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**SMEs RESILIENCIES AND AGILITY DURING  
PANDEMIC COVID-19: A BIBLIOGRAPHY ANALYSIS  
AND FUTURE DIRECTIONS**

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**Introduction.** The Covid 19 pandemic has challenged SMEs to continue to innovate, develop and maintain sustainability. Various efforts have been made to be able to have performance and competitiveness. Covid-19 provides lessons on how SMEs must be agile and resilient to turbulence, especially the global crisis so that they can carry out risk mapping, take important lessons and build relevant strategies.

**Aims and Task.** This study aims to map the literature on organizational agility and organizational resilience in SMEs by conducting a bibliography analysis on 932 papers published in 2010-2021 in the Scopus bibliography.

**Result.** Based on the results of the network visualization, there are seven main clusters. From the results of the overlay visualization, a supply chain is the most important variable concerning organizational agility and organizational resilience in realizing sustainability. Meanwhile, in the density visualization aspect, variables with a very high probability as future research topics such as supply management, supply chain sustainability, sustainable development goals, human resource management, chain resilience, sustainable supply chain management, agile, urban resilience, visibility, supply chain design, resilient supplier selection, and enterprise architecture.

**Conclusion.** The present study produces a visual trend of organizational agility and resilience in SMEs sector that can be used as a references, guidance and proposed for further researchers in exploring research topics, bridging the gap in the literature, building expertise in related topic, increasing the number of citations, and enhance international networking among authors all around the world. Research regarding organizational agility and resilience could be a strategic and essential because of every organization need to sustain their existence, minimize potential risk both financial and non-financial.

**Keywords:** Organizational resilience, organizational agility, bibliography, SMEs, Covid-19.

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## СТІЙКІСТЬ ТА АДАПТИВНІСТЬ МАЛИХ І СЕРЕДНІХ ПІДПРИЄМСТВ ПІД ЧАС ПАНДЕМІЇ COVID -19: АНАЛІЗ БІБЛІОГРАФІЇ ТА ПЕРСПЕКТИВИ

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**Вступ.** Пандемія Covid 19 виступила каталізатором та спонукала малі та середні підприємства продовжувати впроваджувати інновації, розвивати та підтримувати стійкість. З боку підприємств були докладені різні зусилля для того, щоб мати продуктивність та конкурентоспроможність. Пандемія Covid-19 сприяла тому, що малі та середні підприємства повинні бути адаптивними та стійкими до змін, особливо до глобальної кризи, щоб вони могли проводити зіставлення ризиків, брати важливі уроки та будувати відповідні стратегії розвитку.

**Мета і завдання.** Це дослідження має на меті зіставити літературу про організаційну адаптивність та організаційну стійкість у діяльності малих та середніх підприємств шляхом проведення аналізу бібліографії щодо 932 статей, опублікованих у 2010-2021 рр. у базі даних Scopus.

**Результати.** За результатами візуалізації мережі існує сім основних кластерів. З результатів візуалізації накладення, ланцюгів поставок є найважливішою змінною щодо адаптивності організації та стійкості організації до реалізації сталого розвитку. Тим часом, в аспекті візуалізації щільності, змінні з дуже високою ймовірністю є такими майбутніми темами дослідження, як управління постачаннями, стійкість ланцюга поставок, цілі сталого розвитку, управління людськими ресурсами, стабільне управління ланцюгами поставок, гнучкість, міська стійкість, видимість, дизайн ланцюга поставок, стійкий вибір постачальників та архітектура підприємств.

**Висновки.** Це дослідження створює візуальну тенденцію організаційної спритності та стійкості у секторі малих та середніх підприємств, яка може бути використана як довідковий матеріал, керівництво та запропонована для подальших дослідників при дослідженні дослідницьких тем, подоланні прогалин у літературі, накопиченні знань із суміжних тем, збільшенню кількості цитат та покращити міжнародну мережу авторів по всьому світу. Дослідження щодо адаптивності та стійкості організації можуть бути стратегічними та важливими, оскільки кожна організація повинна підтримувати своє існування, мінімізувати потенційний ризик як фінансовий, так і нефінансовий.

