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The Dilemma of Information Overload: A Review of Literature from Accounting and Finance Related Studies

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ABSTRACT

Purpose: Advancements in information and communication technologies enable the production of a mass amount of data and information. Do more information support quality decision-making? It is a dilemma. The purpose of this study is to address the findings related to information overload and discover potential research gaps.

Design/Methodology/Approach: This paper aims to analyze the nature and trends of literature on information overload in the field of accounting and finance from 2017 to 2021 by adopting a systematic literature review approach. As a result of bibliometric analysis from the selected peer-reviewed journals, this paper shed light on 83 research papers for the review process.

Findings: The current study finds an increasing trend of studies focusing on information overload issues in corporate reporting. Results portray that since corporate reports are the critical communication bridge between entities and their stakeholders, disseminating unclouded, coherent and transparent information through the reports is very important to facilitate users and decision-makers. Stakeholder perception studies on content, length, and readability of financial and non-financial information disclosures in the annual reports are suggested for future research endeavors.

Originality: This study originates the point where the causes of information overload literally become a burden for effective decision-making. Thus, the finding of this study will be useful for both preparers and users of information in managing both financial and non-information and help future researchers to spot gaps for upcoming research.

KEYWORDS

Cognitive load, Cognitive overload, Decision-making, Disclosure overload, Information overload, Information load

JEL

CLASSIFICATION

M1, M4

I. Introduction

Information plays an inevitable role in humans' day-to-day life. Presently, information is accessible to everyone from everywhere at any time. When a user gets stressed due to the amount of information to be used in decision-making, there is an existence of information overload (Momany et al., 2014). This happens because the information received by the decision-makers surpasses their information processing capacity (Eppler & Mengis, 2004; Schroder et al., 1967). Similarly, Rodriguez et al. (2014) state this as a system that collects information as inputs and disseminates choices or decisions as outputs. Hence the

quality of decisions worsens when the inputs are intolerable for the processing system. Thus, since a human has limited cognitive processing capacity, decision quality will be reduced if unbearable information is absorbed by the human brain. What caused this situation, and with what impacts?

Digitalization of information is the prominent reason for opening immense information to a wide range of people. This depreciates individuals' intellectual ability to make informed decisions for existence. This condition is described as 'The Information age is drowning us with an unprecedented deluge of data' (Levitin, 2014), and as per Lauri et al. (2020), advancements in

information and communication technologies have made more confusion and complexities for information users. Apart from this drawback, the extensive load of information brings out issues in authorship, novelty, and quality of information (Misra & Stokols, 2012). As a result of this, users will face reliability issues of information that they have for decision-making.

Addedly many authors addressed this hazard of information overload with several phrases and wordings. For instance, the phrases such as ‘Data Smog’ (Eppler & Mengis, 2004; Schatz et al., 2017; Shenk, 1999), ‘Paralysis by Analysis’ (Roetzel, 2019; Shenk, 1999), ‘Information Fatigue Syndrome’ (Edmunds & Morris, 2000), ‘Information Overwhelm’ (Raja & Pushpa, 2020) and ‘Disclosure Overload’ (Hellman et al., 2018) found in previous literature.

Moreover, there is certain evidence that this dilemma existed and was frequently brought up in the debate even before half a century (Schroder et al., 1967). Accordingly, Klapp (1986) stated that information is the most valuable resource, and this valuable resource can change as a burden if the users of the information fail to recognize how much information is too much for decision-making. Then, Shenk (1999) voiced that data are “muck and druck of the information age” (p.31). The German term ‘druck’ mentioned here is defined as ‘pressure’ in English. In addition to that, the researchers also stated that wealthy and privileged people, such as academics and researchers, encountered the problem of information overload before all the revolutions, such as digitalization, took place (Levitin, 2014; Roetzel, 2019). With this brief introduction to the concept of information overload, the next section focuses on explaining the purpose and structure of this paper.

This paper aims to trace prior studies on information overload and analyze them to understand its evolution over time and the development of related conceptual frameworks as well as the factors. Hence, this review paper will answer the question, “To

what extent is the problem of information overload addressed in the studies related to accounting and finance?”. Though some authors, Eppler and Mengis (2004) and Roetzel (2019) undertook systematic reviews of business-related papers as a whole, this paper precisely focused on accounting and finance due to overwhelmed studies in the current era and to reveal critical ideas and research gaps in the mentioned field of studies. Further, due to the increased participation of information technology in the accounting and finance environment, researchers emphasized the importance of the level of information as “New technologies have shaped the accounting landscape” (Hartmann, 2020, p.3). In addition to that, Kelton and Murthy (2016) found that there are occasions where web-based corporate reporting leads investors to cognitive load though it provides disaggregated financial information. Thus, this review study attempted to address the issue of information overload in the accounting and finance fields.

