

# Visualization Sustainable Competitive Advantage: A Bibliometric Analysis

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**Abstract—** Sustainable competitive advantage is the regeneration of temporary competitive advantages where the organization can survive in the long term if it can realize a sustainable competitive advantage. However, in various literature studies, the factors that are antecedents and determinants of sustainable competitive advantage, especially in the Small and Medium Enterprises sector have not been mapped regularly, and are still very shallow and disorganized because they are still a collection of ideas that are separate from the field of science. This study aims to identify the interrelationships of variables related to sustainable competitive advantage based on empirical studies by mapping 500 pieces of literature from the Scopus database from 2010-2021. Based on the analysis results, the research findings indicate a significant increase in the number of publications, more comprehensive academic affiliations, an increasingly global network of authors, and a broader subject area of articles, keywords, and authorship on visual trends. The results of this literature review analysis, provide insight for future researchers to explore the relationship of variables that have not been tested in empirical research, while for Small and Medium Enterprises managers it is how and making relevant policies in order to increase sustainable competitive advantage.

**Keywords—** *sustainable competitive advantage, SMEs, bibliometrics analysis*

## I. INTRODUCTION

The concept of sustainable competitive advantage is a refinement of the previous definition in the long term of an organization because cannot answer and guarantee how the company will forever maintain its business continuity [1][2][3]. Sustainable achievement is to maintain a competitive advantage in the long term and is influenced by the probability of competitive duplication. So when a company achieves a sustainable competitive advantage, it will experience a major change in its competitive structure [4] as well as heterogeneity

process models and the ability to manage institutional context [5].

[6] distinguishes between the definitions of competitive advantage and sustainable competitive advantage. The competitive advantage was a value creation strategy that cannot be duplicate by competitors. A sustainable advantage is beneficial in the long term resulting from a unique value creation process asynchronously with potential competitors that is not easy [6][2], as well as by applying a sustainable reengineering approach [7].

However, changes in technology, movement of people, knowledge, capital, and the occurrence of disasters such as the COVID-19 pandemic have resulted in environmental changes and predictable and unpredictable risks. On the other hand, when an organization's sustainable competitive advantage is not properly identified, it has implications for decreasing long-term success [8][9], because sustainability has strategic relevance to the survival and development of organizations, especially in SMEs [10].

Sustainable competitive advantage describes the factors that affect performance across the company in strategic management [11] achieved through the effective implementation of strategies that affect the organization's environmental activities [12][13] as well as in the face of a dynamic environment [14], as well as a turbulent environment [15]. [16] found that four dimensions in building a sustainable-based competitive advantage are leadership orientation, organizational culture, team-based structure, human resources, and control management systems.

In building a sustainable competitive advantage, in addition to physical resources, integration of all resources within the organization and capabilities such as information and finance, technical skills are needed [17], organizational processes, and

operations [18]. Despite increase discussion and empirical research on SCA in recent years [1][19][8][9][20], but an understanding of what and how to distinguish this concept [21][1][2], and build this construct remains a challenge for scientific disciplines. The purpose of the study is to identify the antecedents and determinants of sustainable competitive advantage from the empirical study.

Development of a better understanding of the sustainability of SMEs by taking into account the unique characteristics of SMEs and adopting a strategic approach in the development and maintenance of the talent pool (intangible assets) [22]. [23] emphasizes the lack of competitive ability of SMEs related to financial performance, so there is a need for thinking, developing, and maintaining competitive capabilities that allow SMEs to compete not only with local but also with global competitors. On the other hand, [24] revealed that the sustainability of SMEs does not only rely on internal but also responsibility for the external environment of the organization.

Motivated by this research gap, the aim of this paper is twofold, from a theoretical point of view, the study identifies the determinants of SCA in SMEs and secondly identifies the variables associated with SCA through bibliometric analysis so that it can be used as a basis for future research and the author's network of expertise. In addition, with bibliometric analysis, the researchers found out the relationship between the determinants of SCA, the level of novelty from previous research.

## II. LITERATURE REVIEW

The development of literature related to SCA is very rapid, so many researchers define SCA and its measurement as shown in Table 1.

