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# COVID-19 Research in Business and Management: A Review and Future Research Agenda

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**Abstract:** Although the COVID-19 pandemic has generated voluminous research in mainstream business and management, there remains a need for a robust state-of-the-art review of the current diverse streams of research that have scattered across different fields. To address this lacuna in the current growing body of research, we conducted a systematic review of 152 COVID-related papers in the field of business and management published in top-tier journals to identify the impact of the pandemic on business activities. Based on the review, we classified the topical foci of the selected studies under three broad categories (i.e., corporate strategy, corporate design and culture, and contextual environment) and 13 sub-categories (e.g., CoVsumption, uncertainty asphyxiation, and normalization of meta-firms), which are the recurring themes in the papers. We correspondingly outline new avenues for future research and the theoretical and practical implications of this study. The findings revealed that, during the pandemic, adaptive strategies to survive the pandemic took precedence over shaping strategies to build post-COVID realities.

**Keywords:** COVID-19 pandemic; systematic literature review; business and management; fundamental uncertainty; liminal opportunities

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## 1. Introduction

The disruptive gale of the COVID-19 pandemic as a global shock to society has blown against almost all dimensions of our lives in nearly all corners of the globe [1–3]. Amid widespread confusion and despite the feeling of being in a hall of mirrors [4], this much is certain: COVID-19 epitomizes system failure [5]. A growing body of research has attempted conjectures regarding the short-, medium-, and long-term consequences of the pandemic [3,6–9]. For the world of business, the pandemic has precipitated failure and catastrophe and stress-tested the resilience of organizations and supply chains (SCc) unlike ever before [10–13]. Some studies have suggested that half a million firms have been endangered by the crisis [14]. The occurrence and unanticipated continuation of the COVID-19 pandemic has had a ripple effect on the craft of management [15], the conceptualization of risk [16,17], and the essence and prevalence of uncertainty [18–21], thereby, forcing organizations to look for alternative strategic paths [22].

Reflecting these COVID-19-induced changing realities of the global economy, there has been an enormous proliferation of research in the field of business and management. Reasonably, the systematization of this growing body of knowledge can be academically valuable. Several broad [23–26] and focused [8,27–32] literature reviews have attempted to systematize the COVID-19 research corpus. For example, Verma and Gustafsson [23] conducted a bibliometric analysis to identify the topical foci and the emerging trends in the first wave of publications. Carracedo et al. [24] conducted a text mining analysis of 16 articles from the leading journals in the field.

Kniffin et al. [8] performed a broad-scope review of the extant literature and integrated the reflections of a team of organizational scholars about COVID-19's implications for the workplace. Piccarozzi et al.'s [25] bibliometric analysis of the first wave of COVID-19 publications offered some insights but, lacks the comprehensiveness needed to outline robust future research directions. In addition, Khlystova et al. [29] conducted a systematic review of the impact of COVID-19 on creative industries and their responses. Despite the growing reviews of the literature, they lack a robust and integrative review of the diverse range of the impact of COVID-19 on business.

Against this backdrop, the purpose of this study is to review past studies on COVID-19 in business and management literature and outline the current research gaps and directions for future research. We aspire to provide a state-of-the-art synthesis of the fragmented and interdisciplinary [33] research at the intersection of COVID-19 and the field of business and management. The data was selected from an initial sample of 8482 articles published from March 2020 to November 2021.

This paper contributes to COVID-19 research and the field of business and management in several ways. First, to the best of our knowledge, we provide the first broad-scope review of relevant COVID-19 research in the field of business and management over a 21-month period. In doing so, this review encapsulates both the lessons learned *during* the COVID-19 period and the implications of the pandemic for the *post-COVID* "New Normal". The research conducted during this *liminal period* suggested that the pandemic is likely to cause an enduring impact [34] and catalyze policy changes [23]. To this end, this study charts the evolution of COVID-related studies within the mainstream business and management literature, the key emerging themes, and their relevant research gaps.

The remainder of this paper is organized as follows. In Section 2, we present the research methodology and the process of data selection. Section 3 documents the descriptive review of the selected articles. Next, we present the results of the content analysis and the pertinent research gaps in Section 4. In Section 5, based on the review, we examine the implications of the COVID-19 pandemic for the management of organizations. Section 6 concludes and discusses the research limitations.

## 2. Research Methodology

Due to the growth of knowledge generation within the field of business and management at an accelerating pace, "the literature review as a research method is more relevant than ever" [33]. In particular, systematic literature reviews "lie at the heart of 'pragmatic' management research" [35]. They can assist scholars to collect, synthesize, map, and evaluate a sizable body of research in an optimally rigorous, structured, transparent, and replicable manner and delineating research gaps/questions; their main advantage is overcoming the subjectivity and implicit biases of the researcher [23,33,35,36]. A quality review of the literature can avoid unnecessary replication, determine the profile of research methodologies and point out contradictions and inconsistencies [36]. In this study, we conducted a systematic literature review of COVID-19 articles in the field of business and management in several stages common to literature reviews as described hereafter [33,35,36].

### 2.1. Research Questions and Objectives

In this paper, we aimed to conduct a big-picture literature review and detect frequently-repeated "themes, ... or common issues" of COVID-19 existing literature in the field of business and management and "synthesize the state of knowledge and create an agenda for future research" [33]. Accordingly, our research questions are as follows:

RQ1: To present the themes that emerged from the accumulation of the research on the impact of COVID-19 on business.

RQ2: To delineate the research gaps in the emerging themes.

RQ3: To discuss some of the implications of COVID-19 for organizations based on the emerging themes.

## 2.2. Review Protocol: Search Strategies and Inclusion/Exclusion Criteria

To proceed with the review, articles were selected through an electronic search of the “Title/Abstract/Keyword” field of *Scopus* and *Web of Science (WoS)* databases using keywords, such as “coronavirus disease”, “coronavirus” and “COVID-19”—as the most frequently used keywords in the field of business and management to refer to the pandemic. We focus on *Scopus* and *WoS* as the two are considered to be the most comprehensive database of peer-reviewed academic articles. This is more so when compared with other databases, such as EBSCO, in the field of business and management [23].

In the identification phase, 423,433 articles were found. In the screening phase, the first-level inclusion criteria (see Figure 1) included subject area, document type, publication time, and language. The period studied ranged from March 2020 to November 2021. We used thematic filters to limit our search to the field of business and management. Subsequently, journal articles were used as the unit of our analysis. The initial search yielded 6237 and 2245 articles from *Scopus* and *WoS*, respectively. A second-level purification was then conducted. On the *WoS* database, we only considered articles from the Social Science Citation Index (SSCI), which gave us 1447 hits in total. We used these articles as the primary source to select the final sample and *Scopus* as a secondary/complementary source.

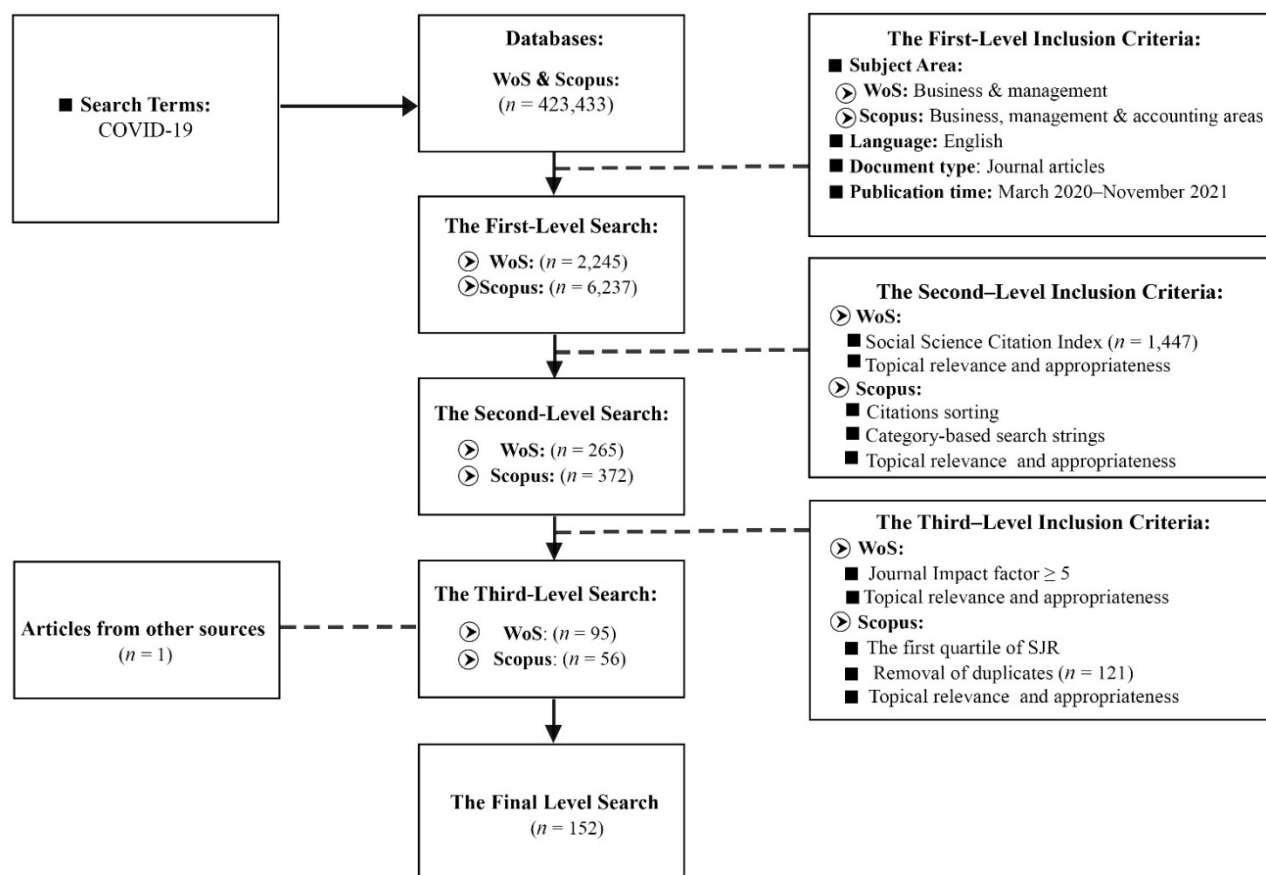
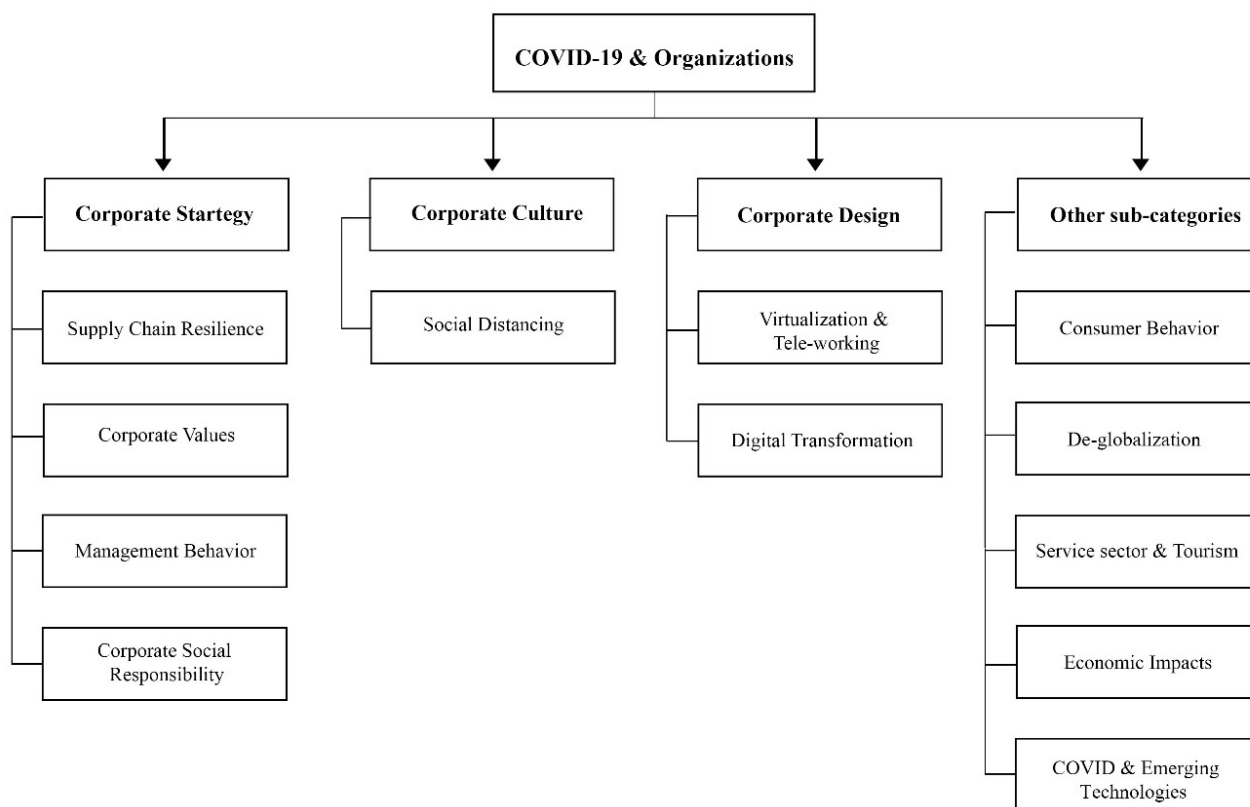


