literature, recommends for widen dependent variable (disclosures via internet reporting) from different angle and perspective (Lodhia & Stone 2017) and considering resign design and methodology issues such as endogeneity problem (Mokhtar 2017). Thus, a focus beyond qualitative perspective, into quantitative analysis and mixed methods can provide useful future exploration (Ariff et al. 2018). Recent studies on disclosures via internet that focus on the medium disclosures such as social media (Xiang & Birt 2020), variety of testing variables (Sandhu & Singh 2019) and techniques of methodologies (Ariff et al. 2018) would open for more debates and discussion to improve disclosures via internet reporting.

From an author's perspective, future research not only should focus on the medium of disclosures via internet reporting such as traditional formal medium (annual report, webcasts, company media relations), but also consider social medium such as Facebook, LinkedIn, Twitter and academic sources (Researchgate, Academia). These is to widen knowledge on what are the factors associated with the disclosures via internet reporting and targeted audiences. It is also suggested that future researchers to study the context of disclosure through narrative statements, in-depth analysis and case studies that lead to internet reporting information. These would not only be useful to the current stakeholders but potential investors of the companies.

TABLE 5. Future research directions

No	Future research topics	References	Period
1	Further studies could investigate the use of social media in publicizing both positive and negative climate change information.	Xiang & Birt	2020
2	Future studies may examine other determinants of IFR, since the current study only predicts 33.7 percent of the variance in IFR	Bananuka	2019
3	Future studies can explore the influence of ownership structure and board structure on CIR.	Sandhu & Singh	2019
4	It might be reasonable to conduct interviews with companies to determine the logic and perception of the managers in dealing with the IFR practices	Ariff, Bin-Ghanem & Hashim	2018
5	Future research could assess the extent to which the potential of the Internet and social media, identified in this paper, is actually used by organisations in their integrated reporting practice	Lodhia & Stone	2017
6	Future research may examine the association between corporate governance, ownership structure and internet reporting. In addition, future empirical research may examine the endogeneity problem between internet reporting and explanatory variables	Mokhtar	2017
7	Future research can employ longitudinal research to explore the reporting development of EDs by LGs in developing countries. Perhaps, comparisons between developing and developed country's perspective can also be made	Kassim, Taib, Nasir, Ahmad, Musman & Arifin	2016
8	Future research can consider to conduct a longitudinal study of Malaysian local authorities and compare the results with those of other developing countries	Joseph, Pilcher & Taplin	2014
9	Other independent variables should be considered, for instance level of education of company director, attitude of management to information technology. A special index measuring ownership spread should be included	Miniaoui & Oyelere	2013
10	More research is needed to better understand the dynamics of why some firms engage in voluntary IFR whilst others do not, and the costs of engaging in the same	Oyelere & Kuruppu	2012

Source: Authors' Own (2022).

DISCUSSION AND IMPLICATION

Overall, some of the reviewed studies on the topic of internet reporting are available in the SCImago Journal & Country Rank, which are ranked as Q1 to Q3. The disparity of the articles on this topic was notable within these rankings. By 2022, it was expected that more documents would be published on this topic by these journals. Several researchers were able to publish related topics under the Q1 SCImago Ranked journals. However, other factors could have hindered more articles from being published in these Q1 journals (Roldan-Valadez et al. 2019). Thus, current researchers are challenged to expand the scope of this topic in the future.

In terms of theoretical implication, the present study has contributed to scholarly knowledge through the identification of extant research gaps and viable agendas for future research pertaining disclosure via internet reporting. Lastly, the findings of this study could offer practitioners with a more holistic view of disclosures via internet reporting, for example, the impact of additional information via internet reporting for potential investors and how policymakers should consider appropriate measures to counter misleading information via internet reporting.

Future spin-off research may focus on other countries. This study has concentrated on previous findings on different countries, such as the Gulf Cooperation Council member states and multi-region observations. Thus, the findings in this study could guide the current researchers in analysing any similarity and complexity that might occur among different countries, and in minimising the gaps that exist for future trends.

CONCLUSION

There is consensus that, in the immediate future, non-financial information (voluntary disclosures via corporate reporting) will increase. The dearth of systematic reviews on voluntary disclosure via corporate reporting is one motivation of this paper. In this context, voluntary disclosure is seen as the main hot topic globally. In addition, we have also increased the understanding of corporate reporting behavior by analysing previous empirical studies.

LIMITATIONS AND RECOMMENDATIONS

Therefore, this paper justifies to the literature by providing an understanding of voluntary disclosures approaches and outlining a future research avenue. The limitation of the studies because the researchers did not focus on non-financial articles and the scope was limited to the corporate reporting. Despite a comprehensive literature review, this study is limited to certain constraints that may be addressed in future research. For instance, the study was constrained by specific inclusion and exclusion criteria which excluded publication sources such as conferences, theses, trade and non-peer reviewed journals. Future studies may address this limitation by determining more objective criteria for disclosure via internet reporting globally.

In the nutshell, the study on voluntary disclosure via internet reporting is an emerging research area that is on the agenda in both academic and industrial. As the body of literature in this field continues to grow, there is a need for scholars to explore specific research streams that address the evolving landscape of corporate transparency facilitated through digital platforms. The study underscores the importance of refining existing theoretical frameworks to better capture the future direction of voluntary disclosure, particularly in the context of rapidly advancing technologies and digital communication strategies. Furthermore, the identified gaps in the literature offer opportunities for future research to expand on the relationship between voluntary disclosure and various organizational outcomes, such as stakeholder trust, financial performance, and regulatory compliance. Based on the sampled literature review, the academic literature on voluntary disclosure have increased and concentrated on specific research streams. A framework for future research is proposed based on identified future research agendas.

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APPENDIX A

Documents from Databases		Number of Observations
Scopus (Elsevier) = 1,530	Web of Science (Clarivate Analytics) = 642	2,172
<i>Deduct: Identification = 1,000 + 1,008</i>		(2,008)
<i>Deduct: Screening = 20 + 99</i>		(119)
Eligibility		45
<i>Deduct: Non-included = 5 + 4</i>		(9)
Total		
Scopus (Elsevier) = 17	Web of Science (Clarivate Analytics) = 19	36