Accordingly, the objectives of this review are to address the concept of information overload, evaluate the key contributions of prior studies, and identify the directions for future research. The rest of the section is organized as literature review, methodology, analysis and discussion, and the paper ends with a conclusion.

II. Literature Review

Information overload is becoming a problem for people and organizations in many fields. This paper explores this issue in the business-related field, considering its ongoing emphasis in the literature (Edmunds & Morris, 2000; Eppler & Mengis, 2004; Roetzel, 2019). For instance, Edmunds and Morris (2000) have paid more attention to defining information overload, evolution and connecting the problem with the internet phenomenon. Reviewing the literature over 30 years period in business-wide areas, such as Organization Science, Accounting, Marketing, and Management Information

Systems, Eppler and Mengis (2004) developed a conceptual framework to illustrate the causes and effects of information overload. They further highlighted information literacy as a key solution to the surfeit of information.

The study by Roetzel (2019) is a survey conducted over a period of 14 years. Their findings broadened the research areas by adding innovation management, health management, international management, and manufacturing to capture the prevailing pulse of the problem of information management. Their conceptual framework has given weights to behavioral and emotional conditions considering the probable evaluations after making decisions and includes cognitive biases as well. Additionally, Roetzel (2019) recommends further research undertakings on information overload by linking to digitalization, virtual organizations, and business psychology.

Thus, the findings of these papers portray a necessity to conduct studies on information overload. Further, due to the drastic evolution of information media over the period, conducting a review on multidisciplinary research will be challenging. Therefore, implementing a study at least in the specific area may aid in understanding the growth of information overload issues over the period. Hence, the next section of this paper discusses the methods followed in conducting the literature review study.

III. Methodology

The investigation of literature related to information overload was conducted with bibliometric analysis as recommended by Schaltegger et al. (2013). Bibliometric analysis is a quantitative study method where researchers analyze, organize, derive ideas, and address research gaps from academically published research papers, chapters of books, and review papers from a particular subject or multiple subjects. This analysis is further described as a statistical analysis of published scientific papers within

defined parameters (Schaltegger et al., 2013). Accordingly, it was found that Eppler and Mengis (2004) and Roetzel (2019) reviewed the literature regarding information overload in areas such as marketing, general management, logistics, accounting, and management information system for the period from 1970 to 2004 and from 2004 to 2017, respectively. Hence, this study focused on the literature published from 2017 to 2021. Moreover, this paper sheds light on particularly in the field of accounting and finance. Since the availability of information has increased over the period because of rapid enhancements in information technology, corporates have also moved their reporting media to the internet. Thenceforth, due to low-cost reporting and reachability, corporates started disseminating more disclosures than before, which ultimately burdens stakeholders in decision-making (Impink et al., 2021). Besides that, Kelton and Murthy (2016) mentioned that though internet-based financial reporting is an efficient communication tool, there are some instances where due to a load of information, the benefits of web-based reporting are misheard by decision-makers. Therefore, this study attempted to address the issue of information overload in the particular field of accounting and finance. Addedly, the number of papers selected by previous authors who did multidisciplinary studies is 97 and 189 (Eppler & Mengis, 2004; Roetzel, 2019). However, the current study faced over 800 research papers for business-related studies. Therefore, this paper limited the number of studies by choosing accounting and finance disciplines.

Further, this study focused on peer-reviewed articles published in EBSCOhost, Taylor & Francis, Emerald, JSTOR, and Oxford Academic databases based on the accessibility and popularity of databases in business-related research. The respective search terms employed in this study are 'Information Overload', 'Information Load', 'Cognitive Overload', and 'Cognitive load' concerning previous studies (Edmunds & Morris, 2000; Eppler & Mengis, 2004;

Roetzel, 2019). Though these terms are used in multidisciplinary studies, this study still employed these terms due to the frequent usage of these terms in the field of accounting and finance. For instance, “Information overload” (Fuhrmann, 2020; Herold et al., 2020; Kelton & Murthy, 2016; Momany et al., 2014), “Information load” (Morunga & Bradbury, 2012), “Cognitive overload” (Marriott & McGuigan, 2018), and “cognitive load” (Hartmann, 2020; Kelton & Murthy, 2016; Wynder, 2018) used by researchers regularly. In addition to that, the search terms ‘disclosure overload’,

‘disclosure load’, and ‘Too much information’ are added since these terms become familiar with the business reporting world, and standard setters use these words to describe how corporates should practice disclosing information to their stakeholders (Accounting and Reporting Checklists | EY - Global, 2022; Guides to Financial Statements - KPMG Global, 2022; IFRS - IFRS Standards Navigator, 2022). In addition to that, the search parameter for the present study is further limited by the papers published in the English language.