Figure 1. The process of article selection.

In the next step, all the titles and abstracts were screened for their relevance to our research questions and the pre-given categories (see Figure 2 and Section 2.3). In so doing, the lead researcher conducted the initial review of the titles and abstracts for their eligibility, and the other two researchers examined the selected articles and a sample of excluded articles to ensure that the inclusion/exclusion criteria were satisfied consistently [29].

We also cross-checked the first 25 journals in the business sub-category of the Journal Citation Report for the “COVID-19” keyword to make sure that all the relevant articles of these journals were included. At this stage, 265 articles were collected. Finally, we tightened our inclusion criteria by only retaining articles published in journals with an impact factor higher than 5. We limited our search to SSCI and high-impact journals due to the considerable number of works published about COVID-19 in the field of business and management. Next, we skimmed through the texts to substantiate their relevance to our research questions, which yielded 95 articles.

On the *Scopus* database, we applied a combinatory strategy, i.e., the number of citations and topical relevance to complement *WoS* results. First, we sorted out the initial pool based on the number of citations and cross-checked all the articles with more than 50 citations to identify both journals and studies that might have been overlooked in the *WoS* search because of the vastness of publications about COVID-19 in the field of business and management. As a second strategy to refine the initial sample, we used the “search within results” option of the *Scopus* search engine and looked for search strings of categories/sub-categories (see Figure 2 and Section 2.3) resulting in 372 hits.



**Figure 2.** Initial analytic categories and sub-categories for article selection and content analysis.

Finally, apart from browsing the texts to ascertain their relevance and the removal of duplicates, we only included articles published in the first quartile of SCImago Journal Rank (SJR) resulting in 56 additional articles. There is only one article [8] in the final sample that was not published in the journals of the field of business and management but

was included in our final sample due to its relevance and importance. The screening process gave us the core contributions including 152 articles from 52 different journals for which a data-extraction form was created. Figure 1 summarizes this process.

### 2.3. Systematization Procedure

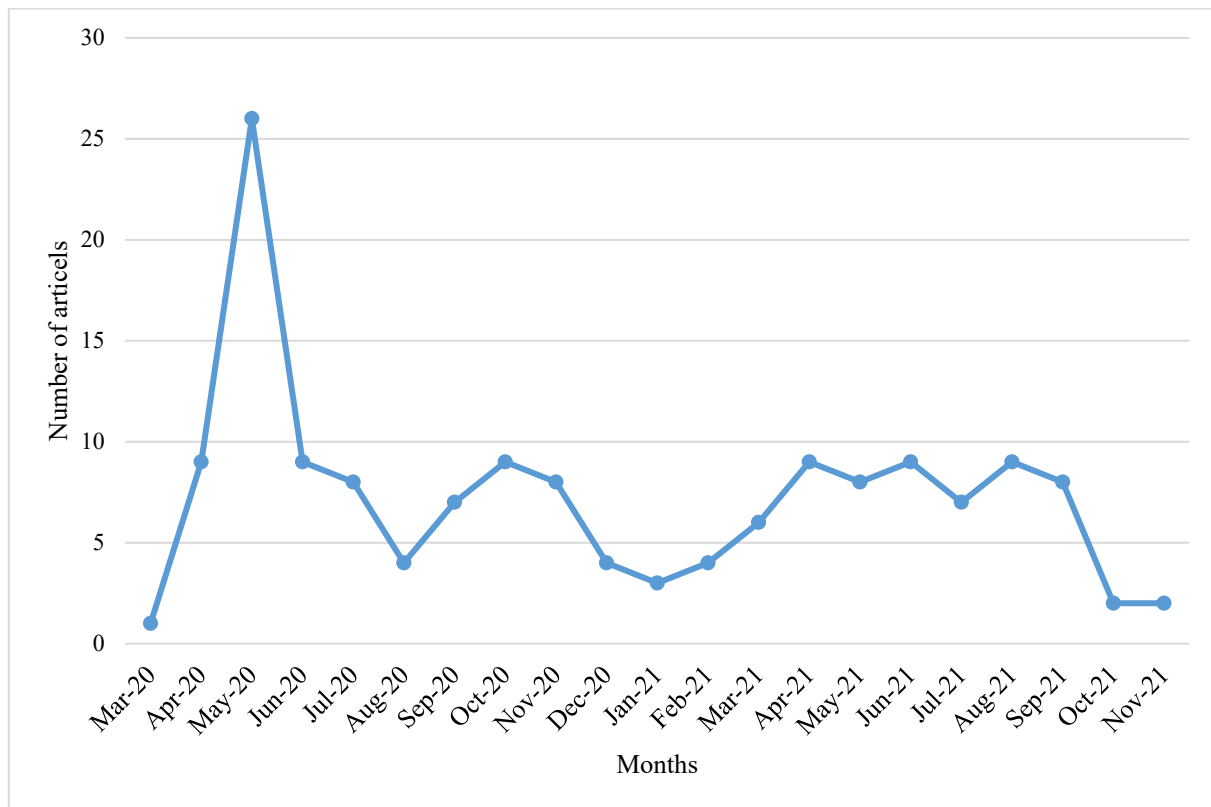
In order to answer the research questions and systematize the content, we conducted a qualitative “directed content analysis” [37] on our final sample through deductive category application followed by inductive category development [38].

With this in mind, we aimed to reduce, summarize and condense the material under examination—the manifest and latent data in the articles—stepwise into much fewer categories and sub-categories [39], as depicted in Figure 2. This diagram was developed based on “the scoping study” [35] of previously-published literature reviews of COVID-19 [8,23,24] and the original corporate identity categorization [40,41]. As the content analysis proceeded, in several “qualitative-interpretive steps” [38], the sub-categories were inductively updated on multiple occasions through tabular juxtaposition, within-category constant comparisons, and cross-case qualitative analyses [36]. To be more precise, we updated the categories in the review panel after 25%, 50%, 75%, and 100% of the material was examined. To ensure inter-subjectivity of data analysis [42,43], two of the researchers conducted the content analysis independently, and discrepancies were resolved in the review panel in iterative cycles.

## 3. Descriptive Analysis of the Literature

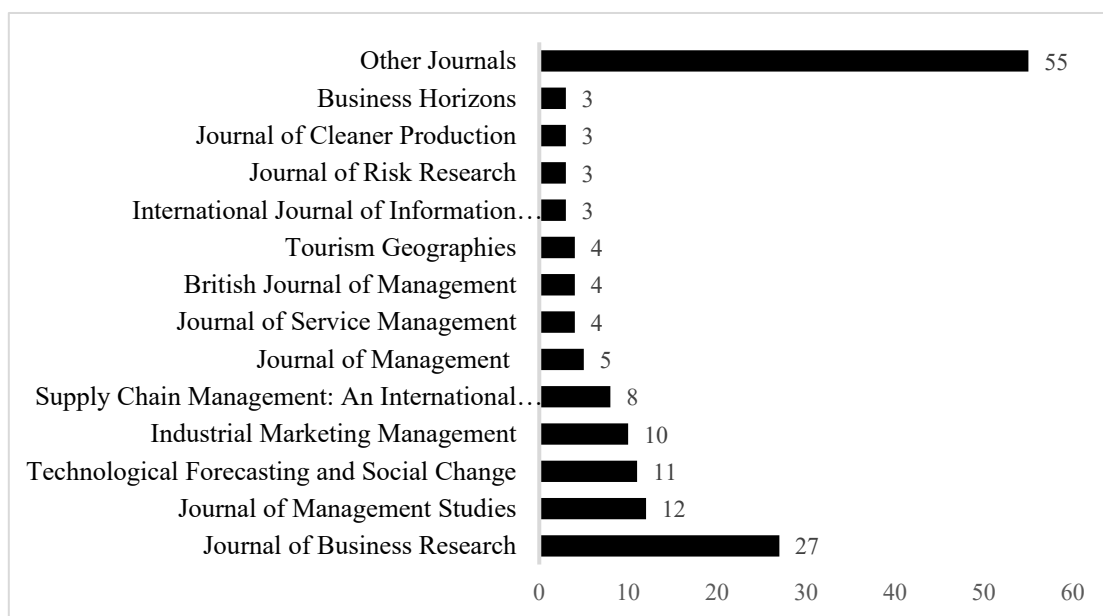
### 3.1. Month-Wise Trend, Publication Outlets, Citation Impact, and Geographic Scope

The final selection includes 152 articles, among which 38.16% ( $n = 58$ ) and 61.84% ( $n = 94$ ) were published in 2020 and 2021, respectively. The oldest article in our sample was made available online on 24 March 2020, and the publication date of the most recent article is 12 November 2021. Figure 3 demonstrates the trend of month-wise publications. On average, 7.24 articles from each month within the study time frame were chosen. The highest amount of selected articles ( $n = 26$ ) was published in May 2020—presumably representative of the first wave of publications in top-quality journals in the field of business and management, including commentaries and special issues. Most likely, this diagram is not reflective of the overall month-wise publication trend since the pandemic outbreak but instead the result of our inclusion/exclusion criteria based on the impact factor of journals and citation numbers.