TABLE 1. THE DEVELOPMENT OF THE "SUSTAINABLE COMPETITIVE ADVANTAGE" CONCEPT

Authors	Definition	Finding
[6]	A firm is said to have a sustainable competitive advantage when it implements a value creation strategy that is not simultaneously being implemented by current or potential competitors and when these other firms cannot duplicate the benefits of this strategy.	SCA results from the limited ability of managers to manipulate all attributes and characteristics of the company where SCA is achieved when company resources are scarce, cannot be perfectly imitated, and cannot be replaced may themselves not be rare, cannot be imitated imperfectly, or cannot be replaced.
[25]	The long-term benefits of applied multiple unique value creation strategies not simultaneously implemented by current or potential competitors along with the inability to duplicate the benefits of these strategies	Constructing the SCA concept, namely a multi-item measure of the SCA construct, and suggesting its relationship to other concepts such as market orientation, customer value, relationship marketing, and networks.
[26]	Strategies in managing resources and capabilities to realize a position for sustainable competitive	Integration of leadership, human resources, organizational culture, design, and systems collectively to build unique resources and capabilities to

		create a dynamic and responsive organization
[3]	Firms with superior technological resources or capabilities can achieve better sustainable competitive advantage	Leveraging temporary competitive advantages to increase technological resources and positioning capabilities in order to enhance sustainable competitive advantage
[18]	Ability to maintain and enhance competitive advantage by changing and/or modifying product designs and packaging to be more unique	Innovation in product and packaging design, promotion, retail, and pricing as a driving force in realizing sustainable market advantages and innovative retail outlets
[27]	The use of VRIN (valuable, rare, inimitable, non-substitutable) and versatile resources in generating innovative company growth in a modern business environment	The role of Customer Linked in realizing SCA to broaden the understanding of RBV, KBV, MO in achieving SCA
[28]	The competitive advantage that cannot be imitated by competitors	The role and benefits of knowledge (exploratory and exploitative innovation) in facilitating the transformation of boundary-spanning searches to SCA

Source: scopus articles

Sustainable competitive advantage is a concept in strategic management that explains the factors that affect the company's performance [11]. In a knowledge-based view, companies develop knowledge in building a sustainable competitive advantage from the unique combination of existing knowledge so that it is difficult to compete and imitate by competitors [6][27]. The benefits of sustainability depend on the ability to make decisions about organizational resources in an institutional context [5], and the ability to cope with a rapidly changing environment by integrating, building and reconfiguring internal and external competencies sensuous to the concept of dynamic capability [29].

[30] revealed that when the company only survives for a few periods, begins to be imitated, or the advantage begins to weaken, the company needs a sustainable competitive advantage by continuously adapting to changes in the external and internal environment, as well as formulating, implementing and evaluating strategies effectively. Sustainable competitive advantage occurs when other firms are unable to imitate the competitive advantage [31] achieve effectiveness in implementing strategies that affect organizational environmental activities [12], or the company's business success [32]. Companies are required to have a strategy in maintaining the sustainability of their competitive advantage, because of the economic factors in the company's competitive and resource environment that drive the company's behavior and returns [5].

## III. METHODOLOGY

A systematic literature review analysis is carried out to understand a variable more sharply and systematically [33]. For this purpose, this research is a systematic literature review

using VOS Viewer to get the final visualization of the extracted variables [34][35]. The identified articles were 500 articles that had passed rigorous peer review in the Scopus bibliography, then 200 articles were selected with the highest citations through the Publish or Perish (PoP) application. The keywords are “sustainable competitive advantage” and “SME”, in research papers and literature on the fields of business, management and accounting studies; social sciences; and economics, econometrics, and finance. These articles were published 2010-2021. Data mining process downloaded in RIS (research information system).

The use of VOS Viewer has advantages in making maps of publication, journal, country, co-citation, and keyword [34]. According to [36], VOS Viewer also has advantages in data mining, forming articles grouping and mapping database sources. Of these 500 articles, two analyzes were carried out with VOSViewer, namely, create a map based on text data based on titles and abstracts and create a map based on bibliometric data by referring the author to data from manager files in the form of RIS. The use of PoP is a software introduced by Harzing, used to investigate Scopus' 200 articles with the highest citation referring to peer-reviewed papers. [37][38] regarding the sustainable competitive advantage and SMEs.