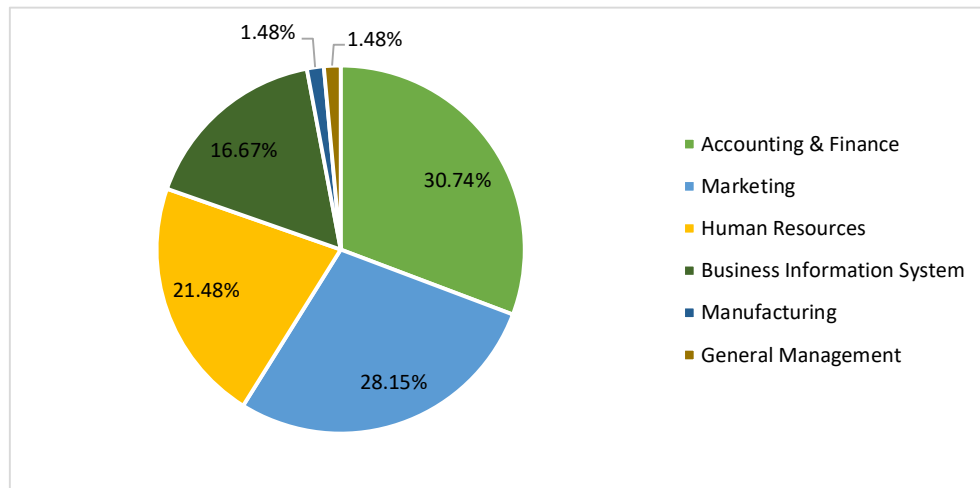


Figure 1. Share of business disciplines from filtered journal articles

Preliminary search results showed 11,154 research papers under the above-mentioned constraints. Since it is a massive number to conduct a thorough review, the study further limited the search parameters to business-related articles. The areas covered under business-related research are marketing, operations management, human resource management, finance, and accounting. To apply this condition, the relevant subjects in the particular databases were selected when conducting searching for literature. This ended up with 2916 research articles. Thenceforth, the number of research articles was further reduced to 884 after eliminating duplicates. The vast difference in several research papers after removing duplicates is due to the existence of many search terms in

a single article. As a next step, this study further trimmed the number of research papers by confirming the papers which treated problem information overload as a paramount subject. Therefore, the research which just mentioned the defined search terms less than two times or the research which just used these terms to narrate other issues were removed from the selected list (Eppler & Mengis, 2004; Roetzel, 2019). This process resulted in 270 journal articles, and the share of each business discipline showed in figure 1. As per the portion of share displayed in figure 1 number of articles found in the field of accounting and finance, marketing, human resources, and business information system are 83, 76, 58, and 45, respectively. In addition to that, areas of

manufacturing and general management were found with four articles each. As a next phase, the selection of sample articles for the current study was further narrowed down to particular field to undertake a precise investigation. Since the previous studies (Eppler & Mengis, 2004; Roetzel, 2019) followed multidisciplinary studies, important views, debates, and findings are shared among different fields. Further, it is also

found that the major portion of the sample set belongs to the disciplines of human resources, marketing, and Information science. Therefore, the significance of each field is relatively low. Hence 83 articles from the discipline of accounting and finance are considered as the finally selected set of publications for the current study to perform deep analysis, where the selection process is shown in figure 2.

