A Systematic mapping study on competitive advantage for Micro, Small and Medium Enterprises

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Abstract. This article aims to classify, identify scientific publications and conduct a thematic analysis of the contemporary literature to create an extensive and detailed understanding in the field of competitive advantage. The research method is done by using systematic mapping study (SMS) to examine scientific publications in the field of competitive advantage which are produced based on the focus and the type of research from time to time. The outcome of this study resulted in the categorization and the quantification of competitive advantage study in various dimensions as well as an overview of the research summary and contemporary research trends.

Keywords: competitive advantage, competitiveness, small business, systematic mapping study.

1. Introduction

Micro, Small and Medium Enterprises (MSME) plays a role in providing employment and produces useful outputs for the people of Indonesia. The development of MSME in the sector of creative industry contributes to create jobs and provide flexibility of needs and innovation in the economy as a whole[1]. The sector of the creative industry is believed to be able to survive while other sectors are being hit by the global financial crisis[2].

The empowerment of MSME amid globalization and high competition makes MSME able to face global challenges, such as improving the innovation of goods and service products, human resources and technology development, and expanding marketing area. This is done to improve the competitiveness of MSME itself, whose goal is to be able to compete competitively on the domestic and the foreign products currently flooding the industrial and manufacturing centers in Indonesia, given that MSME is the economic sector that can survive during the era of competitive globalization[3].

Creating competitive advantage needs the capability to utilize the ability to handle certain problems when the capability grows over time, to utilize and create new resources, such as the skills to utilize technology, or to open new opportunities for the development of new types of products. A company is said to have a competitive advantage when the company performs the strategy of value creation which will produce professionals during the process. Finally, superior performance results and superior production reflect a competitive advantage[4].

Competitive advantage is the advantage over competitors acquired by offering greater values to consumers, either by giving lower prices or by providing greater benefits and services that justify higher prices [5]. According to [6] in *Resource-Based Theory: Creating and Sustaining Competitive Advantage*, saying that the source of competitive advantage includes resources, original, inimitable, and no substitution. The said resources include all assets, capabilities, organizational processes, corporate characteristics, information, knowledge and so on which are under the control of the company for the implementation of the strategy to achieve the effectiveness and the efficiency [7].

The achieved competitive advantage should be maintained because the more advantages make, the more competitors who pay attention to the weak points of the business. Therefore MSME must be consistent in maintaining their advantage [8]. Competitive advantage can also be seen through customer evaluation that can be produced by the company through service facilities that can accommodate all kinds of complaints or suggestions aimed at consumers to improve a better quality of the company. To realize these strategies, MSME should be proactive and innovative in designing business strategies such as the utilization of information and communication technology (ICT). Setting a good strategy becomes the key to success for MSME to be superior by anticipating market competition[9].

To achieve research objectives, more *research questions* are required to find relevant and accurate findings on the *electronic database* all over the world. Overall, the researchers analyze the relevant search results with a study of competitive advantage based on the formulation of main questions, which include:

1. RQ1: How is the focus and research locus on the topic being studied?
2. RQ2: How are the types of articles and research methods being used?
3. RQ3: How are the topics developed in each country from time to time?

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2. Method

This study uses a *systematic mapping study* (SMS) which is a secondary study. SMS is rooted in the *study literature review* (SLR) introduced in the research of information technology [10]. Research with the SLR approach aims at identifying, evaluating, and interpreting all available and relevant literature sources, related to the research questions that have been formulated [11].

The most common reasons for performing SLRs are: First, to summarize the existing evidence on the topic; Second, to identify gaps in current research and to provide advice for future investigations; and Third, to give a background positioning new research activities [10].

3. Searching steps

To increase the accuracy of the SMS study, the process of search and analysis should be done as accurately as possible. Thus, in this section characterizes the process of selecting the data source, the implementation strategy to generate search strings, and determination of the exclusion and inclusion criteria.

This study adopted the searching process from [12] and [11]. In this process, each step which has results and *systematic mapping* becomes the result of the mapping process. In

Figure 1, we illustrate the complete process of SMS used in this study, by referring to the research conducted and as instructed by [13] and [12].