**Ключові слова:** Організаційна стійкість, організаційна спритність, бібліографія, МСП, Covid-19.

**Introduction.** Coronavirus pneumonia (Covid-19) which first spread in Wuhan, China to all parts of the world has caused a health emergency so that it was declared a pandemic by the World Health Organization (WHO) on March 11, 2020. Furthermore, in just eight months (11 November 2020), WHO reported a spike in positive cases to 62 million with 1.5 million deaths that have infected 220 countries.

In addition to interpreting the health emergency and the extraordinary impact on the economic, social, and cultural sectors, the pandemic is also a major challenge and threat to the sustainability and continuity of business processes where an important aspect of the organization's strategic capabilities becomes a trigger in building crisis resilience [1]. For this reason, the formulation of systematic efforts needs to be made to identify problems regarding research phenomena and trends in crisis management both at pre-crisis (identification, prevention and preparation), during the crisis (alternative, response and implement strategy to crisis), and after-crisis (evaluate, learning, fixing, revision and sustain).

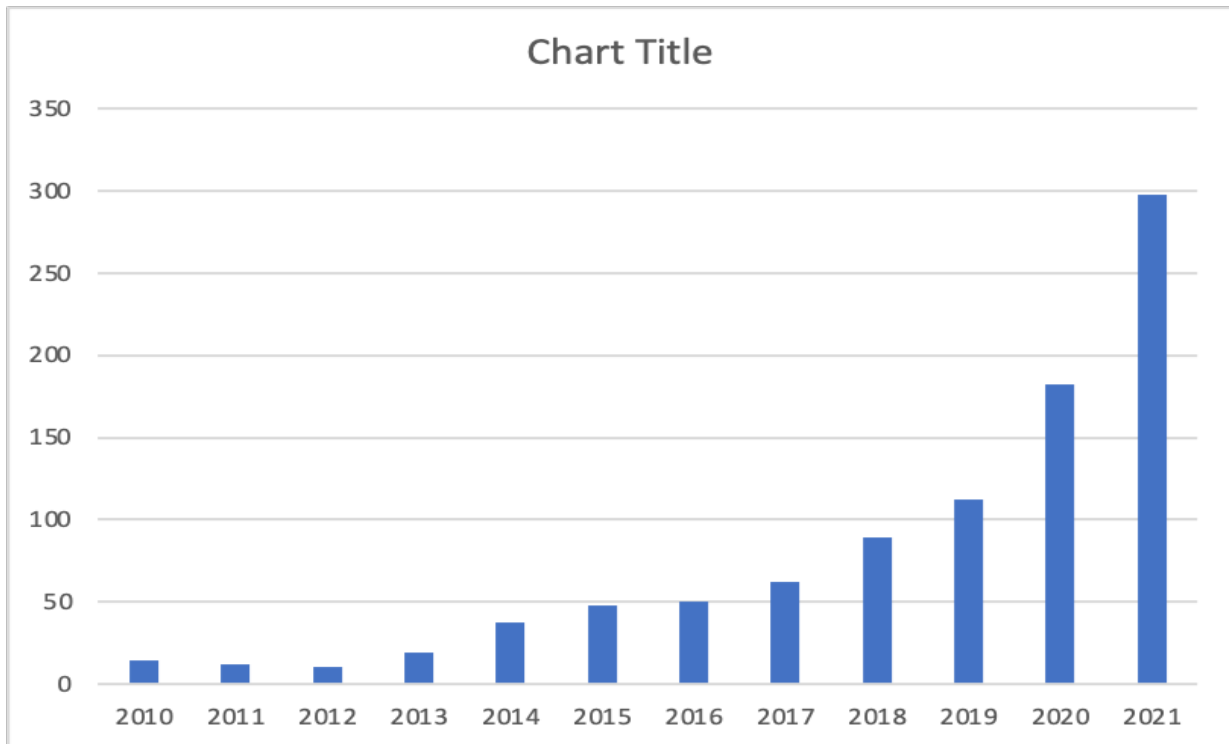
The attention to investigating business sustainability and the ability of companies to respond to critical scenarios is especially relevant in today's global emergency. The various impacts and difficulties caused by Covid-19 are an important concern for investigating how organizations react, facing possible losses and even bankruptcy if they do not have alternative plans to deal with them [2]. Therefore, a strategic plan is needed to ensure that the organization's operational activities continue despite disruptions, to ensure business continuity in a pandemic scenario and post-pandemic recovery. Research on organizational agility has been carried out by several researchers [3-4] associated with organizational performance [5] market orientation [6] but in the context of SMEs still needs to be explored [7] to provide a complete picture of how to be more agile in dealing with turbulence [8]. In addition to being agile, SMEs are also very important for resilience in dealing with crisis [9] so creative in facing challenges [10] have sustainability [11] have the right response [12] relevant strategy [13] in building a sustainable competitive advantage [4]. Motivated by the phenomena and research gap

