

## **BIBLIOMETRIC ANALYSIS ON THE IMPACT OF COVID-19 ON CORPORATE GOVERNANCE**

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### **Abstract**

The COVID-19 pandemic has created a severe impact on the business field in the world as a whole. Nevertheless, there is a dearth of studies that synthesize the literature on the COVID-19 impact on corporate governance. The purpose of this study is to highlight the key issues and current trends in the area of COVID-19's effects on corporate governance and to offer suggestions for future research paths. This study performs a bibliometric analysis using a sample of 137 studies from the SCOPUS database to ascertain the volume of research on COVID-19 and corporate governance between 2020 and 2022. Based on their citations and the number of publications, researchers in this study identified the most significant authors, sources, countries and documents using Biblioshiny software. Additionally, evaluate the themes that already exist, point out any barriers to the literature's expansion, and offer suggestions for future research directions. There is a dearth of research studies conducted on this area, but China and India published the highest number of articles. The majority of research on COVID-19's impact on corporate governance focuses on the qualitative approach and is frequently investigated based on agency theory. Finally, the research suggests potential directions for future studies by the researchers and helps practitioners and policymakers to understand the impact of the COVID-19 pandemic on corporate governance and take necessary actions.

### **Keywords**

Bibliometric Analysis, Corporate Governance, Agency Theory, COVID-19

### **JEL Classification**

G 34, H 12, M 14

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## **Introduction**

The COVID-19 pandemic has triggered a crisis on a scale that humanity has not seen in recent memory. The global COVID-19 pandemic has wreaked havoc on businesses and economies worldwide. Numerous economists forecast a global recession as a result of this pandemic. The COVID-19 crisis has raised public awareness of the significance of good corporate governance, sound financial assurance, and adaptable corporate management practices in business (Kells, 2020). In the short term, a study of corporate governance could help figure out which factors (like ownership structure, board attributes, and executive compensation) were in place before the pandemic. This could help companies stay alive in the post-pandemic period. In the long run, the crisis will lead to structural changes in governance mechanisms that will allow businesses to either prevent or respond to events that could happen again (Zattoni and Pugliese, 2021).

Even though there are a number of studies that have examined the literature related to the COVID-19 impact on corporate governance, there is a dearth of studies that conduct a synthesis of the literature. Therefore, this study tries to uncover this gap by conducting a bibliometric analysis related to the impact of COVID-19 on corporate governance from 2020 to 2022 period. Through the use of bibliometric analysis and content analysis tools, the following research issues were investigated in the work.

RQ 1: What is the current trend in publications about impact of COVID-19 on corporate governance?

RQ 2: Who are the most influential authors of impact of COVID-19 on corporate governance?

RQ 3: Which are the most influential sources in research on impact of COVID-19 on corporate governance?

RQ 4: Which countries are the most influential in research on impact of COVID-19 on corporate governance?

RQ 5: Which academic studies and publications on impact of COVID-19 on corporate governance have the most impact on citations?

RQ 6: What are the frequently used author's keywords in relation to research on impact of COVID-19 on corporate governance?

RQ 7: What are the recommendations for future research in impact of COVID-19 on corporate governance?

In order to determine the current level of knowledge, research trends, and research needs in the context of impact of COVID-19 on corporate governance, it is crucial to delve into these research questions. According to the researchers' knowledge no research has examined the COVID-19 impact on corporate governance using a bibliometric analysis. Based on the foregoing, the current study uses an evaluation methodology based on bibliometrics to evaluate the quality of earlier studies on the area of impact of COVID-19 on corporate governance. This study brings the following

contributions: First, we will give a thorough overview of the research contributions of scientific journals, authors, and nations. Next, we will look more closely at the most-cited works and most-productive authors. Third, we will qualitatively analyze the highly cited articles in the area of impact of COVID-19 on corporate governance. Finally, we will look at the top research priorities and any potential structural gaps.

The main sections of this study are as follows: introduction, literature review; methodology; empirical findings and their discussion; conclusion; and policy implications.