The researchers conducted an online search on indexed electronic databases of the Scopus. Scopus is a library database containing abstracts and reputable international academic journals included in the criteria of the Directorate General of Higher Education (DIKTI) of the Republic of Indonesia.
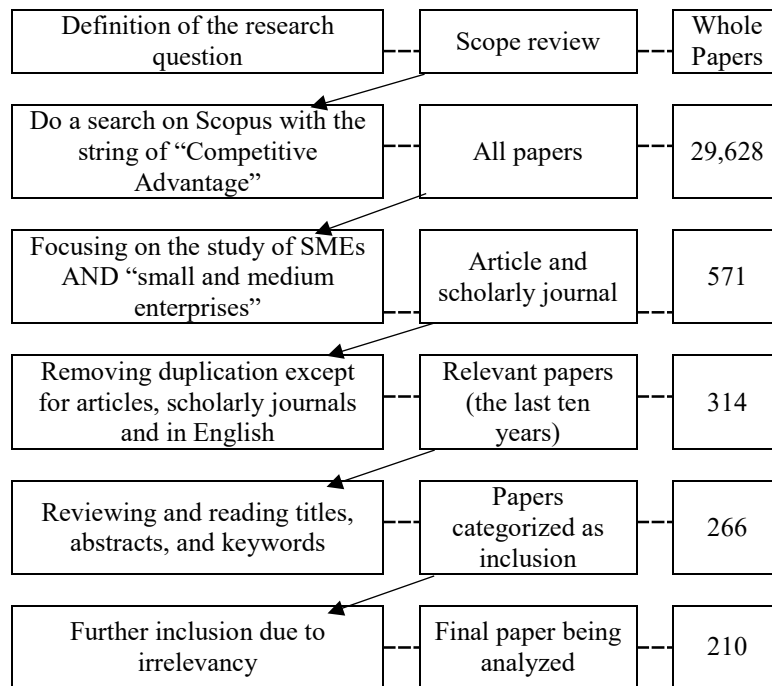
Definition of the research question	Scope review	Whole Papers
Do a search on Scopus with the string of "Competitive Advantage"	All papers	29,628
Focusing on the study of SMEs AND "small and medium enterprises"	Article and scholarly journal	571
Removing duplication except for articles, scholarly journals and in English	Relevant papers (the last ten years)	314
Reviewing and reading titles, abstracts, and keywords	Papers categorized as inclusion	266
Further inclusion due to irrelevancy	Final paper being analyzed	210

Figure 1. SMS Process (Searching)

Search strings or search keywords are created using strategies from [11] concerning the research of [14]. The first step is to define the main keyword. The second step is to examine the well-known research in the field of competitive advantage. The third is to search for the alternative of keyword forms to be used in the search process.

The last step is to use the *Boolean* operator whose function is to synthesize into one search string, but this research does not use the *Boolean* operator *AND* or *OR* because in the third stage the researcher finds that if the string combination is "*competitive advantage*" *AND (SMEs OR SMEs OR "small and medium enterprise" OR "small and medium enterprises"*), the researchers found 571 results.

However, if the search string simply does not use Boolean, the results found with the "*competitive advantage*" string are 29,628 results. The search string above applies to searches on all parts of the articles, such as titles, abstracts, and keyword in Scopus electronic database. The search process began on November 30, 2018.

The further step to determine the category of exclusion articles called exclusion criteria and inclusion articles which is one of the mapping study activities to exclude irrelevant

articles and include relevant articles. In this study, we formulated the exclusion and inclusion criteria to facilitate mapping.

4. Result and discussion

4.1 Research Results

This section is the result of a mapping based on the research questions. Based on the mapping results of 210 articles on competitive advantages grouped by using *Microsoft Excel 2016* applications with the category of *research focus, research locus, methods, paper type*, and the development of research in the world published by the Scopus. After doing the mapping systematically, it is found that 15 types of article documents originated from Indonesia.

4.2 Focus and Research License (RQ1)

To answer RQ1, we classify 210 articles on research focus areas with categories of environmental factors, information and communication technology (ICT), organizational capability, innovation capability, dynamic capability, business development, knowledge management, entrepreneurial orientation, entrepreneurial marketing, investment.

Figure 2. Research Focus

Figure 2 is the percentage of the topics being studied, most of which are the research with the focus on *innovation capability* comprising 89 (25%), *Dynamic Capability* of 61 (17%), *Knowledge management* of 59 (16%), *Information and Communication Technology* (ICT) of 55 (15%) and the least of which is the *environmental factor and investment* (8%) and 5 (1%) of the total 210 (100%) od the research.