Fig. 1. Process data analysis

#### IV. RESULT AND DISCUSSION

The results of the extraction of titles, keywords, and abstracts obtained 500 relevant documents from the Elsevier and Science Direct database in the period 2010-2021. The database consists of research papers and literature reviews. The steps in bibliometric analysis include the first; search for articles in the Elsevier and Science Direct databases with the keywords "sustainable competitive advantage" and "SMEs", on research articles and reviews in the fields of business, management, and accounting studies; social sciences; and economics of econometrics and finance for the 2010-2021 period. Drawing from Scopus database, we were downloads 500 articles relevant to keywords in the form of a research information system (\*ris). The second; is to do a VOSViewer analysis by creating a map based on text data to get mapping

research based on predetermined keywords. The third is extracting the selected data (in RIS) in the title and abstract to expand the accuracy of SCA. Full counting was chosen because the author wants to see a keyword as one keyword not based on a combination of two or more and determines the occurrence of the term is 3. From 9884 terms, 940 thresholds are selected and only 560 are relevant to be selected. The fourth is to verify the selected words are relevant in making the map, and this process is the final process. The results of the VOSViewer analysis are network visualization, overlay visualization, and density visualization.

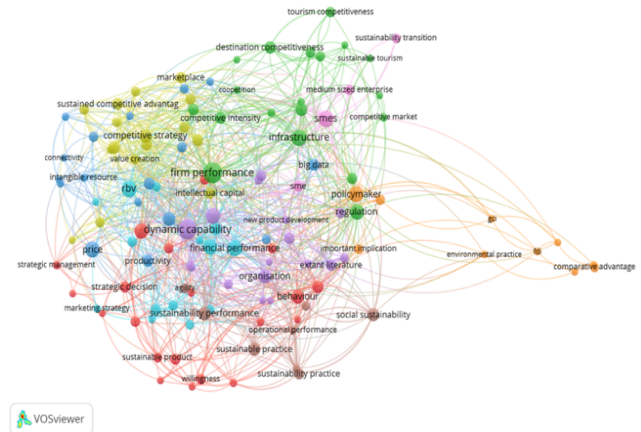


Fig. 2. Network visualization

In Figure 2 there are 9 clusters with each identified term having accuracy and links with other variables. These clusters include: cluster 1, namely: firm performance, competitive intensity, infrastructure, regulation, coopetition, destination competitiveness, tourism competitiveness, sustainable tourism, and competitive market; cluster 2, namely: dynamic capability, organization, new product development, and extant literature; cluster 3, namely: SMS, sme, medium-sized enterprise, and sustainable transition; cluster 4, namely: financial performance, and rbv; cluster 5, namely: price, productivity, intangible resources, connectivity, and big data; cluster 6, namely: strategic management, strategic decision, sustainable product, willingness, and behavior; brown, namely: agility, sustainable performance, sustainable practice, social sustainability, and operational performance; cluster 7, namely: policymakers, environmental practice, GCI, FDI, and comparative advantage; and finally cluster 8, namely: competitive strategy, sustainable competitive advantage, value creation, market place, and intellectual capital.