above, the present study try to provide an overview of publications related to agility and resilience in the SMEs sector. This is done to provide a roadmap for researchers to develop science related to current topics based on literature mapping.

**Methodology.** The present study identifies articles that have passed rigorous peer review in the Scopus database - leading indexers - especially Elsevier dataset and ScienceDirect dataset analysed to get the final visualization with VOS Viewer [15-16]. Next, we identified the keywords "organizational agility", "organizational resilience", "SMEs" and "Covid-19" so that a total of 932 articles were downloaded in the form of a research information system (\*ris) and then transferred to the reference manager, Mendeley. The research data collection process was carried out for three months (June-August 2021) through identification of keyword phrases used to find related information.

The next process is to feed 932 selected articles to the VOS Viewer application and analyze the process hierarchy with the aim of analyzing the research information system (\*ris) so as to produce analytical output according to the objectives of this study. VOS Viewer was chosen because of its usefulness which is able to generate publication maps based on country groupings, number of publications, writing networks and keyword phrases [15]. In addition, the function of VOS Viewer is to perform article classification, data mining, and mapping the source of published articles [17].

**Result and Discussions.** The results of extracting the keywords "organizational agility", "organizational resilience", "SMEs" and Covid-19" in the Scopus database (especially Elsevier and ScienceDirect) with a period spanning 2010-2021 on review and research articles with the subject area of business, management, and accounting; social sciences; decision science; environmental science; and economics, econometrics, and finance, the resulting article is 932 relevant documents. Bibliometric analysis with VOS Viewer was carried out to make research maps based on text data, namely titles and abstracts. The analysis results were obtained in networking visualization, overlay visualization, and density visualization. Figure 1 shows the result of the number of documents in the Scopus database in detail.