In the study of competitive advantage, most researches study the MSME located in a region, both in a city and in a village with total findings of 92 studies. Furthermore, many research locus is done in the industry with the findings of 42 studies. Then, in the sector of creative industry, there are 15 studies, similar findings are found in the research locus of High-tech SMEs (technology companies). However, researchers found that there is research or study on competitive advantages that do not have research locus in terms of the place being

studied, to which the researchers conclude that there are several studies that use the type of philosophical articles. (Figure 3).
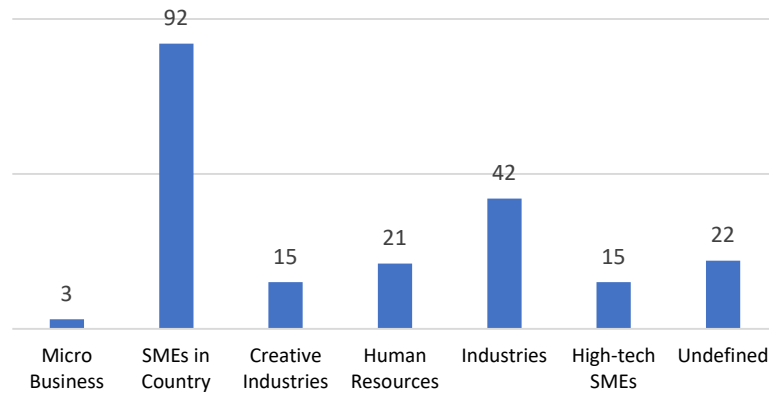

Figure 3. Research Locus

4.3 Type of Article and Research Method (RQ2)

Type of research article shows the classification of research that refers to the research of Wieringa et al. (2006), where the study is grouped into four categories: validation research; evaluation research; solution proposal; philosophical papers. To provide an answer for RQ2, we categorize 210 result studies of the classification mapping.
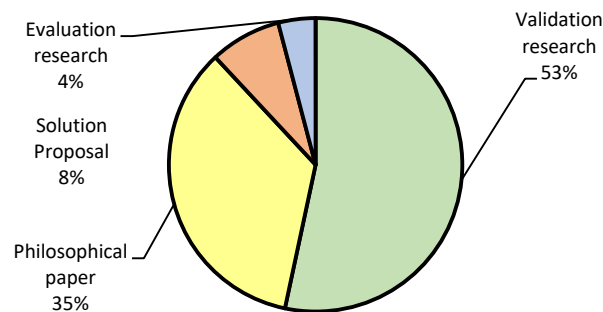

Figure 4. Article Type

Figure 4 illustrates the distribution of the article type (paper type) based on the classification category according to Wieringa et al. (2005). Based on the systematic mapping study, the most commonly used article type is validation research with a total of 143 (53%) studies. The next most frequent article type is philosophical papers with a total of 93 (35%) studies. The next is a solution type article of 21 (8%) and the least is the evaluation type article of 11 (4%) studies.

The classification of research methods refers to the research of [16]. The research method used in this systematic mapping is the quantitative, qualitative and mixed-method approach. The accumulation of total findings of 210 Scopus-reputed journals is illustrated in figure 5.
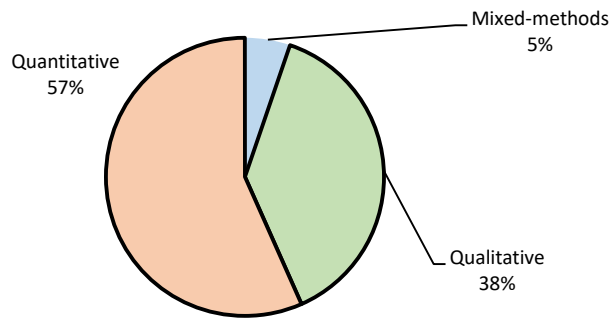
Figure 5. Research Method

The research approach using quantitative method is the most common method because its nature is to test and to evaluate. The total of articles of the research using quantitative approach is 119 (57%) studies. The next is the article using a qualitative method comprising 80 (38%) studies. And mixed-methods comprising 11 (5%) studies.