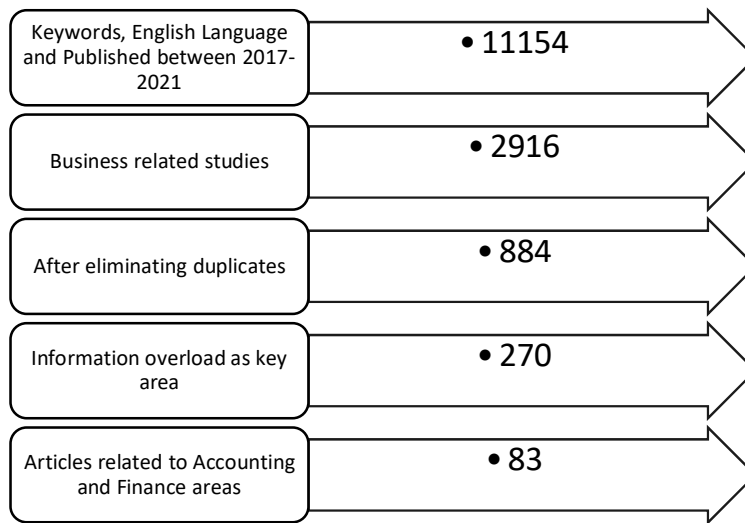


Figure 2. Process of filtering research papers for analysis

Additionally, previous review studies conducted by Eppler and Mengis (2004) and Roetzel (2019) show that the proportional share of the number of research works done in the field of accounting and finance is 19.58% and 8.63%, respectively. This is lower than the current study, which secured 30.74 % of the share for the accounting and finance field. Therefore, these readings portray that accounting and finance-related analysis on information overload has increased over the period, and this signals an

emergency in undertaking analysis in these areas.

IV. Analysis and Discussion

Table 1 shows the distribution of selected journal articles divided by the sub-disciplines related to accounting and finance. The highest number of publications was observed in the area of financial reporting, with a 44.58 % of the share.

Table 1. Classification of publications in sub-disciplines of accounting and finance

Sub-Disciplines	No of Publications	Share (%)
Financial Reporting	37	44.58%
Financing	16	19.28%
Accounting	10	12.05%
Management Decisions	8	9.64%
Auditing	7	8.43%
Banking	2	2.41%
Taxation	2	2.41%
Technology	1	1.20%
Total	83	100 %

Similarly, the top journals which published these researches are Meditari Accountancy Research, Accounting, and Business Research, European Accounting Review, Accounting Auditing and Accountability Journal, and Journal of Behavioral Finance, with more than four papers per journal. Table 2 shows the distribution of research papers over respective journals. The highest number of articles which is eight were found in Meditari Accountancy Research. Following that, Accounting and Business

Research and European Accounting Review secured five papers each, while Accounting, Auditing & Accountability Journal, and Journal of Behavioral Finance published four articles each. Additionally, five journals were published every three articles, and seven were published every two. The rest of the articles are published by a different journal, where the rest occupies 33.73 % of selected research papers for this study.

Table 2. Classification of papers by journal publications

Name of the journal	No of Publications	Share (%)
Meditari Accountancy Research	8	9.634%
Accounting and Business Research	5	6.024%
European Accounting Review	5	6.024%
Accounting, Auditing & Accountability Journal	4	4.819%
Journal of Behavioral Finance	4	4.819%
Accounting in Europe	3	3.614%
Asia-Pacific Journal of Accounting and Economics	3	3.614%
European Journal of Finance	3	3.614%
Journal of Applied Accounting Research	3	3.614%
Managerial Auditing Journal	3	3.614%
Accounting Education	2	2.410%
Asian Review of Accounting	2	2.410%
Economic Research-Ekonomska Istrazivanja	2	2.410%
International Journal of Bank Marketing	2	2.410%
Journal of Accounting and Organizational Change	2	2.410%
Journal of Public Budgeting, Accounting, and Financial Management	2	2.410%

Pacific Accounting Review	2	2.410%
Accounting Research Journal	1	1.205%
American Economic Review	1	1.205%
Applied Economics	1	1.205%
China Finance Review International	1	1.205%
Corporate Communications	1	1.205%
International Journal of Accounting and Information Management	1	1.205%
International Journal of Energy Sector Management	1	1.205%
International Journal of Operations and Production Management	1	1.205%
Journal of Accounting in Emerging Economies	1	1.205%
Journal of Applied Economics	1	1.205%
Journal of Business Strategy	1	1.205%
Journal of Decision Systems	1	1.205%
Journal of Economics and Development	1	1.205%
Management Decision	1	1.205%
Management Research Review	1	1.205%
Public Management Review	1	1.205%
Public Money and Management	1	1.205%
Qualitative Research in Financial Markets	1	1.205%
Review of Accounting and Finance	1	1.205%
Review of Finance	1	1.205%
Revista Contabilidade e Financas	1	1.205%
Social and Environmental Accountability Journal	1	1.205%
Society and Business Review	1	1.205%
South African Journal of Accounting Research	1	1.205%
Studies in Economics and Finance	1	1.205%
Sustainability Accounting, Management and Policy Journal	1	1.205%
The Review of Financial Studies	1	1.205%
The Russell Sage Foundation Journal of the Social Sciences	1	1.205%
Total	83	100 %