**Figure 3.** Month-wise COVID-19 scientific production trend.

As for the publication outlets (see Figure 4), the articles included were from 52 different journals: the Journal of Business Research (17.76%;  $n = 27$ ), the Journal of Management Studies (7.89%;  $n = 12$ ), Technological Forecasting and Social Change (7.24%;  $n = 11$ ), Industrial Marketing Management (6.58%;  $n = 10$ ), and Supply Chain Management: An International Journal (5.26%;  $n = 8$ ) represent the highest number of articles. Sixteen journals contributed two articles, and 23 journals had only one article in our sample. The list of these journals is presented in Table A1 in Appendix A.



**Figure 4.** Publication outlets.

Examining the citations of the sample revealed that the average citation level per document 111.53. In a relatively short period of time, some of the selected articles have received considerable attention. The most well-cited papers are as follows: Ivanov [12] [2020; 557 Scopus citations], Dryhurst [44] [2020; 478 Scopus citations], Sigala [45] [2020; 383 Scopus citations], Donthu and Gustafsson [3] [2020; 343 Scopus citations], Hall [46] [2020; 290 Scopus citations], Sheth [47] [2020; 285 Scopus citations], Ashraf [48] [2020; 282 Scopus citations], He and Harris [34] [2020; 272 Scopus citations], Higgins-Desbiolles [49] [2020; 239 Scopus citations], and Kuckertz et al. [50] [2020; 231 Scopus citations].

Our selected articles were written by 439 authors based in 42 countries. As far as the geographical location of the first author is concerned (see Figure 5), contributions were dominated by authors from the USA (23.68%;  $n = 36$ ) and the UK (15.13%;  $n = 23$ ). Thirteen countries appeared only once in the set. Figure 6 presents the geographical scope of contributions. While Europe and America lead the statistics, there are only five manuscripts from Africa and the Middle East, and only two of them [51,52] are about context-specific issues. The COVID-19 research in the field of management and business is dominated by researchers from USA and Europe.

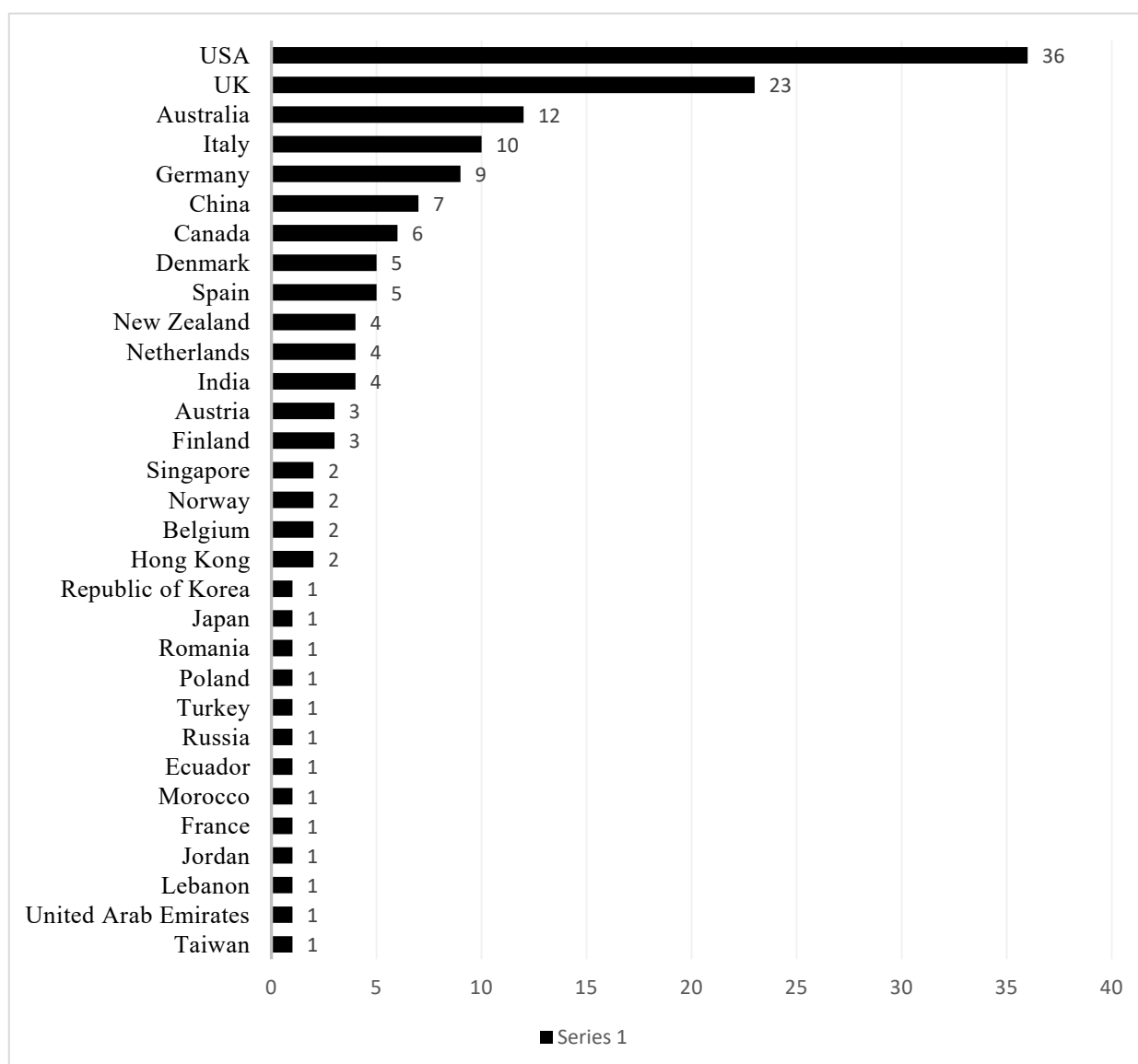
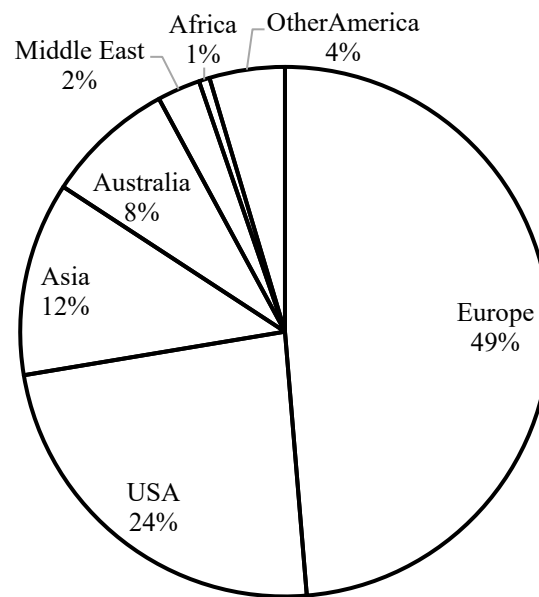


Figure 5. First author's geographical location.





**Figure 6.** The geographical scope of the articles.

While approximately half of the manuscripts (55.26%;  $n = 84$ ) were written by multiple authors, articles written by two authors comprise 24.34% ( $n = 37$ ) of the reviewed articles, closely followed by single authorship articles (20.39%;  $n = 31$ ). Another observation is that 6.37% ( $n = 28$ ) of the authors had two papers in the set, and only one author—Hari Bapuji—appeared in three papers. Of all the articles, 47.37% ( $n = 72$ ) were written by authors coming from different countries, which is indicative of a good level of international collaboration—well above the average for cross-country partnership—21.3%—in a large-scale dataset of articles published in 2015 [53].

Of the 10 well-cited papers, half of them were written by sole authors, three of them are about tourism, and four of them were published in the *Journal of Business Research*. Institutes from Europe ( $n = 4$ ), America ( $n = 2$ ), Australia, ( $n = 2$ ), China ( $n = 1$ ), and New Zealand ( $n = 1$ ) contributed to the most-cited articles, all of which were released from March through July 2020 in the first round of COVID-19 publications in the leading journals (see Figure 3).