4.4 The trend of publication in each country from time to time (RQ3)

Based on the results of the mapping, it is found that most countries produce research on competitive advantage is the United Kingdom with a total of 35 publications, followed by Malaysia with 26 publications. What is interesting is that the third largest is Indonesia with 17 publications. The description of the research trends of competitive advantage is illustrated in Figure 6.
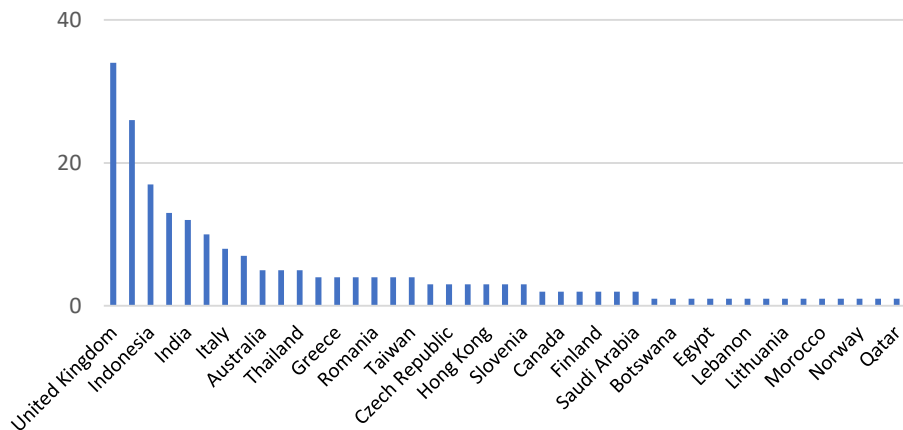

Figure 6. The development of publications in each country

Then, Figure 7 is the research trend published in electronic media database in the last 10 (ten) years that began in 2007, but from our search results, it is found that competitive

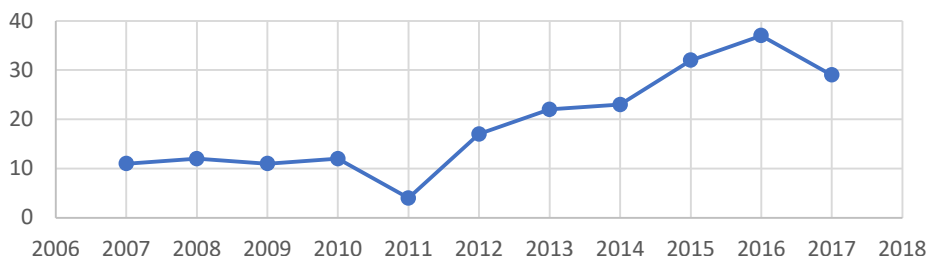advantage research began to grow after Porter in 1980 published his research titled *competitive strategy*.

Figure 7. The development of publications from year to year

5. Conclusion

To improve the competitiveness of both the micro, small and medium enterprises (MSME) sector, the application of the concept of competitive advantage is required. There are millions of competitors who will become the real threats that can shut down the business. The impact is the growth of the economy rooted in business endurance. The academics, practitioners, research institutions and governments have a role in producing studies related to the competitive advantage of a business. The linkage between the academics, practitioners, research institutions and government with business actors, companies, industries, and business actors is to develop the concepts, and ideas about competitive advantage.

This research mapped out the literature of competitive advantage available on the Scopus scientific databases. The main motivation of the study being mapped is to provide an overview of the existing literature on the competitive advantage as a solution to winning a business competition.

The researchers apply the method of systematic mapping to determine what focus has been studied in the area of this research. Out of 210 research articles that have been mapped out systematically, we conclude that:

1) The topics widely studied are the study with the focus on Innovation Capability (25%), Dynamic Capability (17%), Knowledge management (16%) dan Information and Communication Technology (15%) in small and medium enterprises comprising 44% (92 studies out of 210)
2) The most commonly used type of article is validation research with a total of 143 (53%) articles, using an approach of quantitative research (57%).
3) The country producing the most study on competitive advantage is the United Kingdom with a total of 35 publications, Malaysia 26 publications, and Indonesia with 17 publications.

The research method adopted by SMS is a practical research method to identify the appropriate topics to be studied, as well as which areas are needed for more research. The result of this study provides guidance to assist researchers in planning future research through the discovery of research *gaps*.

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