## 1. Research methodology

A bibliometric analysis was utilized in this research to provide a comprehensive picture of the present status of scientific production and to assess the quality of prior studies, delivering a wealth of information on a specific issue (Dissanayake, Iddagoda and Popescu, 2022). Bibliometric analysis has increased dramatically since 1998 and continues to expand at an even faster rate after that (see (White and McCain, 1998; van Eck and Waltman, 2017). According to statisticians and mathematicians (Garfield, 1955), this methodology examines and surveys published works such as articles and books using a wide range of mathematical tools and statistical methodologies. Statistical methods shed light on scientific research explanations and disciplinary patterns (De Bakker, Groenewegen and Den Hond, 2005; Bouyssou and Marchant, 2011). Bibliometric analysis tell researchers about the history of a field, illuminate its current state, and suggest new research directions (Durieux and Geveno, Pierre, 2010; Bilal *et al.*, 2022). Current bibliometric analysis study focused on COVID-19 and corporate governance research.

The review of this study comprises journal articles, books, book chapters, and conference papers, resulting in a review with a wider focus (Det Udomsap and Hallinger, 2020). The start date was not included in the SCOPUS search engine with the intention of recognizing the historical publications on CG. The search strings “COVID-19” AND “corporate governance” was entered into the Scopus search engine and were directed towards the keywords, abstract and title of the publications. The initial search yielded 145 publications. The database was reduced to 142 publications with the application of “Language filter”. The final database included 137 publications on “COVID-19” AND “corporate governance” after the exclusion of publications related to 2023. The analyses of this study were performed using Biblioshiny software (Aria and Cuccurullo, 2017). Next section includes the results and discussion on the bibliometric analysis performed.

## 2. Results and discussions

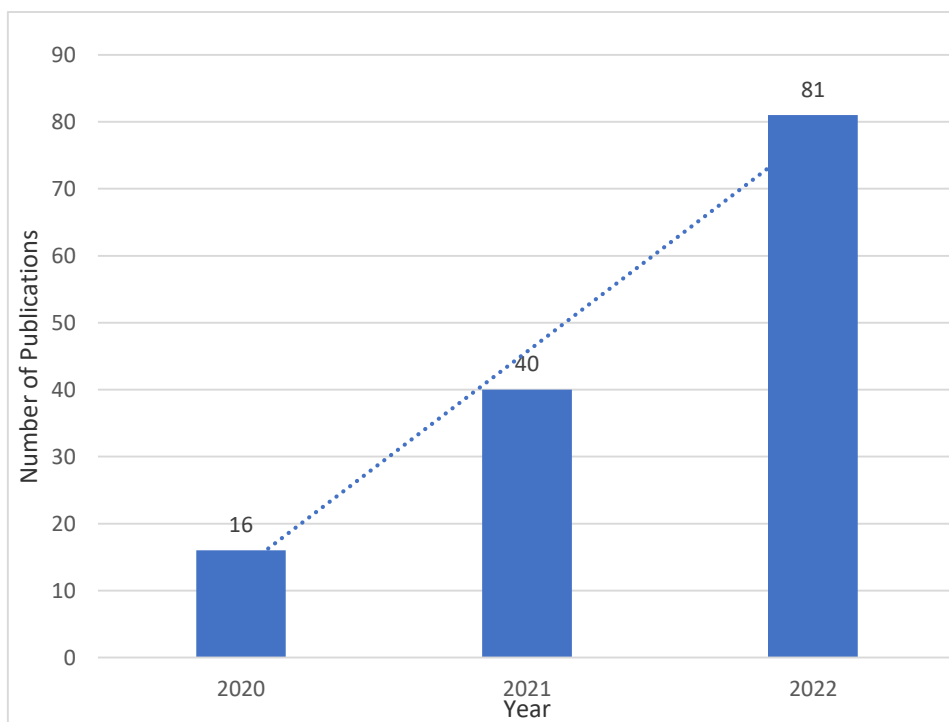
### 2.1. Analysis based on the year of publication

The number of publications on COVID-19 impact on corporate governance between 2020 and 2022 is depicted in Figure 1. An increased upward trend in publications is observed, and it was maximum in 2022 with 81. According to the trend line illustrates continuous increase in publications related to COVID-19 impact on corporate

governance. In 2022, the number of publications reaches its peak because the research work conducted during the COVID-19 period may be published in that year.