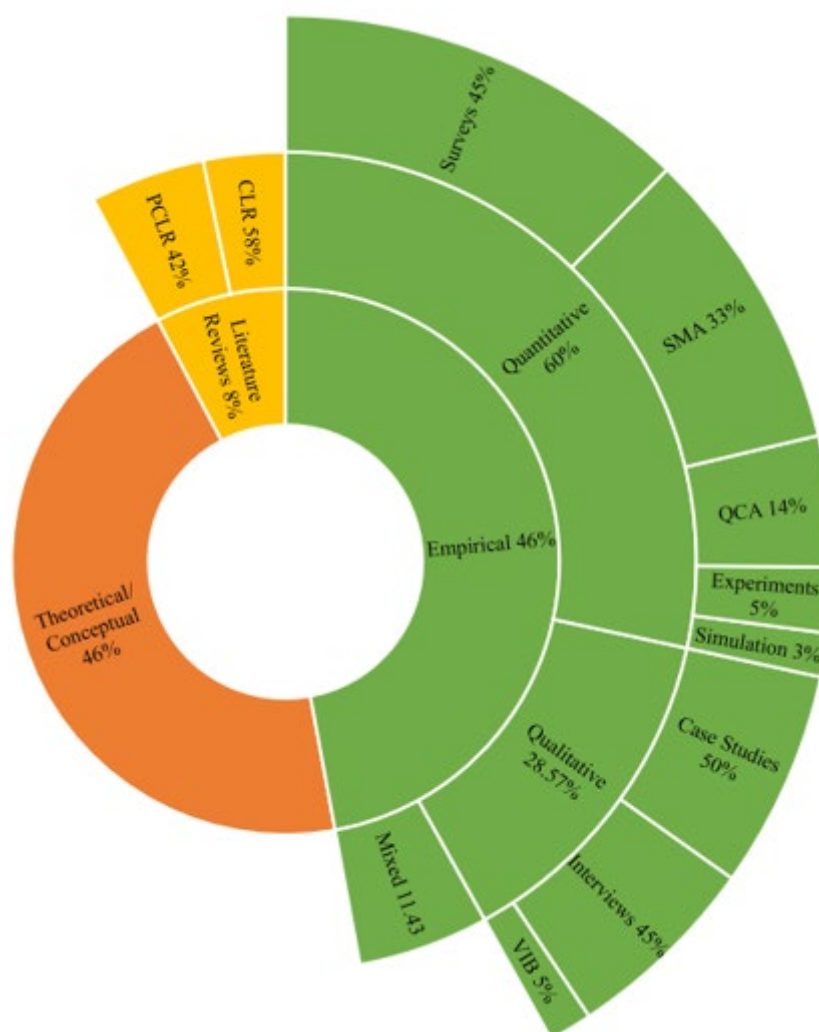
### 3.2. Article Types and Research Methodologies

To classify the articles, we relied on the article abstracts and key findings coupled with our independent assessment of the general direction of each manuscript [54]. Of all the selected articles, 71.05% ( $n = 108$ ) of them are exploratory and to varying degrees focus on the immediacy of the event—“It is all about survival now” [55]. Such studies provide empirical evidence (e.g., [19,56–58]), synthetic evidence (e.g., [23,24]), anecdotal evidence (e.g., [59,60]), case vignettes (e.g., [61]), comparisons between pre-pandemic and pandemic periods (e.g., [62–64]), and conceptual rationale (e.g., [13,17]) about the impact (e.g., [12,65]) of COVID-19 on firms, their responses (e.g., [66,67]), their adaptive strategies (e.g., [68–72]), and challenges and opportunities (e.g., [73–75]) during the COVID-19 period. A sub-category of the articles is not limited to the firm-level perspectives; these articles are broader explorations (e.g., [44,76–79]).

Around 28.95% ( $n = 44$ ) of the articles, beyond exploring the immediate effects of COVID-19, discuss some aspects of the post-COVID world. A sub-category ( $n = 12$ ) of these articles are value-laden about the business evolution during the pandemic, go beyond the firm-level perspective [5] and answer “what should be done to shape the New

Normal” question. They treat COVID-19 as a “transformational opportunity” [45], a “contextual background” [80], or a “tipping point” [20] to problematize management’s core assumptions [45,81] and argue in favor of shaping the next reality for “the greater good” of all [82], including future generations [5,6,34,49,83–86]. The second sub-category ( $n = 34$ ) of these articles aims to sort out a list of priorities [8,15,72,82,87–97] and/or possibilities [1,20,34,46,47,98–111] for the post-pandemic “New Normal” . It should be noted that two articles were classified under both of these subcategories.

In reference to research methods, Figure 7 presents the percentage of articles per their methodology. While both conceptual and empirical articles represent 46.05% ( $n = 70$ ) of the sample, only 7.89% ( $n = 12$ ) of the articles are literature reviews. Regarding empirical articles, quantitative techniques, qualitative approaches, and mixed methods were employed in 60% ( $n = 42$ ), 28.57% ( $n = 20$ ), and 11.43% ( $n = 8$ ) of the studies, respectively.

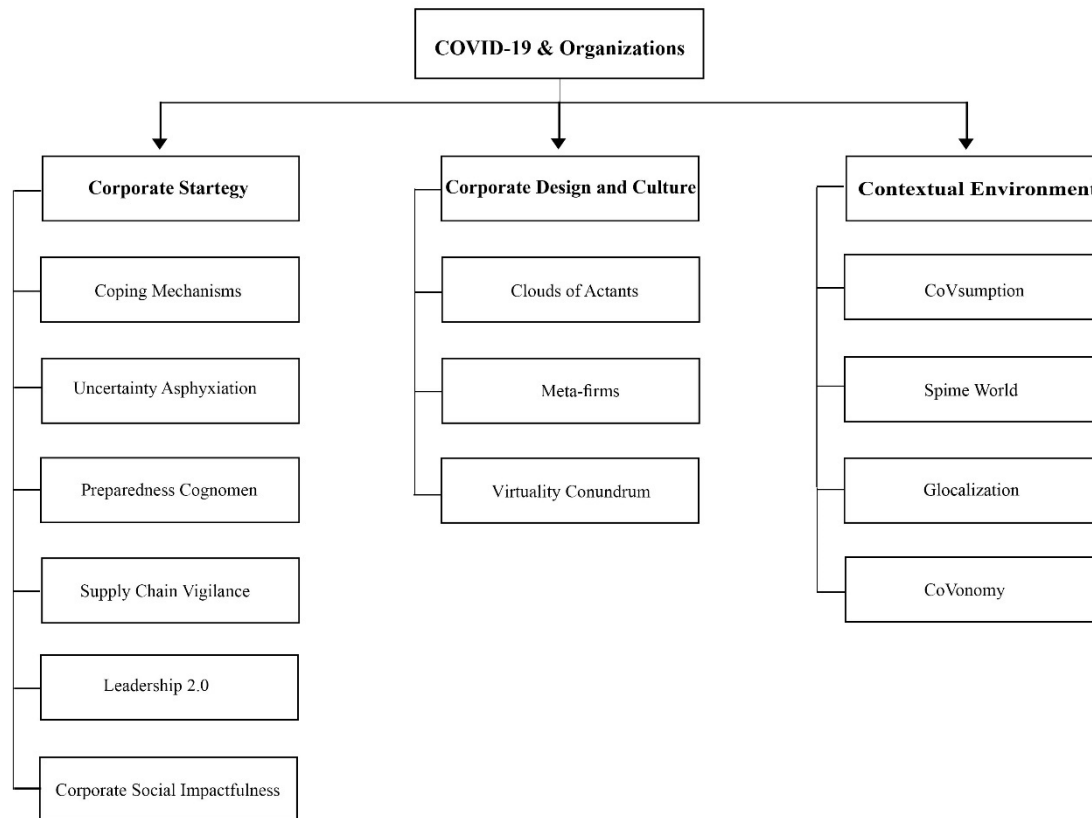


**Figure 7.** Research methods used by studies. Acronyms: Pre-COVID Literature Reviews (PCLR); COVID-19 Literature Reviews (CLR); Quantitative content analysis (QCA); Statistical/mathematical analysis (SMA); and Virtual Ideal Blitz (VIB).

#### 4. Content Analysis of the Literature

In the systemization procedure, the ex-ante dimensions allowed us to juxtapose similar articles and make within-category comparisons resulting in new and more sophisticated dimensions [112]. Figure 8 presents the final category system. Some of these inductively developed dimensions through content analysis not only retrospectively sum up the topical foci the selected articles to answer our first research question but also prospectively allude to the emerging trends relevant to the post-pandemic “New Normal”. They

can be considered as prospective “overarching categories” [35] that extend and enhance other literature reviews based on which the study began (e.g., [8,23,24]). In the subsequent paragraphs, we provide an audit trail of these constructs back to the core contributions.



**Figure 8.** The final tree diagram of the category system.

#### 4.1. Corporate Strategy

##### 4.1.1. Coping Mechanisms

One of the central threads running through the sample is the *coping mechanisms*, i.e., survival strategic maneuvers *during* the COVID-19 period. Founded on the review of the extant literature, Wenzel et al. [21] offered a general classification of these mechanisms—namely retrenchment, preserving, innovating, and exit. In a similar vein, Bailey and Breslin posited that proactive approaches and rapid innovation “may be the best bet for the endurance of many organizations” [10]. As for innovation, in many studies, business model innovations were hailed as the holy grail of strategic responses [22,50,58,73,113,114]; innovation was also repeatedly proposed as a perfect solution using an assortment of compounds, such as open [66,115], convergence [82] systemic [116], accelerated [117,118], AI-enabled [98] and bricolage innovations [119].

Moreover, on the one hand, at a theoretical level, several authors suggested some generic strategic inclinations (see Figure 9 for a summary) that can prove to be effective in tackling COVID-19, such as system perspectives [5], interdisciplinary strategizing [120], pluralism logic [118], design thinking [121], co-creation [122,123], the entrepreneurial orientation [15,20,65,120,124,125]—hustle [126], simultaneous/parallel experimentations [115,127], altered value propositions [61], and using polyvalent resources and generalism [128].

On the other hand, at a more operational and occasionally context-specific setting, numerous instances of resilience-building maneuvers were presented: safeguarding liquidity during the crisis [73], cash flow management [129], the acquisition of speed-by design capabilities [68], temporal strategies [66], higher levels of downward delegation [100], the orchestration of internal/external resources to spark off fast innovation reactions [130], avoiding customer solutions [106], revising retail strategies [70], adopting agile marketing [95], and benefiting from stammgasts to generate liquidity [114]. More specifically, based on survey and interview data in an Italian context, Rapaccini et al. [94] underlined the value of servitization and accelerated digital transformation to cope with the pandemic. Specific considerations about the management of the sales force [131] as well as “salesperson bricolage” [69] and “salesperson resilience” [71] were discussed as viable coping mechanisms, too.

Finally, on the subject of strategic collaborations, Sharma [17] considered reactive collaborations as an uncertainty-reducing mechanism to confront COVID-19. Similarly, the importance of asymmetric collaboration [66,132] and collaboration networks [82] was highlighted. Crick and Crick [59] provided some anecdotal evidence from retailers, pharmaceutical organizations, and technological giants to discuss the “heterogeneity of cooperation strategies” [59] during large-scale emergencies.

#### 4.1.2. Uncertainty Asphyxiation

The literature suggests that the transboundary dynamics of COVID-19 can lead to “organization-environment misfit” [13] and possibly *uncertainty asphyxiation*. This recurring theme was developed by the authors to refer to the sudden death of a business due to the amplification of types and the degree of uncertainty. Some antecedents of *uncertainty asphyxiation* are discussed in the literature: confusion between risk and uncertainty [17]—particularly Knightian/fundamental uncertainty [16,127,133], paradoxical components of uncertainty management [13,134,135], obsolete framing and dominant mindsets [45], and steadfast beliefs in market primacy/logic [81] and/or the global business ecosystem [13].