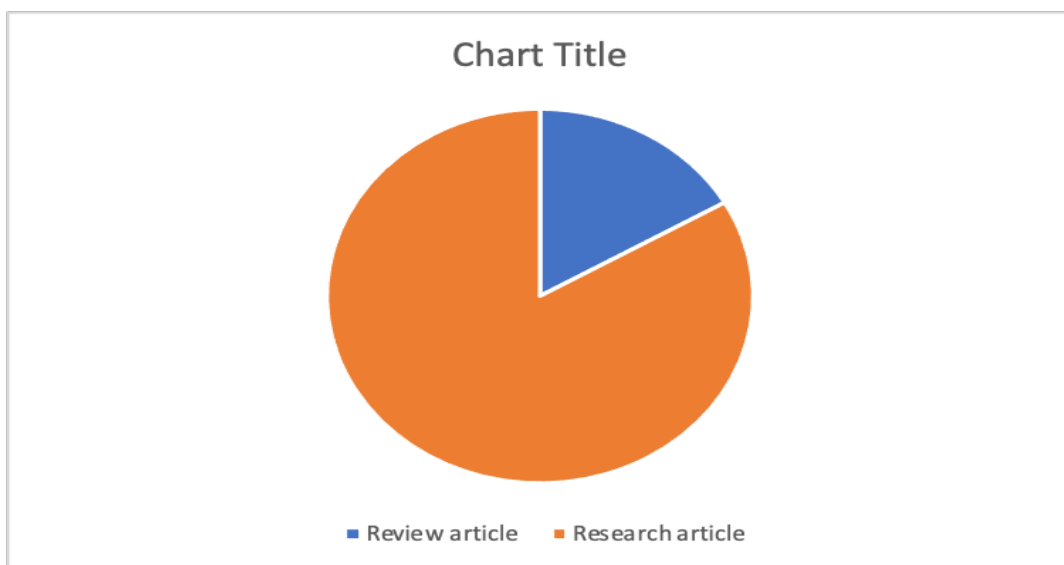


**Figure 1. Years Period of Publications**

According to the Scopus.

In the chart above, information is presented that in general, the trend of research on agility and resilience in the SME sector is increasing. In 2010 there were 14 publications, 2011 (12), 2012 (10), 2013 (19), 2014 (37), 2015 (48), 2016 (50), 2017 (62), 2018 (89), 2019 (112), 2020 (182) and 2021 (298). The upward trend began to increase from 2019, 2020, and 2021, especially when Covid-19 hit all sectors and

businesses around the world. This upward trend in publications is an important signal that attention to agility and resilience is increasingly important. Furthermore, based on the type of publication (see Figure 2), there are 172 review articles and the remaining 860 are research papers. This means that the research trend is more about testing hypotheses or research models.



**Figure 2. Article Types**

According to the Scopus.







The yellow color which is a lighter color indicates the study of the denser items. This means that research on items in the yellow area has been carried out a lot, such as covid, crisis, chain. Then around the yellow center, it seems to be starting to dim, which means that the density of studies on items is getting rare, such as supply chain resilience, visibility, blockchain technology, climate change, supply chain management, and architecture. Furthermore, areas with very dim colors indicate that studies on this topic are rarely conducted and this has a very high probability as a future research topic such as supply management, supply chain sustainability, sustainable development goals, human resource management, chain resilience, sustainable supply chain management, agile, urban resilience, visibility, supply chain design, resilient supplier selection, and enterprise architecture.

**Research Implication.** The bibliometric analysis makes it easy for researchers to identify and find novelty for their research [15-17]. This study provides insight and adds to the body of knowledge on organization agility and organization resilience, both in the perspective of organizations and SME managers [18] thereby building sustainable performance [19-23] and generate business models that support economic recovery [20, 24-25].

Based on the results of the analysis through the network, overlay, and density visualization, this research contributes theoretically. First, the topic of future research is that there are great opportunities in research on supply management, supply chain sustainability, human resource management, chain resilience, agile, and urban resilience. These variables can be used as research variables because the level of novelty of the network item has a limited link, the level of

renewal is the most updated, and the level of density is still very rarely studied [26-27].

Second, the results of the bibliometric analysis as a whole show that the topic of organizational agility and organizational resilience is still rarely done and can still be developed more specifically because the analysis results show the emergence of new variables such as urban resilience, resilience capability, resilience strategy, resilience supplier selection, resilience supply. chains.

Third, that the supply chain resilience variable is potentially connected to the supply chain in various topics such as supply chain design, supply chain disruption, supply chain manager, supply chain network, supply chain performance, supply chain risk manager, and supply chain sustainability.

Fourth, for researchers, the potential and gaps in the literature generated in this study are opportunities in building international networking so that they can contribute to increasing global understanding and insight regarding organization agility and organizational resilience.

**Conclusion.** This present study aims to highlight and measure the visual trends of organizational agility and resilience in SMEs. The findings of this literature review provide scientific evidence that the topic of agility and resilience has received serious attention from several researchers. For this reason, we have identified and identified several opportunities for further research. However, this study also has limitations, namely, firstly, it only highlights the visual trends of agility and resilience in the SME sector but does not analyze the contribution, number of citations and impact of the research. Second, the data extracted is only data from the Scopus database so that future research can add to it from the Web of Science or Google Scholar.

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