Moving to the country-wise classification of the selected papers, Table 3 shows that 34 papers were conducted worldwide (Al-Omouh et al., 2021; la Torre et al., 2019; Salijeni et al., 2019; Tang & Karim, 2019). Apart from that, eight papers were done in South Africa, while six papers were done in the USA. Further, Australia, China,

Germany, the UK, and European countries were found with three each research papers. Surprisingly one research paper was found in Sri Lanka, which discussed the Sri Lankan investors' perception of the usefulness of financial standards (Bandara & Falta, 2021).

Table 3. Classification of papers by countries

Country	No of Publications	Share (%)
Worldwide	34	40.964%
South Africa	8	9.638%
USA	6	7.228%
Australia	3	3.614%
China	3	3.614%
European	3	3.614%
Germany	3	3.614%
UK	3	3.614%
Brazil	2	2.410%
New Zealand	2	2.410%
Portugal	2	2.410%
Sweden	2	2.410%
Canada	1	1.205%
China and USA	1	1.205%
Denmark and USA	1	1.205%
Hong Kong	1	1.205%
Indonesia	1	1.205%
Italy	1	1.205%
Japan	1	1.205%
Kuwait	1	1.205%
Malta	1	1.205%
Sri Lanka	1	1.205%
Switzerland	1	1.205%
Taiwan	1	1.205%
Total	83	100 %

Considering the distribution of authorship of research papers, 199 authors were found from these 83 selected articles, and it is also observed that there is no author with more than three papers. Significantly, three authors were spotted with three papers each, while seven authors were spotted with two papers each. In addition to that, among three authors who found three articles each, two of them co-authored those three articles. Surprisingly, most research papers authored by these ten authors are published in Meditari Accountancy Research.

After analyzing authorship, this study was classified by the research methods employed in selected research papers. Table 4 shows the percentage of share that the sample consisted of with each research method. Accordingly,

43.37% of the papers used secondary resources and followed archival research methods. They used annual reports of the entities and accounting standards published by several boards for their analysis. These results vary with the findings of Roetzel (2019), for which 30.16% of the studies followed lab experiments and 28.57% of the studies followed surveys. Selecting papers from all disciplines in Business and Management may be the reason for the deviations in findings. Further, it is also found that the papers accompanying archival methods have studied Integrated reporting, Economic Social and Governance (ESG) reporting, Readability of reports, corporate internet reporting, and sustainability reporting done by local governments. Hence it is explicit that many researchers paid

attention to the information overload issue in corporate reporting. These results portray that since corporate reports are the critical communication bridge between entities and their stakeholders, disseminating unclouded,

coherent, and transparent information through the reports is very important to facilitate users and decision-makers (Abad et al., 2020; Abreu & Mendes, 2020; Stology & Paugam, 2018).

Table 4. Classification of papers by research methods

Research Methods	No of Publications	Share (%)
Archival method	36	43.37%
Surveys	8	9.64%
Online Experiments	6	7.23%
Interviews	6	7.23%
Conceptual	6	7.23%
Questionnaires	6	7.23%
Observations	5	6.03%
Qualitative	4	4.82%
Reviews	3	3.61%
Case Study	3	3.61%
Total	83	100%

In addition to the above findings, this review noticed another fact that, except for a few authors, most authors made logical arguments regarding the problem of information overload with empirical evidence rather than employing theories. Hence few papers discussed the issue of the concepts and ideas developed by Miller (1956) and Schroder et al. (1967). Alternatively, authors like Wynder (2018) and, Caruana and Farrugia (2018) discussed cognitive overload and information overload theories to make logical reasons for their ideas.

Consequently, few papers argued and conducted discussions about the accounting and financial reporting standards and how information overload rises because of implementing and amending changes in standards (Abad et al., 2020; Bandara & Falta, 2021; Fiechter et al., 2018; Hellman et al., 2018; Lombardi et al., 2021; Pandya et al., 2021; Al-Mulla & Bradbury, 2020). The report submitted by Financial Reporting Council (2009) concluded that one remedy to overcome clutter and overload issues in

annual reports is to change the seekers' behaviour, which will help users avoid unnecessary text and data in annual reports while accessing them. Further, Pandya et al. (2021) investigated challenges encountered when conforming to fair value measurements provided by International Financial Reporting Standards (IFRS) number 13. According to the interviews conducted by them, respondents declared that information overload occurs when IFRS requires more disclosures in reporting.