Furthermore, in reference to risk society, the fresh revelation of broader and societal conceptualizations of risk [16,86] necessitates a re-examination of organizational critical sense-making and the border between plausible/implausible [136] to acquire different “modalities of risk knowledge in organizations” [137]. To address this shifting essence of risk, Brammer et al. proposed that the dialectic between business and society should be investigated through “a more detailed and dynamic concept of society” [1]. In doing so, they employed the societalization theory to analyze the impact of COVID-19 in the USA and envisaged three post-pandemic scenarios for the role of business in society.

Similarly, the conversion of deep uncertainty into situations where conventional risk management can be applied was discussed as a possible antidote to *uncertainty asphyxiation* [18]. More generally, taking heed of changing public perceptions of risk and more effective means of risk communication are vital prerequisites for any uncertainty management practice [44].

#### 4.1.3. Preparedness Cognomens

There is a traceable stock of descriptive terms propounded by several authors to refer to the capacity of organizations to harness jolts. We name these descriptive terms *preparedness cognomens*. They include but are not limited to strategic hypermobility [34], resilience [10,11,50,113], agility [22], robustness, adaptiveness and anti-fragility [58], platform ecosystem resilience [138], organizational [2] and knowledge [75] ambidexterity, tight-loose ambidexterity [8], generative resilience through multimodality [128], and organizational hybridity [20].

Beyond these theoretical descriptive terms, some works attempted to operationalize some of these *preparedness cognomens* [52,139,140]. For instance, Mertzanis offered one possible operationalization of country-level preparedness in the COVID-19 context—namely

the epidemiological susceptibility risk index “to predict corporate performance around the world” [139]. Similarly, Tosun et al. [140] investigated the immunizing effect of exposure to previous disasters in firms headquartered in New York City and concluded that firms that survived 9/11 also performed better in terms of stock returns by about 7% during the COVID-19 pandemic.

Lastly, Davidsson et al. [124] criticized “the prevalent discourse” generated and propagated by both academicians and practitioners to negatively frame the COVID-19 “in terms of failure, resilience, and crisis” [124]; instead, they contended that the virus can be conceptualized as an “external enabler” to catalyze constructive change.

#### 4.1.4. Supply Chain Vigilance

The failure of overreliance on just-in-time systems [11], disruptions in SCs [12,141], their challenges [19,74], and factors affecting their behavior in pandemics [12] had a strong presence in the set. Their re-designing and localization were debated time and again [3,19,91,94,141]. In discussing the survivability strategies of SCs [75] and key SC strategies for the post-COVID period [72], the urgent need for digital SC twins [88] and building what we call *supply chain vigilance* was strongly stressed [2,19,23,102,141]. The literature review suggested that *supply chain vigilance* helps SCs “to anticipate early signals of surprise” and “act faster” [142] through the further inclusion of advanced technologies (IoT, blockchain, AI, deep and machine learning, RFID, and inter alia). Ivanov and Dolgui [88] emphasized that the future competition will happen between the information services and analytics algorithms behind the SCs, i.e., their *vigilance*.

Several manuscripts talked about the role of various factors/ideas in specific contexts and investigated the contribution of purpose [143], additive manufacturing clusters [144], reshoring [145], collaboration [146], the alliance management/artificial intelligence [147], digital technologies [148], sensing and seizing capabilities [149], chaos theory [150], and “Bring-service-near-your-home” innovation [151] in the proper management of SCs during the COVID-19 period. In a sample of U.S. companies, Fasan [56] empirically showed that companies equipped with green SC management suffered less in terms of stock returns during the crisis. Lastly, in an editorial commentary, Ketchen and Craighead [120] provided some anecdotal evidence of how firms benefited from interdisciplinary strategizing by combining research from entrepreneurship, SC management, and strategic management.

As for SC localization, several researchers considered the De-Chinazation of SCs [17], the emergence of “In-China-for-China” or “In-America-for-America” supply ecosystems [104] as well as Samsungesque multiple-source manufacturing [17] as viable future options. The tendency for shorter supply chains and buying local products can be an important factor in making supply chains resilient and sustainable [152,153]. Finally, the pandemic magnified a series of last-mile delivery challenges that might lead to the widespread application of more innovative and sustainable ways, such as drone delivery, in the future [102,120].

#### 4.1.5. Leadership 2.0

During the crisis, the decisive role of senior leadership [34,154] and key leadership practices adopted by leaders, such as Jacinda Ardern and Tsai Ing-wen underscored the importance of having women in leadership positions [3,24,76]. Wilson [154] reviewed some lessons from New Zealand’s approach to COVID-19 and introduced a pandemic leadership framework characterized by nurturing a shared purpose, being led by expertise, marshaling collective efforts, enabling coping, and building trust in leadership. Kniffin et al. [8] correspondingly reasoned that a feminine style of leadership is likely to be recognized as an optimal choice for crisis management. As a case in point, a statistical analysis of data from 210 countries demonstrated that gender equity and the proportion of women in the legislature had a positive impact on public health outcomes in the COVID-19 context [76].

The characteristics of effective crisis leadership and factors affecting it were investigated by several authors. In this regard, of different styles of leadership, ethical leadership [55], authentic leadership [10], and resilient leadership based on pragmatic idealism [134] were theoretically investigated. Crisis leaders are aware of the importance of transparent, compassionate, and empathetic communication [69], prioritize improvisation [135], exhibit supra-dynamic managerial capabilities [20], adapt their leadership style to the context [55], and deploy a complexity mindset [155].

Furthermore, due to the unprecedented virtualization of organizational work, Chamakiotis [89] insisted on the re-imagination of e-leadership and proposed a framework for e-Leadership in the COVID-19 context; similarly, Kulshreshtha and Sharma [156] cataloged the pros and cons of e-leadership. Finally, in two survey-based works in Germany, the positive impact of health-oriented leadership [157] and the effectiveness of task- and relation-oriented leadership on employees' work performance [158] were reported.

#### 4.1.6. Corporate Social Impactfulness (CSI)

Based on the review, we observed that “the revelatory power” [49] of the pandemic led to the heightened awareness of structural inequality [5,8,15,80] and “the interplay between organizations and societies” [80]. As for the effect of CSR on confronting COVID-19, two empirical works in two different settings revealed that CSR behavior had a positive impact on resilient corporate performance [123,138].

Above and beyond this, the forward-looking writers demanded the implementation of comprehensive theories in studying business-society dialectic [1], the re-examination of value assessment and allocation [86], and designing roadmaps for a transition toward (i) authentic CSR [34], (ii) socially conscious governance [83], and (iii) humanizing strategy [84]. Apart from these ideal visions, some actionable steps to materialize *corporate social impactfulness* can also be traced in the sample: Chesbrough [115] argues in favor of opening up the long tail of intellectual property to everyone.

Mandatory non-financial integrated reporting [90] and the institutionalization of CSR reporting [6] were regarded as two other pragmatic steps toward *corporate social impactfulness*. Consistent with Barnett et al. [159], our review revealed that CSR initiatives should go “beyond good intentions” [159] toward *social impactfulness* [6]. As an illustration, to delineate between “COVID-washing” and authentic CSR, Forcadell, and Aracil [160] categorized 218 post-shock CSR interventions from 111 Spanish companies into symbolic, selective, reactive, and supportive categories; they found that supportive post-shock CSRs combine effectivity and efficiency to deliver the desired impact.

Despite the optimism expressed in some works about the future of CSR [6,34], Cole and Shirgholami [105], contrarily, maintained that the pandemic will result in regressive rather than progressive modern slavery shifts in the apparel sector, thereby, leading to higher levels of exploitation of vulnerable people.

## 4.2. Corporate Design and Culture

### 4.2.1. Clouds of Actants

As a short-term effect, the pandemic triggered a shift from innovation-supporting organizational values to safety/resilience [161] partly leading to careful deliberation about the wellbeing of employees [8]. It also led to immense levels of general distress of employees—particularly essential employees—[162] and widened the gender gap in work hours by 20%–50% due to higher levels of caregiving responsibilities [78].

Furthermore, COVID-19 resulted in the proliferation and normalization of “work from home” and “work-from-anywhere” adjustments [8,15,103], flextime working schedules [87], the extended virtualization of work, teamwork and business trips, the hybrid workplace as the new norm [34,102], and the declining role of presenteeism in defining real work [96]. Because of the similarities between these pandemic-related work settings

and the occupational specificities of entrepreneurs, Carnevale and Hatak [65] proposed that entrepreneurship literature can enlighten the new reality of HRM.

In the medium term, based on a number of contributions, the cumulative effect of these changes is likely to usher in a new era of work. This new configuration will face dilemmas about locational/temporal/goal autonomy [87] and will likely include more asynchronous coordination of complex interdependent work [15] as well as new modes of employee surveillance [8,100] using their digital exhaust/footprints [101]. Two drivers may have profound impacts on the trajectory of this evolution: first, shifts in human resource composition and employer-employee landscape [163] toward the inclusion of not only independent contractors [100], collocated-remote personnel, and talents from everywhere [8,65] but also nonhumans along with humans in what we call a *cloud of actants* (In Actor-network theory, actant is a (non)human actor “that acts or to which activity is granted” [164]).

In this regard, the pandemic wave of automation, including the adoption of algorithms, robots, and drones, is noteworthy owing to the effectiveness of automation in contagion control. Based on a novel dataset from Italy, Caselli et al. [111] showed that higher rates of robotization can mitigate the risk of workplace contagion. They also warned that robotization should be handled with care by taking the potential trade-offs between workplace safety and employment rates into consideration.

The second driver is the increasingly evanescent borders between virtual reality and real virtuality caused by the real-artificial-real transition [47,102,165]. Based on the literature, it appears that the COVID-19 virus can act as the “catalyst” of these drivers, which, in turn, may lead to the speciation of new forms of organizations.

#### 4.2.2. Meta-Firms

During the pandemic, organizations with asset-light, virtual and networked business models had the upper hand. The pandemic dramatically highlighted the cross-scale effects between organizations and their contextual environment [5], challenged the conventional organizational matrix/boundaries [100], and called for more holistic/integrative conceptualizations of organizations [81].

In the long run, it can further unfetter organizations [166] and normalize phygital matrixed organizations entitled by authors as *meta-firms*. The review revealed that *meta-firms* are characterized by algocratic governance [87], virtual recruitment, training, and socialization [8,65], modularized tasks, and distributed coordination [15,100], higher rates of pooled and sequential interdependencies [100], fuzzier boundaries between core and periphery employees [87], and new forms of informal structures [65] to maintain organizational culture/values [65,87,89,163]. Muzio and Doh [81] probed into the control and coordination scenarios of such organizations, and Papadopoulos et al. [2] propounded that socio-material lenses should be used to study the convergence of digital technologies, work, and organization.