## 2.2. Analysis based on the authors

The analysis of this study identified 566 authors from 253 published articles on the subject of Corporate Governance. Table 1 illustrates the top contributing authors in the CG field. It is noted that Ding W, Levine R, Lin C and Xie W published in 2021 “Corporate immunity to the COVID-19 pandemic” and has 213 citations. Second highly cited authors are “Hou F, Wu Z, Xiong H and Zhang J” who received 97 citations for “[Which Firm-specific Characteristics Affect the Market Reaction of Chinese Listed Companies to the COVID-19 Pandemic?](#)”. Third highly cited authors are Scherer AG and Voegtlin C who received 93 citations for “Corporate governance for responsible innovation: Approaches to corporate governance and their implications for sustainable development”.



**Figure no. 1 Trend of publications**

*Source: Own elaboration*

**Table no. 1 Analysis based on the authors**

Authors	H_Index	G_Index	M_Index	TC	NP	PY_Start
Ding W	1	1	0.333	213	1	2021
Levine R	1	1	0.333	213	1	2021
Lin C	1	1	0.333	213	1	2021
Xie W	1	1	0.333	213	1	2021
Hou F	1	1	0.25	97	1	2020
Wu Z	1	1	0.25	97	1	2020
Xiong H	1	1	0.25	97	1	2020
Zhang J	1	1	0.25	97	1	2020
Scherer AG	2	2	0.5	93	2	2020
Voegtlin C	2	2	0.5	93	2	2020

*Source: Own elaboration based on Biblioshiny Software*

### 2.3. Analysis based on the journals

The analysis on the journal citations were conducted using the 137 articles that appeared in 97 journals. The journals with the most citations per year on corporate governance index are depicted in Table 2. The leading journals are Journal of Financial Economics, Corporate Governance (Bingley) and Emerging Markets Finance and Trade. It is observed that the scope of these journals is in the theme of “corporate governance”. Additionally, the most cited journals are also noted to be rated with Association of Business Schools (ABS) rating.

**Table no. 2 Analysis based on the journals**

Journal	h_index	g_index	m_index	TC	NP	PY_start
Journal of Financial Economics	1	1	0.33	213	1	2021
Corporate Governance (Bingley)	7	10	1.75	113	11	2020

Emerging Markets Finance and Trade	1	1	0.25	97	1	2020
Academy of Management Perspectives	1	1	0.25	83	1	2020
Sustainability (Switzerland)	3	7	0.75	63	8	2020
Journal of Asian Finance, Economics and Business	1	1	0.33	63	1	2021
Journal of Business Research	1	1	0.33	55	1	2021
Resources Policy	1	1	0.5	32	1	2022
Journal of Risk and Financial Management	3	5	1.5	27	6	2022
Economic Research-Ekonomska Istrazivanja	2	2	1	24	2	2022
Journal of Management Studies	2	2	0.67	24	2	2021

Source: Own elaboration based on Biblioshiny Software

#### 2.4. Analysis based on the country

The country-wise analysis included contributions from 53 countries that had publications on Impact of COVID-19 on Corporate Governance, and the top publishing countries on this topic are depicted in Table 3. It could be observed that the top three highly cited countries are the United States, China and United Kingdom. The top cited Asian countries are China, Malaysia and India respectively.