Further, some authors argued how voluntary reporting causes information overload to the users of reports and how it can be managed to satisfy different types of users (Dawd, 2018; Fuhrmann, 2020; Myburgh, 2001; Nel & Baard, 2019). Myburgh (2001) recommended that tailor-made systems will be a solution to decrease information overload. Hence, the electronic database is an effective tool for implementing a tailor-made system. Through this technology, stakeholders can access information conferring their relevancy. Surprisingly their recommendation worked out in today's business world. Besides that,

several authors mentioned Integrated Reporting (IR) as a treatment to reduce information overload problems (Dawd, 2018; Fuhrmann, 2020; Myburgh, 2001). Since the IR describes the mileage of an entity with a combined view of financial and non-financial information, the size of the information will be reduced, information asymmetry will be mitigated, and stakeholders will tend to be attracted to IR. Therefore, it is observed that there is an increasing trend in studies related to IR (Adhariani & Sciulli, 2020; Argento et al., 2019; Du Toit, 2017; Fuhrmann, 2020; Niemann & Hoppe, 2018; Stone & Lodhia, 2019).

Financial reports are the most important and highly attended communication tool by the stakeholders. Therefore, organizations should create and present financial reports in a way that convinces and influence investors' behaviors (Bai et al., 2019). Hence, the balance between quantity and quality in annual reports matters to a great extent to make great use of them. Thus, this study found that several authors addressed the issues related to lengthy annual reports (Abad et al., 2020; Du Toit, 2017; Du Toit et al., 2017; Hegazy & Kamareldawla, 2021; Herold et al., 2020; Velte, 2020). While there are also a few studies associated with the issue from different perspectives, such as from the preparers' side and statistically measuring the level of disclosure and the readability of annual reports (Dority et al., 2021; Lee et al., 2017; Santos et al., 2019; Stone & Lodhia, 2019; Velte, 2020). The observations on selected studies portray an increasing trend in research-related readability of financial reports using different types of readability indices such as Gunning Fog Index (Bai et al., 2019; Velte, 2020), Flesch-Kincaid Grade (Stone & Lodhia, 2019; Velte, 2020) and Smog Index (Dority et al., 2021). Thus, several studies on the quantity and quality of financial reports showcase that the importance of the information provided for decision-making is increasing due to high access to them from all over the world.

Moreover, this study came through an interesting phenomenon in accounting which is called 'neuro accounting' where Tank & Farrell (2021) conducted a review that explains the influence of neuroscience in the accounting context. They revealed that studies in behavioral accounting are important because the accounting information provided for decision-makers is highly impacted by their cognitive ability.

Approaching studies in the Sri Lankan context, there are limited studies that address this issue. Accordingly, Bandara and Falta (2021) studied the perceived efficacy and usefulness of annual reports by investors and lenders. Since the study is about the perception of investors and lenders, there is a gap in identifying and communicating the issue from different perspectives, such as from the preparers' side, and statistically measuring the level of disclosures in the reports. Moreover, researchers highlighted that since the English Language is not the main language for Sri Lankans and almost every company listed on the stock exchange publishes reports in English; special attention should be shown to the comprehensibility of the disclosures. Having analyzed and discussed the nature and types of studies addressing the issue of information overload, the next two sections summarize the findings in terms of approaches and causes for information overload.

Information overload: Approaches

The quality of the decisions made by the individuals is the visible output of how the information had been used with individuals' cognitive ability. Previous research attempted to visualize the existence of information overload with the quality of end decisions. Subsequently, there are mainly two approaches employed by the researchers to describe the occurrence of information overload, namely level of information and complexity of information. The level of information is considered the first approach used by several researchers in defining this issue. They used an inverted U-shaped curve to explain how information overload occurs

at a certain level of information (Driver & Streufert, 1969; Eppler & Mengis, 2004; Roetzel, 2019; Schroder et al., 1967). Figure 3 shows a graphical presentation of this theory. The level of information is represented by the x-axis (independent variable), and decision-making performance is represented by the y-axis (dependent variable). Up to the turning point, decision-making performance will increase gradually, where the level of information provided is

endurable to human information processing capacity. After this limit, the performance outcome of decision-making will decrease since the human brain witnesses an excess level of information gradually (Roetzel, 2019; Schroder et al., 1967). Therefore, the information level after the turning point is declared as information (over) load (Schroder et al., 1967). Hence the view of the interpreted relationship is called an inverted u curve.