#### 4.2.3. Virtuality Conundrum

The significant challenges posed by the uncharted territory of collocated virtual work—what we call **the virtuality conundrum**—is a major leitmotif in numerous works: the intermingling of work, private, and family spheres [65,89] and the conflict between them [65]; the autonomy paradox [65,87]; the difficulty of unplugging from work demands [65]; the digital well-being of the personnel; Zoom fatigue/technostress [89,163]; technology toxification [87]; low degrees of personnel engagement [156]; reduced empathy [8]; privacy and security concerns [96]; the erosion of the employee–environment fit [65]; loneliness and social exclusion [8]; the possibility of intrusive micro-management [8,15]; less effective indoctrination of the organizational culture [163]; and the rise of blinkered bosses [62] are among the most important challenges that were discussed in our sample.

To create a basis for comparison, Ninaus et al. [63] compared the impact of employees’ perceptions of ICTs on burnout, work–family balance, and job satisfaction in three

independent datasets gathered during pre-pandemic and pandemic periods; they concluded that “companies and employees need to focus more on ICT demands than on ICT resource management” [63].

Several works were particularly concerned about the state and inhibitors of innovation and creativity in virtual teams [8,15,89] and how virtuality can affect innovation in teams and organizations and considered it as an important topic for future research [167].

### 4.3. Contextual Environment

#### 4.3.1. CoVsumption

The immediate impacts of COVID-19 on consumer behavior [47]—labeled as CoVsumption by the authors—such as panic buying and hoarding [3,57,165,168] are among the recurring themes of the sample. Cruz-Cárdenas et al. [28] conducted a systematic review of consumer behavior during COVID-19 and affirmatively endorsed a digitalization agenda for firms. More concretely, the pandemic led to consumption displacement [169] and a stockpiling mentality [70] likely due, among other factors, to the limited time and quantity scarcity [170], fear and anxiety [34], ontological insecurity [168], intention to self-isolate, cyberchondria, and the perceived severity of the pandemic [57].

This also led to the proliferation of e-commerce [47,96], exacerbated consumer aversion to typical products [171], and gave rise to new product purchase intentions for a variety of reasons, including COVID-induced nostalgia [172]. During the lockdowns, consumers quaran-teamed, used mediating technologies to cope with social exclusion [165], displayed a marked proclivity for DIY projects/behaviors [165], bought products that evoked a sense of self-sufficiency [116], and opted for gaming and eSports [122,173]. Further to this, taking heed of the psychological state of consumers was highlighted [174]. Revision of market segmentation strategies [175] and socio-psychological assessment of innovations [116] were correspondingly advised.

Apropos of longer-term potential entailments of *CoVsumption*, the possible return of old habits as hobbies [47], preference of the quality over the quantity of travel [107], the rise of health-conscious product choices [34,175], the adoption of contactless/technology-dependent shopping [176], the popularization of drone delivery [51], the further inclusion of transformative robotic services [109], the emergence of safety-first service designs [108], and the growth of the “Everything-as-a-Service” mindset [106] were mentioned. Kirk and Rifkin [165] predicted an increase in contactless options, such as curbside pick-up, robotic delivery, and “Walk out Shopping”.

On a more fundamental level and in view of the changing identities of consumers [165], He and Harris [34] pointed out the dilemma of prosocial and pro-environmental consumption [64] vs. hedonic gratification. They also raised concerns about consumer ethnocentrism and animosity, thereby, inviting scholars to study consumer ethics related to the choice between domestic and foreign products. In a similar vein, Eichinger et al. [97] postulated that societal megatrends, such as urbanization and digitization, along with the COVID-19 pandemic [97] will make “a feeling of groundedness or being emotionally rooted” [97] for consumers more relevant than ever.

#### 4.3.2. The Spime World

During the pandemic, a dramatic increase in the usage of the internet and social media was registered [3,170]. Caused by the “psychological dividend” of COVID-19 [96], skepticism about advanced technologies turned pale [111], and digitalization was re-assessed as a “must-have” necessity [28,73] resulting in accelerated [96] and even forced digitalization [67,73] along with the growth of digital servitization [22,94]. This shift added extra impetus to digital readiness [22,94] and up-skilling based on a digital-first mindset [95].

In the long run, the dramatic growth of self-regulating socio-technical systems [99], the evolution of digital technologies and tracking/surveillance systems, and data-driven



and awareness-based collective actions [102] can lead to the birth of the *Spime world*. *Spime* (coined by mixing space and time) is a futuristic object that begins and ends as data and can be tracked in space and time [177]. In one of the most visionary articles of the set, Grinin et al. [99] spoke about this shift and regarded the Coronavirus “digidemic” as the catalyst of the final phase of the cybernetic revolution.

Socio-technical/material lenses [2] and convergence innovation [82] were recommended to study this trajectory. As for the unintended consequences of the *Spime world*, Amankwah-Amoah et al. [96] studied the inhibitors and risks of digitalization for organizations and called for “informed” digitalization to avoid possible oligopolization. The cybersecurity/cybercrime ethical dilemmas [92] and the fear of Orwellian surveillance systems and their impingements on civil liberties—in the absence of sufficient protection laws—were among other debated concerns [165].

#### 4.3.3. Glocalization

Throughout the texts, hyper-globalization and inter-connectedness were constantly mentioned as the main instigators of COVID-19, [24]. A number of articles considered the possible consequence of the open defiance of the globalization consensus [93,104], such as the return of selfish/aggressive nationalism [46] and the emergence of cosmopolitan localist governance [85]. The rise of “new country- and firm-specific advantages” [91] and the further adoption of regional strategies [93], protectionist policies, location-specific advantages, and techno-nationalistic schemes [104], together with the continuation of the China+1 strategy by multinational corporations [104] are among some of the noteworthy postulations. It can be surmised that the quest for balance between globalization and self-reliance, i.e., glocalization [34,91]—particularly in the case of “strategically sensitive goods” [93]—can be a strategic priority of the “New Normal”.

Despite numerous projections about the glocalization of production and value chains, Madhok [93] speculated that the globalization of intangibles, such as “ideas, knowledge, and intellectual capital” [93], will continue. He even anticipated that the digidemic may give rise to the globalization of white-collar jobs and activities.

#### 4.3.4. CoVonomy

*CoVonomy*—coined by the authors to refer to the economic impacts of the pandemic—either as a major topic or a side issue recurs in many manuscripts. In an empirical analysis, Ashraf [48] observed that, in response to the pandemic, stock market returns declined, and the market response varied over time based on the stage of the outbreak. Galindo-Martín et al. [79] demonstrated that entrepreneurship was negatively affected in select OECD countries and investigated the impact of monetary policies, fiscal effects, competitiveness, and business expectations on entrepreneurial activities.

Moreover, *CoVonomy* manifested itself in a significant decline in venture capital investments, especially for seed-stage ventures in 130 countries [178], a marked tendency among investors for safe-haven assets in their portfolios [173], and a lower deal value of exit strategies [179]. The pandemic also forced governments to provide financial aid for the affected firms. On the basis of a survey of 1151 firms in the Netherlands, Groenewegen [180] empirically showed that the state aids were effectively allocated. They went “to better-managed firms and to those with low turnover expectations and high turnover uncertainty” [180].

At a deeper level, neo-liberal assumptions [83], growth paradigms, their ontological/epistemological foundations [45], and TINA(There is no alternative) [49] were frequently criticized. The cited alternatives include: re-configuration of the state-market relationship [13,81], the collaboration of firms, governments, and civil society [93], attention economy [66], humanistic globalization [49], life-affirming economics [85], and wise capitalism [84].

4.4. Content Analysis Epilogue: Research Gaps/Questions

Figure 9 encapsulates some of the noticeable coping mechanisms (see Section 4.1.1 for details) suggested by the exploratory articles in our sample to confront COVID-19. For all the emerging themes, the forward-looking articles made postulations about the implications of the pandemic for the post-COVID “New Normal”, which were discussed extensively in the sub-sections of Section 4. Figure 9 presents a summary of these postulations as well.

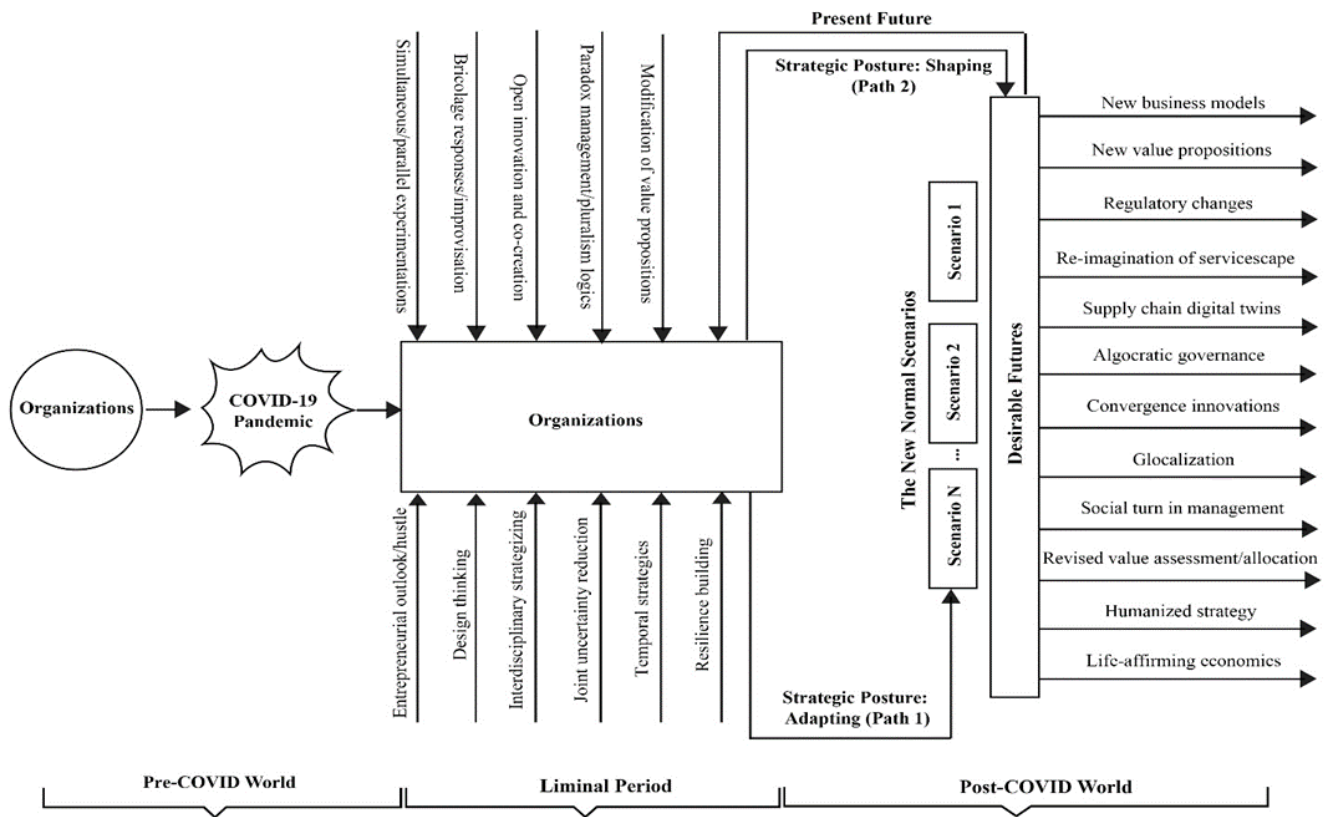


Figure 9. A conceptual summary: during COVID-19 and beyond.