**Table no. 3 Analysis based on the country**

Country	TP	TC
USA	14	232
China	41	208
United Kingdom	23	82

Malaysia	17	77
Italy	29	33
India	28	31
Greece	6	22
Romania	17	18
Sweden	1	16
Slovakia	5	14

*Source: Own elaboration based on Biblioshiny Software*

## 2.5. Analysis based on the keywords

Keyword analysis is conducted based on the number of occurrences (after conducting data cleaning on the keywords). The keywords such as corporate governance, COVID-19 and Crisis were removed because these are the main keywords used in the analysis. The top 20 keywords used can be found in Table 4 and Figure 2. Table 4 highlights that most of the Impact of COVID-19 on corporate governance research conducted with the relationship between firm performance, corporate social responsibility and ESG. In addition, board of directors, gender diversity, information asymmetry, ownership structure, audit committee, board size, digitalization, enterprise risk management and disclosure are considered as frequently discussed areas. These studies were conducted in emerging economies including China and India. Importantly, the main theoretical underpinning this area is agency theory.

Protecting shareholder interests, reducing agency costs, and ensuring that agent and principal interests are aligned are the goals of corporate governance processes (Davis, Schoorman and Donaldson, 1997). The agency hypothesis proposes that the separation of the chairman and CEO positions results in superior performance (Shleifer and Vishny, 1997; Kiel and Nicholson, 2003). Most academics employed agency theory to study the relationship between corporate governance and the importance of this theory.

Table 3 Frequently used keywords

Words	Occurrences
firm performance	15
corporate social responsibility	11
ESG	7
china	6
board of directors	5
agency theory	4
gender diversity	4
information asymmetry	4
ownership structure	4
audit committee	3
board size	3
digitalization	3
disclosure	3
enterprise risk management	3
india	3
intellectual capital	3
risk management	3
shareholder activism	3
stakeholders	3
audit quality	2