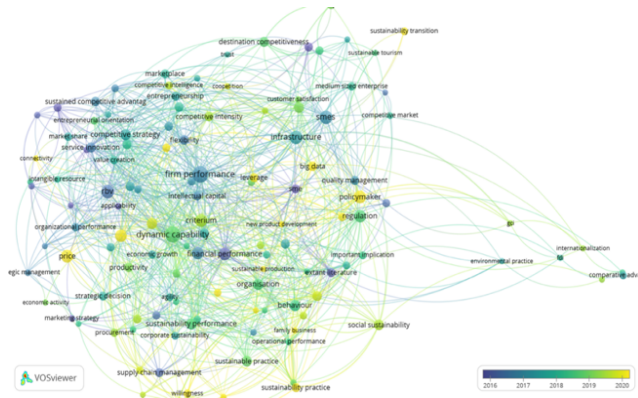


Fig. 3. Overlay visualization

Figure 3 is the result of the overlay visualization analysis. This visualization shows the development of the selected terms from year to year by displaying color changes. In 2016-2017 more research on applicability, SMEs, financial performance, marketing strategy, supply chain management, RBV, and extant literature; 2017-2018 on sustainable competitive advantage, firm performance, intellectual capital, service innovation, strategic management, organizational performance, infrastructure, flexibility, and quality management. Meanwhile, in 2018-2019 the focus of research is on market share, competitive strategy, marketplace, trust, intangible resources, value creation, entrepreneurship, market share, strategic decisions, agility, economic growth, corporate sustainability, organization, behavior, operational performance, sustainable practice, operational performance, sustainable tourism, comparative advantage, environmental practice, competitive market, and FDI. Research between 2019-2020 concerns destination competitiveness, customer satisfaction, competitive intelligence, competitive intensity, entrepreneurial orientation, dynamic capability, productivity, economic activity, procurement, social sustainability, GCI, and internationalization; while the latest research after 2020 is with the brightest color focusing on connectivity, price, willingness, sustainability practice, family business, sustainable production, new product development, leverage, big data, policymaker, cooperation, sustainable transition.

This analysis aims to identify the antecedents and determinants of “sustainable competitive advantage” in SMEs. Figure 3 shows that sustainability practice, sustainable production, and sustainable transition have opportunities in future research. Seeing the emergence of these new variables, the latest research is more specific in identifying the antecedents and determination of SCA in SMEs.

Figure 4 is the result of density visualization analysis. It can be seen that there is a difference in the color texture which indicates that the lighter the texture, the more research has been carried out on that term, while the dimmer indicates that less research has been carried out on that term.

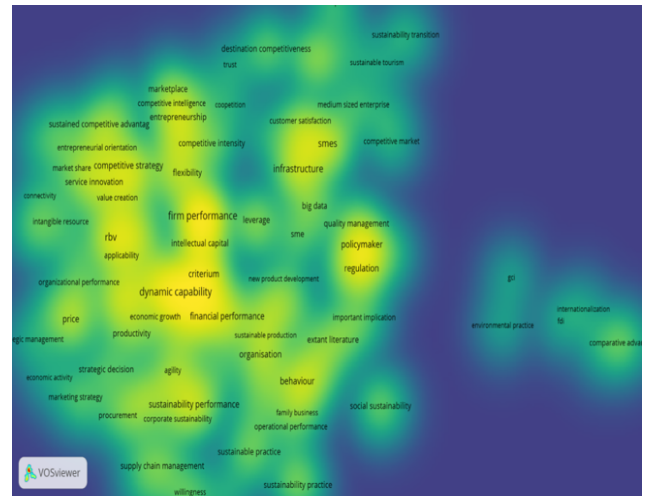


Fig. 4. Density visualization

Figure 4 shows that the sustainable competitive advantage has a light that is not too bright, which means that there is not much research on SCA compared to dynamic capability, firm performance, and competitive strategy which have the brightest light. Based on density visualization, the dim light provide a huge probability as new variables that have not been widely studied. These variables include sustainability transition, sustainable practice, social sustainability, sustainable tourism, competitive market, SME, coopetition, willingness, environmental practice, GCI, internationalization, FDI, destination competitiveness, trust, and connectivity.

From figure 2-4 shows that the variables that can be used as indications for future research, especially for SMEs, are a sustainable competitive advantage, sustainability transition, sustainable practice, sustainable tourism, willingness, and connectivity. Considering that these terms are still not well explored, it can be used as a new variable that has novelty. Subsequent research contributes to increasing insight into SCA by conducting studies on the use of sustainable competitive advantage, sustainability transition, sustainable practice, sustainable tourism, willingness, and connectivity. In addition, information on each available topic area can be searched with more specific keywords.

## V. CONCLUSION

The results of this bibliometric analysis contribute to increasing the conceptual body of knowledge of SCA. For future research, there are still many research possibilities related to SCA which can be explored comprehensively in a conceptual framework. Based on the results of bibliometric analysis, the mapping of SCA is related to the variables of sustainability transition, sustainable practice, sustainable tourism, willingness, and connectivity. Future research can be done by proving the relationship between SCA and these variables. This article is a review article with a bibliometric analysis literature review system with the aim of mapping research related to sustainable competitive advantage. The limitation of this article is that evidence is needed in testing the relationship between variables that have been presented in the



results of this study so that it can produce a causal relationship between variables.

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