Additionally, based on the review and in order to analyze the strategic responses of organizations during COVID-19, Figure 9 presents two main strategic postures organizations can adopt in response to COVID-19—namely, adapting and shaping (see Section 5 for detailed explanations of these postures).

To answer the second research question, Table 1 outlines the relevant research gaps/questions of each sub-category, the number of articles reviewed for each category/subcategory, and their methodological orientation. The list of research questions should not be considered exhaustive. (In the table, NoA stands for the number of articles)

**Table 1.** The distribution of reviewed papers among categories with relevant research gaps/questions.

Categories (NoA :)	Sub-Categories (NoA)	Methodology (NoA)	Research Gaps/Questions
Corporate Strategy (106)	Coping Mechanisms (44)	Theoretical articles (25) Qualitative approaches (8) Quantitative techniques (5) Mixed methods (3) Literature reviews (3)	<ul style="list-style-type: none"> <li>➤ Longitudinal studies of crisis management [10]</li> <li>➤ Transdisciplinary/integrative strategizing frameworks</li> <li>➤ Shaping vs. adapting postures during a major disruption: Which one outperforms the other in the long run? [20]</li> <li>➤ Coopetition strategies during and after crises [59]</li> <li>➤ Strategy/funding dilemma for SMEs during crises [125]</li> </ul>
	Uncertainty Asphyxiation (16)	Theoretical articles (13) Qualitative approaches (1) Quantitative techniques (2)	<ul style="list-style-type: none"> <li>➤ How can socio-culturization of risk change uncertainty management?</li> <li>➤ Theories and frameworks to harness and cope with Knightian uncertainties</li> <li>➤ How can black swans, such as COVID-19, lead to business failures? [13]</li> <li>➤ How can deep uncertainties be simplified? [18]</li> </ul>
	Preparedness Cognomens (17)	Theoretical articles (9) Qualitative approaches (1) Quantitative techniques (4) Mixed Methods (1) Literature reviews (2)	<ul style="list-style-type: none"> <li>➤ Conceptualization and operationalization of uncertainty-readiness as a construct/disposition</li> <li>➤ How do organizations acquire uncertainty-readiness and can it be institutionalized?</li> <li>➤ How can organizations overcome inertial tendencies and unlearn at times of crisis?</li> <li>➤ “Why do organizations strive to learn from COVID-19?” [13]</li> </ul>
	Supply Chain Vigilance (30)	Theoretical articles (9) Qualitative approaches (8) Quantitative techniques (6) Mixed methods (5) Literature reviews (2)	<ul style="list-style-type: none"> <li>➤ How to structurally de-risk SCs and the contribution of digitalization, localization, Big Data Analytics, industry 4.0 capabilities, and advanced technologies to achieve it</li> <li>➤ Multi-echelon service supply chain systems [151]</li> <li>➤ Supply chain digital twins [88]</li> <li>➤ Balanced sourcing strategies [145]</li> <li>➤ Empirical event-based supply chain risk studies [141]</li> <li>➤ Integrations of corporate social responsibility and supply chain resilience [181]</li> </ul>
	Leadership 2.0 (17)	Theoretical articles (6) Qualitative approaches (2) Quantitative techniques (3) Mixed methods (1) Literature reviews (5)	<ul style="list-style-type: none"> <li>➤ What are the characteristics of crisis-ready leaders?</li> <li>➤ Why were crisis leadership capabilities absent? [10]</li> </ul>

Corporate Social Impactfulness (17)	Theoretical articles (13) Quantitative techniques (3) Literature Reviews (1)	<ul style="list-style-type: none"> <li>➤ Implications of COVID-19 for business ethics and social responsibility [182]</li> <li>➤ Conceptualization and evaluation of risk-resilience responsibility [86]</li> <li>➤ Re-conceptualization of the private enterprise [83,86]</li> <li>➤ How do organizational practices worsen societal economic inequality? [80]</li> <li>➤ The relationship between societal-level processes and organizational behavior [1]</li> <li>➤ Deficiencies of labor protection and standards for vulnerable workers [105]</li> </ul>
	Corporate Design and Culture (25)	Clouds of Actants (17)  Theoretical articles (13) Quantitative techniques (3) Literature reviews (1)
Meta-Firms (10)  Theoretical articles (8) Literature reviews (2)		<ul style="list-style-type: none"> <li>➤ Modes of surveillance, assessment, and appraisal for "work-from-anywhere" scenarios [8]</li> <li>➤ Investigation of transformed community-building practices and social virtualizations in meta-firms</li> <li>➤ Interdependencies of global and local issues [5]</li> <li>➤ Investigation of multi-level, multi-actor grand challenges from a management perspective [81]</li> <li>➤ New theories about the temporal dimensions of organizations [100]</li> </ul>
Virtuality Conundrum (11)  Theoretical articles (6) Quantitative techniques (2) Mixed methods (1) Literature reviews (2)		<ul style="list-style-type: none"> <li>➤ How does office-based work differ from virtual work? (pros and cons)</li> <li>➤ Implications of digitalization and virtuality on work, performance, teamwork, coordination, organizing, innovation, and organizational culture</li> <li>➤ "How is an organizational culture created, maintained, and sustained in virtual and globally distributed settings?" [87]</li> </ul>

<b>Contextual Environment (65)</b>	<b>CoVsumption (26)</b>	<p>Theoretical articles (9) Qualitative approaches (2) Quantitative techniques (12) Literature reviews (3)</p>	<ul style="list-style-type: none"> <li>➤ Consumer resilience and improvisation [47]</li> <li>➤ Responsible shopping practices and their measures [119]</li> <li>➤ Investigation of the antecedents and the underlying mechanisms of unusual purchasing practices using real-world empirical data [57,170]</li> <li>➤ The relationship between crisis-induced consumer habits and long-term consumer ethical behavior [34]</li> <li>➤ The influence of disease cues on consumption behavior [171]</li> <li>➤ “How do consumers react to widespread threats versus local ones?” [168]</li> <li>➤ The impact of the real-artificial-real transition on customers [47,173]</li> <li>➤ Conceptualization of essential services from micro, meso, and macro perspectives [119]</li> <li>➤ Robotic transformative services and customer’s attitudes toward them [109]</li> </ul>
	<b>The Spine World (15)</b>	<p>Theoretical articles (9) Qualitative approaches (2) Quantitative techniques (1) Mixed methods (1) Literature reviews (2)</p>	<ul style="list-style-type: none"> <li>➤ Improvised alternatives of location-centric consumption/events/services [47]</li> <li>➤ AI-enabled content analysis of the datasphere for business purposes [47,101]</li> <li>➤ “What balance will consumers and society embrace between security and privacy?” [165]</li> <li>➤ “What are the ethics of granting access to other people’s digital exhaust and what implications does it have for organizational justice and equity?” [101]</li> <li>➤ The role of slow digitalization in business failures [96]</li> </ul>
	<b>Glocalization (9)</b>	<p>Theoretical articles (8) Literature reviews (1)</p>	<ul style="list-style-type: none"> <li>➤ The impact of COVID-19 on the born-global firms and multi-national corporations</li> <li>➤ The impact of further growth of techno-nationalism on multi-national corporations [104]</li> <li>➤ © “What would a more sensible globalization look like?” [93]</li> </ul>
	<b>CoVonomy (15)</b>	<p>Theoretical articles (7) Quantitative techniques (7) Literature reviews (1)</p>	<ul style="list-style-type: none"> <li>➤ Comparison of the economic impact of COVID-19 with other recessions [173]</li> <li>➤ The impact of COVID-19 on digital finance markets [178]</li> <li>➤ State-market relationship and non-market strategies [13]</li> <li>➤ Post-capitalism economic narratives [85]</li> </ul>

## 5. Discussion and Implications

Proceeding from the results of the content analysis, we cogitated over two underlying implications of COVID-19 for organizations: (1) a theoretical implication for the future of organizational strategizing and (2) a practical implication for the management of organizations during crises and the significance of *liminal opportunities* in pivoting the strategic path of organizations. In doing so, we will answer our third research question.

### 5.1. Theoretical Implications: A Theory for Organizational Uncertainty-Readiness

From a theoretical standpoint, the coronavirus outbreak was a reality check upon *preparedness cognomens* theorized, executed in, and attributed to organizations. It revealed

that they have been, to a great extent, a part of organizational strategic rhetoric and not genuine dispositions to face ruptures of the COVID-19 caliber [34,184] and/or Knightian/fundamental uncertainty [18,133]. That is why the vast majority of organizations proved to be not sufficiently change-fluent.

Nonetheless, firms with a priori resilience built into their organizational culture and structure have reported turning to built-up reserves and therefore being less affected by COVID-19 [50]. The decisive role of extra dimensions and types of uncertainty—such as social and informational—[17], which often originate far from the “core activities of organizations or communities” [185], the ever-increasing relevance of Knightian uncertainty [127,133,186], and the proven vulnerability of corporations to wild cards [34] are likely to and should be translated into theoretical and empirical endeavors to assess the *uncertainty-readiness* of organizations and making organizations *uncertainty-ready*.

This can be done through obtaining dynamic capabilities of higher orders appropriate to the rate of change or the development of ad hoc problem-solving [187]. To what extent this disposition/construct is morphous/amorphous remains an open question. There is a vastly fragmented and interdisciplinary body of literature theorizing a set of cognomens to label this latent capacity [188]: organizational improvisation [189], high-reliability organizations [190], mindful organizations [191], anti-fragility [192,193], future-preparedness [194], organizational vigilance [195], and organizational agility [196].

Nevertheless, the current methodological and conceptual repertoires of strategic management cannot address Knightian/fundamental uncertainty [4,18,186]. Therefore, the future of organizational strategy needs theoretical frameworks, epistemologies, and practical guidelines to harness Knightian uncertainty characterized by “unpredictable, poorly understood change... [and] partial knowledge” [186]. Several studies [4,17,18,127,184,186] have highlighted this as a future research agenda for strategic management using different nomenclature.