Source: Own elaboration based on Biblioshiny Software





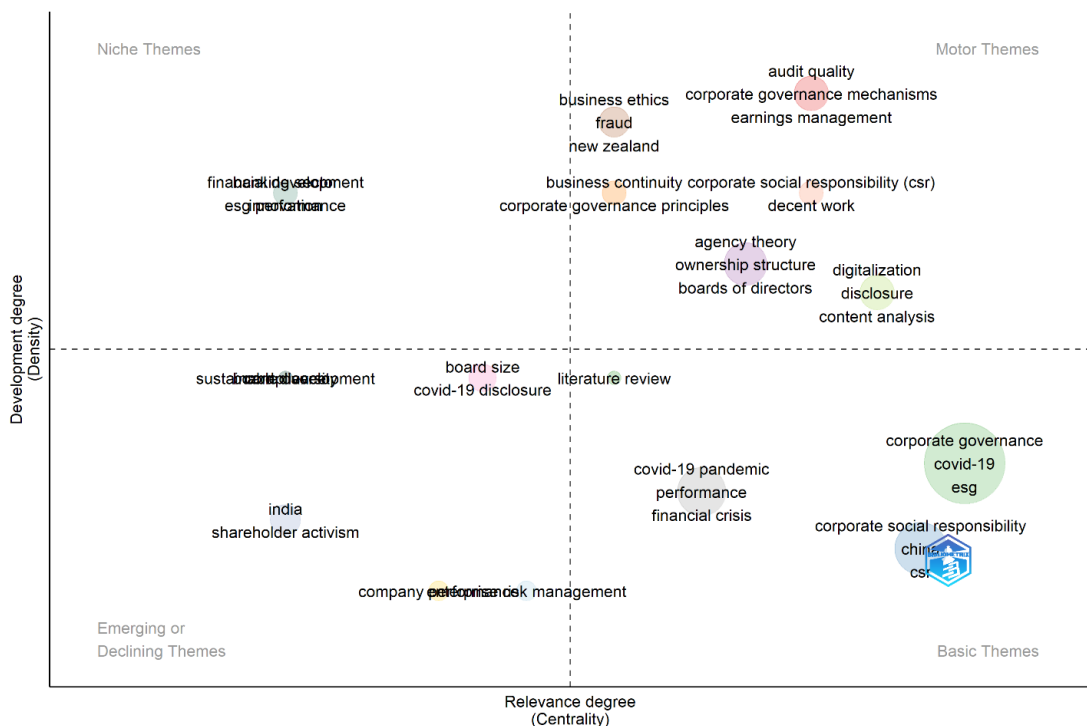


Figure no. 3 Thematic map

Source: Own elaboration based on Biblioshiny Software

### 2.6. Analysis based on the top research publications

The top research publications are explained in this section. The article with the most citations, "Corporate immunity to the COVID-19 pandemic," has 213 citations (Ding *et al.*, 2021). Although this study did not explicitly address corporate governance, it did analyze how COVID-19-period business actions affected stock performance. The study's findings show that companies with superior CSR practices before the pandemic do better in the market's response to COVID-19. Additionally, ownership is significantly associated to stock price responses to COVID-19 occurrences. Large corporations, governments, and family-controlled businesses all experience smaller stock price declines as a result of the pandemic than do businesses controlled by hedge funds and other asset management companies (especially through direct holdings and with nonfamily managers). The study's conclusion is that during the pandemic, low levels of managerial ownership are favourably priced by stock markets, but high levels of managerial ownership are negatively priced.

In addition, (S. F. Khatib and Nour, 2021) also conducted a study in China and found that the market reaction to the COVID-19 outbreak is particularly acute in enterprises in virus-vulnerable industries and those with large institutional investors. Furthermore, enterprises with a greater scale, stronger profitability and development potential, higher combined leverage, and less fixed assets are less affected by the COVID-19 outbreak than other firms. Moreover, Uddin *et al.*(2021) found that governance score is one of the key factors that affect market volatility and might be considerably reduced using the sample of 34 developed and developing nations. In developed markets, governance is an important factor during the pandemic period, but emerging economies are not a key factor.

The next COVID-19 impact was addressed by Scherer and Voegtlin(2020), who looked at the difficulties of governance and the part that responsible innovation played in this development. This study, which is based on a thorough review, examines how alternative forms of participatory and reflexive government might help address society's socioeconomic and environmental challenges by drawing on theoretical and empirical ideas from the political sciences. The article offers examples of creative corporate governance as a result, which can help in the development of technologies that do good while avoiding damage. This research also highlights the governance limitations and the significance of responsible innovation in the evolution of the current coronavirus epidemic (COVID-19).

Vitaly, Khatib and Nour(2021) use a sample of 188 non-financial companies from the Malaysian market for the years 2019–2020 to assess the effect of the COVID–19 on the link between corporate governance traits and firm performance. The results of this study showed that, despite the COVID-19 epidemic impact on every aspect of the company, including firm performance, governance structure, dividend, liquidity, and leverage level, the difference between the two eras was not statistically significant. On the other hand, we found that board size is unimportant during the hazy time of the current crisis by separating the sample into years. It's noteworthy to observe that, despite having an inverse association with firm performance in both metrics the year prior, board gender diversity looked to be significantly enhancing company performance (ROA and ROE) during the financial crisis. This resulted from a more diverse board's varying perspectives, expectations, skills, and backgrounds in comparison to its counterpart. Board and audit committee meetings, on the other hand, appear to have a significant negative impact on company performance because of the high director compensation, which comes in the form of an annual retainer and per-meeting fees that businesses could not afford (as additional expenses), at least during this uncertain period.

Additionally, Ikram *et al.*(2020) discovered that the COVID-19 epidemic, together with the economy and corporate governance, is the most important factor to increase firm sustainability standards. This was done utilizing the Fuzzy Analytical Hierarchical Process (FAHP). While the commitment to climate change, social distance and shift in working hours, emergency response plan, JIT and lean delivery, and social distance were among the 45 sub-barriers of various categories that received the highest rankings. Additionally, (Li *et al.*, 2022) did research in China during the COVID 19 period and

discovered that green legislation like environmental taxes and green finance (in the form of green bonds) play a substantial and beneficial impact in encouraging investment in renewable energy sources. When firm size and corporate governance procedures are kept in check, however, the volatility of the oil price and geopolitical risk have a negative effect on China's investment behavior for sustainable energy sources. The study also strengthens the link between green funding and investment in renewable energy while defending the moderating function of green rules.