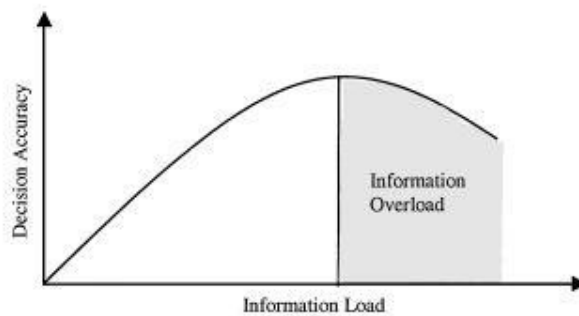


Figure 1. Explaining Information overload with inverted U curve (Schroder et al., 1967)

Similarly, Edmunds and Morris (2000) pointed out that the individual's performance is positively correlated with the amount of information he or she takes up to a convinced limit. The performance will deteriorate if the individual obtains information beyond the limit. In addition to that, Edmunds & Morris (2000) stated that the information provided beyond the level does not cohesively with the decision-making process. Therefore, the burden of heavy information will complicate an individual's ability to prioritize the details and make an effective decision and even get difficult to recall the information used in the decision-making process (Schick et al., 1990).

Another approach to defining information overload is the complexity of information. According to Roetzel (2019), if the decision-maker encounters complications with the information provided for decision-making, he/she might grasp the optimum information processing capacity before the turning point, which is explained by the quantity of

information. Further, the author discussed two comprehensive motives to cause the turning point in the inverted u-curve shown in figure 3 (Schroder et al., 1967). The first is information overload from the cognitive viewpoint, and the second is from an equipment-related viewpoint (resource-related viewpoint). According to the cognitive viewpoint, information overload derives from the information processing capacity of the decision-maker, where the decision-maker stops acquiring information beyond a certain limit for decision-making purpose. Hence information provided beyond that limit will no longer be used by the decision-maker.

When considering this issue from the equipment-related viewpoint, the problem of information overload is derived from limited resources. The resources mentioned here are the time and budget allocated to complete the task with the provided information. For instance, Roetzel (2019) explained that limited resources associated with this issue

with time and budget allocated for an auditor. If the auditor faces a tight time limit with limited resources, such as a low number of team members with insufficient qualifications, the outcome of decision-making might not be up to the optimum level though he/she can employ full information processing capacity. Beyond that, time is the most exceptional resource today to cope with. Executives in any type of organization are urged to make decisions promptly with available information due to heavy competition and bargains. In medicine world, surgeons and clinicians are urged to make such swift verdicts to save the life of patients. Thus, resources and equipment provided for decision-making also influence the accuracy and quality of the decision made by the individuals or team. Similarly, Eppler and Mengis (2004) considered these two motives as two fundamental variables of information overload with different phrasings, such as Information Processing Capacity (IPC) and Information Processing Requirements (IPR), and they introduced five causes for information overload, which will have a stern influence on IPC and IPR. The next section reviews the causes of information overload.

Information overload: Causes

Five causes of information overload introduced by Eppler and Mengis (2004) are the information itself, the task assigned to be completed with information, the person related to the task or process, the organization where the person belongs, and the information technology employed in the organizational structure. Eppler and Mengis (2004) further detailed these five causes as follows. Information itself represents the quantity, quality, frequency, and intensity of information. The task includes implementing new projects, reoccurring routines, and the scale of the processes. Further, the person referred to here is an individual's attitude, qualification, motivation, or passion for