One important aspect of such a theory would deal with organization–environment misalignment at temporal, institutional, and strategic levels [13,116]. In a black swan world, as the rate of change increases, the boundary of organizational knowledge is exposed [4], *uncertainty asphyxiation* looms large, and the management of the “disrupted context” turns into “a matter of life or death” [185]. Under such conditions, organizational entrainment [197,198] can give firms “more oxygen to reorient themselves” [133].

Furthermore, the paradox mindset is at the heart of this construct [134] because one dimension of this preparedness requires organizations to resist the speed contagion and readjust their “rhythms and temporalities...with macro socioecological systems” [5]. Another paradoxical dimension is the capacity to be simultaneously in the system and zoom out and think about big things [5,135]. Last but not least, the development of this construct needs temporal ambidexterity: the ability to juxtapose the long-term and short-term aspects—business and society—instead of polarizing them [199].

In the face of Knightian uncertainty, two strategic postures can be taken—“shaping” and “adapting” (see Figure 9) [186]. In terms of the strategic responses of organizations, our findings show that shaping and taking advantage of entrepreneurial opportunities were eclipsed by survival strategies and adapting. The shaping alternative manifested itself in the recurring theme of “re-imagination” in a small minority of articles ( $n = 12\%$ ). The quest for *corporate social impactfulness* and re-imagination of tourism [45,49,60,107,110] are the most noteworthy examples of shaping postures in our selected papers.

Perhaps the most challenging aspect of this strategic posture is assumptions about the role of the future in organizations and strategizing. While facing Knightian uncertainty with a shaping purpose, the future is transfigured from a hypothetical monolithic category into a “present future” [200], which can influence the present (see Figure 9) through “design epistemologies” [186], and “future-making practices” [201]—i.e., reading “things that are not yet on the page” [202] (Path 2 on Figure 9) and therefore becomes the *raison d'être* of strategy.

Alternatively, organizations can pursue the strategic posture of adapting (Path1 on Figure 9). The COVID-induced acceleration and its transboundary dynamics have changed the “level of the game” [187] for the strategic management of organizations. During the COVID-19 period, this posture was enacted by forming “temporary adhocracies” [22]—“ephemeral organizations” [203]—and seeking ad hoc solutions—captured by the recurring theme of bricolage responses (e.g., [50,69,119]) in our sample.

For the long-range horizons, this posture can be translated into the constant incorporation of outside-in approaches, such as corporate foresight [204] or scenario-planning into organizational strategic management. Scenario-driven thinking can result in a portfolio of experiments and future options in the face of Knightian uncertainty [19,58,121,127,133,184,205]. Scenario-driven thinking can also be regarded as the essential preliminary to the shaping strategic posture, which means that these strategic postures are not necessarily mutually exclusive [4,186].

### 5.2. Practical Implications: Liminal Opportunities

The analysis has implications for organizational leaders and managers. First, enacting a shaping posture is directly related to the way the COVID-19 pandemic is framed either as a crisis or an “external enabler” [124]. To materialize this posture, organizations should promptly seize entrepreneurial or embryonic opportunities [50,122,142]. COVID-19 has created a period of liminality for the whole society and organizations and may lead the world of business toward a wide variety of remotely imaginable futures.

It is noteworthy to mention that high-stake, high-pressure, opportunity-rich liminal periods are often over-managed and under-led; managers take shelter in their operational comfort zones instead of meta-leading organization out of the emotional basement “toward a more promising future” [206].

In addition to short-termism and over-management, organizations might be incapable of sufficiently swift strategic responses due to inertial tendencies [20]. Organizations customarily opt for short-termism even when longer-term sub-optimal outcomes [207] can be achieved despite the irreversible negative societal and economic consequences of short-termism [208].

Amid liminality, those organizations that, in addition to the disruptive short-term aspect of the pandemic survival-mentality [20], exercise “disciplined imagination” [209] and proactively ponder over creative aspects can write the future of their industries because new rules of competition often come into existence during liminal periods. The crisis-induced high malleability of organizational structures and philosophies—what Edward Powley calls “liminal suspension” [188]—is the opportune moment to *unlearn* some soon-to-be-obsolete ideologies and pivot organizational identities and perspectives [210].

Consequently, during the liminal period, organizations willing to go beyond waiting for the scenarios of the “New Normal” to emerge so that they can adapt to (Path1 on Figure 9), should spare no “agentic efforts” to shape and create their future environments [186] (Path 2 on Figure 9). This capacity can be achieved by an “unlearning mentality”, “dropping the tools” we are accustomed to [211], and transforming “stressors, crises, and shocks” [134] into new value propositions and business models [22,61,73].

The organizational disposition behind such a proactive approach is not mere adaptation [212] or absorption [213] or even resilience—bouncing back—but “bouncing forward”: “imagination of the new in response to the unimagined” [128] (Path 2 on Figure 9). This mindset can be pursued in any major environmental jolt.

An illustrative example of the liminal opportunities extensively discussed in our selected papers is CSR reinvigoration. In response to sociopolitical controversies, corporations cannot remain neutral anymore [6,214]. Historically, huge environmental changes paved the road for more ethical and socially responsible organizations [34]. During the liminal period of COVID-19, the plasticity of the predominately profit-driven Anglo-American model of corporate governance opens up a historic opportunity to move away from the single-minded slogan of “the only business of business is business”.

To materialize this, organizations should not passively wait for the post-coronavirus scenarios to emerge but instead proactively strategize to take a societal turn [80], pivot their collective perspective [1], and “strive for a new and better normal” [1] (Path 2 on Figure 9). With this in mind, Sandra Waddock [85] criticizes “the desire to ‘bounce back’ or return to normal” [85] and argues in favor of shifting the grand narrative of neo-liberalism and establishing life-affirming economics to create *socially impactful organizations* [86] (Path 2 on Figure 9).

In terms of liminal opportunities, the same argument can be made about *supply chain vigilance* and the normalization of *meta-firms*. As for *meta-firms*, together, the “digidemic”, the inclusion of more advanced technologies, algocratic governance, and the changing essence of work can result in new forms of organizations. The literature suggested that it is unlikely that these “new organizational forms simply represent a passing fashion” [215]. Therefore, in anticipation of eventual recovery from the COVID-19, organizations are recommended to frame the crisis as an “external enabler” [124] and prepare themselves for the design challenges of meta-firms in terms of (1) interdependence, (2) disembodiment, (3) velocity, and (4) power [166].

## 6. Conclusions

We conducted a systematic review of COVID-19 research in the field of business and management over a 21-month period and systematized the impacts of COVID-19 on business. We deduced three categories (corporate strategy, corporate design and culture, and contextual environment) and 13 sub-categories. CoVsumption, uncertainty asphyxiation, normalization of meta-firms, and the growing significance of supply chain vigilance are among the noteworthy impacts.

Despite COVID-19 being labeled as a wild card or black swan event in our selection, most of the publications described COVID-19 as the “accelerator” or the “catalyst” of pre-existing trends, such as workplace transformation, the embedment of surveillance technologies, the quest for the transformation of capitalism, digitalization, virtualization, corporate social responsibility, structural inequality, de-globalization, and e-commerce to mention but a few.

In addition to acceleration, the imagination of collectively desirable futures and the further convergence of seemingly unrelated technologies, objects, ideas, and activities were the other two recurring leitmotifs. As of strategic postures, our study produced sufficient evidence to support the idea that survival and adaptive strategies were prioritized over shaping strategies. The necessity for new value propositions and the emphasis on corporate social impactfulness can be considered as an opportunity to debunk the grand narrative of neo-liberalism and move toward materializing sustainable development goals [216].

Apart from the research directions summarized in Table 1, the study revealed areas concerning the strategic management of organizations that require further attention and consideration: (i) frameworks to assess the readiness of organization in the face of Knightian uncertainty; (ii) identifying the characteristics of uncertainty-ready organizations; (iii) shaping vs. adapting strategic postures during major disruptions; and (iv) the importance of detecting and seizing liminal opportunities in pivoting the strategic path of organizations. Needless to say, “given the lack of precedence”, academic attempts to fathom the impacts of the crisis “demand frequent revisions” as time goes by [22].

### *Limitations and Further Research*

This study is not without its limitations. Since our search strategy was in favor of the high-tier academic journals as well as well-cited papers, a certain degree of selection bias can be considered as the first limitation of our work. Future research should seek to combine multiple databases, which is likely to capture not-indexed journals in the two databases used.



In addition to the first limitation, the timeframe also excluded some recent publications. In this direction, future study can extend the timeframe to capture more recent studies as the field of COVID-related research in business and management continues to grow [217]. Future studies could extend the time frame and focus on other social science fields with the aim of synthesizing the literature. Moreover, although the predetermined categories facilitated the review process, they might have resulted in ignoring unexpected emerging categories/concepts.

We do contend, however, that this sample is representative of the current literature of COVID-19 in the field of business and management. A recommendation is extensive reviews of the contextual environment of organizations for social, technological, environmental, economic, technological, and political drivers of change triggered by COVID-19 to recognize seeds of change and key uncertainties for the post-COVID “New-Normal”. We hope that this work on COVID-19-induced effects on business and management serves as a catalyst for new lines of research on the nature and effects of COVID-19 and other pandemics on business activities and strategies.

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## Appendix A

**Table A1.** List of journals with one or two articles in the sample.

**Journals with two papers:** Journal of Consumer Research; International Journal of Hospitality Management; Transportation Research Part E: Logistics and Transportation Review; Journal of Marketing; Journal of Innovation and Knowledge; Strategic Entrepreneurship Journal; Journal of Business Venturing Insights; Journal of Retailing and Consumer Services; BRQ Business Research Quarterly; Business and Society; Journal of Product Innovation Management; Management and Organization Review; Journal of Service Research; Journal of World Business; Business Ethics, Environment, and Responsibility; International Journal of Operations and Production Management.

**Journals with one paper:** Long Range Planning; California Management Review; European Management Journal; Research in International Business and Finance; International Journal of Management Reviews; Small Business Economics; Academy of Management Perspectives; Gender, Work and Organization; Business Strategy and the Environment; European Journal of Information Systems; Corporate Social Responsibility and Environmental Management; Production Planning and Control; American Psychologist; Journal of Vocational Behavior; International Journal of Entrepreneurial Behaviour and Research; Journal of Service Theory and Practice; R and D Management; Journal of Business and Psychology; International Journal of Logistics Management; Strategic Management Journal; Tourism Review; Leadership; and Current Issues in Tourism.

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