Vitaly, Koutoupis *et al.*(2021) conducted systematic review using 62 studies published in the year 2020 and found that most studies of CG in the context of COVID-19 have taken place in industrialized nations and within theoretical frameworks. Additional global research including developed, emerging and other countries is required due to the paucity of accounting data. Additionally, no clear findings have been made regarding the importance of ESG and CSR to financial performance. In addition, this study found that to fully explain the effect of COVID-19 on CG, future research should employ more approaches and data sources including more emerging, frontline, and standalone countries, and accounting data could be used more frequently. Additionally, methodology might be expanded to incorporate a variety of techniques, including surveys, regression analysis, and data collection from other sources. Future studies might potentially broaden the scope of CSR literature to include industries besides hospitality, such the aviation and health sectors. Additionally, the performance of ETFs in comparison to other CSR initiatives or ESG rankings may be a promising area for future study. Finally, CG traits like autonomy and ownership could be scientifically investigated.

Additionally, Koutoupis *et al.*(2021) conducted mixed method study and showed that due to a significant digital divide, students were neither satisfied nor prepared for this sudden move toward online education. Instead, they experienced dread, uncertainty, and a number of difficulties in order to adjust to this unheard-of change. They were discovered to be engrossed in memories of F2F mode prior to the COVID epidemic and view this online change as a temporary adjustment as a result of their inability to respond to the pandemic in any other way. Contrarily, Golubeva(2021) highlights the significance of country-specific elements for the performance of organizations, including the level of economic growth and the corporate governance infrastructure determine the performance in COVID-19 period, utilizing data set of 5,730 firms from 13 nations.

Finally, Amore, Pelucco and Quarato(2022) found that family businesses outperformed other firms in terms of market success and operating profitability during the pandemic. This effect is stronger for firms with many family shareholders and no relevant minority investors. Further, this study investigates the processes and finds that the outperformance of family enterprises is caused by a more effective use of labor and a lesser decline in revenues.

### **Discussions**

The following research gaps and potential directions for future research can be determined based on the bibliometric analysis of highly cited documents utilizing

quantitative and qualitative analysis. Future studies should concentrate on developing on the following fronts:

1. There is a need to analyze the COVID-19 impact on corporate governance using a comprehensive survey.

Khatib and Nour(2021) has conducted only corporate governance impact on performance comparison in two periods using few board characteristics. It is better to conduct this relationship using corporate governance index constructed using comprehensive analysis of corporate governance and firm performance measure using market performance as well as financial performance. In addition, corporate governance practices related to shareholders, stakeholders, disclosures and CEO and executive management impact on performance can be examined by the future researchers.

2. It is better to examine the COVID-19 impact on the relationship between corporate governance and corporate sustainability.

There is no study that has directly investigated this area in SCOPUS database, but certain studies have conducted corporate social responsibility and sustainability in the COVID-19 period (Raimi *et al.*, 2022; Vasile *et al.*, 2022). But this is a significant area in terms of the impact of corporate governance on sustainability in the COVID-19 period, which helps firms to rethink the corporate governance. It is better to use quantitative survey comparing pre and post period and examine the difference.

3. It is better to examine the COVID-19 impact on corporate governance using mixed method of study.

The research has been conducted using quantitative analysis or literature review. It is better to analyze this impact by using exploratory sequential method which initially conducts qualitative interviews or focus groups and identifies the impact and then test this impact using questionnaire survey. Otherwise, the analysis using explanatory sequential method constructs the questionnaire according to the literature and analyzes data quantitatively and afterwards follows up with qualitative analysis and integrates data to arrive meaningful conclusions.

4. It is better to examine the COVID-19 impact on the relationship between corporate governance and earnings management.

No study has investigated this area in SCOPUS database. But there are few studies conducted on studies related to earning management s in COVID-19 period (Hussain *et al.*, 2020). But this is significant area as to know how the corporate governance impacts earning management during the COVID-19 period, which helps firms to rethink the corporate governance. It is better to use quantitative survey comparing pre and post period and examine the difference.