completing the work and level of experience. Organizational structure, code of conduct, centralization, and changes in standards are considered under the organization factor. Ultimately Information technology considered in this case is what type of information technology and how it is applied in the organization. This includes email facilities, the internet, intranet, and modern communication tools such as chat apps and mobile conversation. Though Information technology plays a dominant part in creating, storing, and retrieving information, it cannot solely influence the problem of information overload to occur. The individuals or teams who use it, the type of job assigned to be done utilizing the technology, and the type and size of the information also cause information overload. Hence, Eppler and Mengis (2004) concluded that information overload arises because of the fusion of some or all five factors, not only for the reason of a single cause. Further, Eppler and Mengis (2004) discovered that the factors such as information and person impact Information Processing Capacity (IPC) since the information and person who possess data directly link to processing capacity. While task and organization impact Information Processing Requirements (IPR) since those are the essentials to carry out the information processing work. In addition to that, information technology is found to be the factor that influences both IPC and IPR since it takes the roles of resource and facilitating tool for decision-making. Moreover, Roetzel (2019) supported these causes by introducing pair of essential innovations that caused a drastic upsurge in the availability of information and a decrease in cost associated with searching for information, eventually leading to trouble with loaded information. They are Gutenberg's printing innovation and the rise of Information Technology.

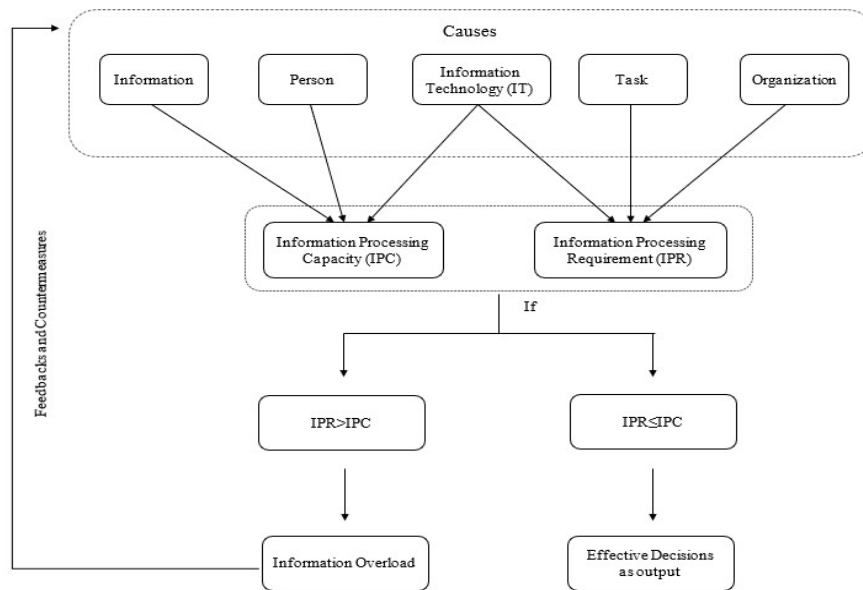


Figure 2. Modified Conceptual Framework for Information Overload

Thenceforth, the study by Cao et al. (2018) pointed out that an organization should maintain an IPR equivalent to IPC to create effective decision-making surroundings. If the IPR exceeds IPC, the decision-makers will fail to match the optimum output of the assigned task. For this study, a working definition of Information overload developed is developed as follows; “Information overload is a mental state that any individual or crew evidence cognitive heaviness due to level and literacy of information, type of task provided, resources allocated and technology applied for effective decision-making process” and accordingly, modified the conceptual framework developed by Eppler and Mengis (2004) and shown in figure 4 above.

V. Conclusion

Identifying the causes of loaded information at an early stage may assist avoid difficulties in decision-making. Meanwhile, paying attention to other resource constraints such as time, equipment, and human resources also

aids in proper decision-making. Concurrently selected articles from the databases confirm that there is an urgent requirement to determine the disclosure levels in annual reports and their comprehensibility since the annual reports have a massive influence on stakeholder behavioral outcomes. Further, the demand for studies in neuro accounting, behavioral accounting, and behavioral finance portrays that future business platforms pay attention to user response rather than what they provide as information for decision-making. Therefore, consideration of users’ perception increases to ensure the usefulness of the information that any corporates create.

Being an emerging concept in developed countries, the issue of information overload becomes a vital problem to be addressed in developing countries like Sri Lanka. Since many research papers discussed information overload with empirical evidence, only limited papers addressed this issue with the concept developed by widely cited authors and even hardly debated this issue with

cognitive overload theory. Therefore, it is clear that there is a gap in the theoretical background. Hence, future researchers, especially in South Asian countries, are recommended to conduct studies in preparing minimized and comprehensible financial and non-financial reports.

Consequently, the invention of this study which is the measuring point where information overload occurs, will assist future research and the preparers of any kind of information to be alert on the ratio of information processing capacity and the requirement, where fair understanding between IPC and IPR leads to better decision-making and avoid countermeasures for information overload issue.

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