5. It is better to examine COVID-19 impact on corporate governance in emerging countries using different samples.

According to SCOPUS database there are no studies conducted in Russia, Sri Lanka, African countries, Thailand, Myanmar. It is better to conduct the research on these

countries using listed and non listed companies as samples and with comprehensive methodological innovations.

### **Conclusions**

The Biblioshiny software program was used to examine literature in the topic of Impact of COVID-19 on corporate governance, data that was retrieved from the SCOPUS database for the years 2020 to 2022. Using trend analysis, the first research question is examined by tracking publishing trends from 2020 to 2022. An examination of publishing trends revealed that since 2004, there has been an increasingly number of publications addressing COVID-19 on corporate governance. The second study question examined how many articles and citations each author received. Ding W, Levine R, Lin C and Xie W have received highest citations.

Utilizing the quantity of publications and citations received from each journal, the third research question was examined. Highly cited journal was Journal of Financial Economics which is Q1 ranked journal. Therefore, in order to increase the number of citations for their articles, future researchers should submit them to these journals.

The quantity of publications as well as the citations of the authors assigned to their nations were used to examine the fourth research question. With the probable exception of the United States, China and United Kingdom has recently had greater influence in the field of research than the majority of other nations. A critical analysis of highly cited academic papers on COVID-19 and corporate governance was used to analyze the fifth research question. This research examined the impact of COVID-19 on corporate governance investigated by the authors using literature surveys and quantitative analysis using different attributes. According to these studies, it was found that there is dearth of the studies in this area and it needs to be reexamined.

In order to analyze the sixth research question, word clouds and theme maps were used. Firm performance, ESG and corporate social responsibility are the most commonly used buzzwords. Future research implications were discovered through a thematic analysis. In the final question, it is suggested that researchers use comprehensive studies to construct corporate governance index using more dimensions, relationship to tested in mixed methods and with additional variables including sustainability, earning management and use different moderators.

Researchers can now comprehend the current limitations and extent of this field's research owing to our findings. As a result, our findings may be used by researchers to draw attention to the innovative and understudied concerns that will help COVID-19 impact on corporate governance which is more of a concern to managers and policy makers. In addition, the most researchers use agency theory to examine this impact, while future researchers can consider stakeholder theory, legitimacy theory, signalling theory, resource dependency theory which can be used independently or multi theory perspective to examine the impact.

In addition, this study has significant managerial implications including the understanding the impact of COVID-19 on corporate governance areas, including

meetings, risk management, resilience response plans. Accordingly they can consider the necessary changes to improve corporate governance in the organizations, which is important to achieve higher performance in this period (Dissanayake, Dissabandara and Ajward, 2021).

Furthermore, this study has policy implications such as policy makers can identify the areas that need to be concerned to improve corporate governance in this context. Accordingly they can introduce policies related to digital meetings, proxies, risk management, and reduce corruption. This can be implemented by the countries and can increase the level of governance which is a requirement of sustainable development.

Accordingly, this synthesis results increase our understanding of COVID 19 and corporate governance in relation to academic research and trends by bridging the empirical and practical gap, but there are still certain gaps in our understanding that need to be filled by further study. The reasons for the long-term changes in the themes, co-authorships, and journal citations that our study identifies are not specifically examined in our analysis, nor are the variables that hastened the increase in publications on COVID 19 and corporate governance examined. The causes of shifts can be investigated by other scholars, who can also analyze co-citations and bibliographic coupling. Despite our accomplishment in investigating and mapping global scholarly studies focused on COVID 19 and corporate governance, our findings failed to pinpoint the key factors that contributed to the rapid expansion of this literature over time. Researchers can proceed with research projects that shed light on the factors that sparked the explosive growth of CGI research.

Despite these drawbacks, the research makes a significant contribution to the synthesis of the literature on COVID 19 and corporate governance, which will be crucial for researchers and academics in identifying trends and future research recommendations.

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