A Bibliometric Analysis of Social Media and Entrepreneurship Research

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Abstract. This study employs the method of bibliometrics to investigate the connection between social media and entrepreneurship, with the aim of uncovering important themes and insights into the usefulness of social media in the field of entrepreneurship. Utilizing the Scopus database as the primary tool, the study gathered and analyzed data to retrieve a total of 799 articles on May 18, 2023. To visualize and evaluate the performance of scholarly publications, a software called VOSviewer was employed. The study's findings focused on author contributions, journals, countries, and the number of articles. The research revealed an increase in the number of document publications over time, with the United States leading in the number of documents published (161 documents). Additionally, the "Journal of Sustainability (Switzerland)" was identified as the most productive journal, with Jr, Ngammoh N, et al named as the authors with the highest number of document publications. Toffoletti K was also identified as the most highly cited author, with a total of 138 citations. The keywords most commonly used in the research were "social media", "entrepreneurship", and "entrepreneurs". This research has the potential to guide future studies on the relationship between entrepreneurship and social media by providing a comprehensive overview of the current academic landscape.

Keywords: Bibliometric Analysis, Entrepreneurship, Intention, Social Media.

1   Introduction

Entrepreneurship and social media have become increasingly intertwined in the academic literature[1]. Social media platforms have proven to be significant tools in fostering entrepreneurship, driving innovative business models and enhancing stakeholder engagement[2]. This study focuses on examining this intersection by conducting a bibliometric review of published work related to entrepreneurship and social media. Bibliometric analysis, a well-regarded methodology, uses mathematical and statistical techniques to study patterns in scholarly publications[3]. This method allows us to track the evolution, trends, and collaborative networks in the entrepreneurship and social media research field[4]. This research has a dual-purpose study. First, the research intends to determine the primary topics, essential collaborations, and geographical distribution

of the publications on this topic. Second, to identify gaps in the current corpus of literature and to propose possible future research directions. By employing a bibliometric approach, it is expected to produce a scientific map illustrating the interrelationships between the various research elements in the field of entrepreneurship and social media. This includes determining influential articles, prominent authors, and major journals[5]. Additionally, the research also intended to track the historical progression of this interdisciplinary area. As entrepreneurship continues to evolve with the aid of social media, understanding the nature of this relationship becomes crucial[6]. This bibliometric review is designed to provide scholars, practitioners, and policymakers with an in-depth understanding of the current state of research in this area[7]. Using bibliometric analysis, the researcher can explore this compelling field, investigating how the interaction between entrepreneurship and social media has influenced academic discourse and determining potential future trends. The findings of this study will be revealed by addressing the following questions:

RQ 1: How is the trend of entrepreneurship and social media publication journals?

RQ 2: What is the contributing country to the development of this study?

RQ 3: Which journals have the most publications in this study?

RQ 4: Which authors have the most citations in publications?

RQ.5: Which keywords are the most relevant on the subject of this publication?

2   Methods

In this study, bibliometric analysis was used to obtain a comprehensive comprehension and interpretation of the visualization of scientific publication outcomes associated with the application of mathematical and statistical methods[8]. This quantitative technique is frequently used to map academic literature, illuminating patterns and trends[9]. In addition, researchers are able to identify patterns and predict potential future study outcomes. This procedure involves the collection of information on publication type, title, keywords, authors, and countries[10]. There are two principal procedures of bibliometrics which are performance analysis and science mapping[11],. In this study, bibliometric performance analysis employed various techniques, such as word frequency analysis, citation analysis, and quantification of the number of publications categorized by countries, affiliations, authors, and other relevant information[12].

3   Results and Discussion

After all phases have been completed, a bibliometric analysis will be conducted to obtain the research results. The utility of bibliometric analysis stems from its capacity to provide a comprehensive comprehension of a particular field of study[13]. When discussing the study of qualitative and quantitative shifts in the realm of scientific research, the term "bibliometric analysis" is often used. It involves things like constructing a profile of published works on a certain subject and examining the organizational and stylistic features of scholarly work in a given discipline[14]. Performance analysis and

scientific chart mapping, often known as bibliometric mapping, are two independent subfields of the bibliometric method. These words are used to describe various parts of the technique. The procedure starts with a review of the preceding period's performance.

3.1   Publication Trends

Following a thorough assessment of the data, it was determined that 799 document articles were deemed suitable for analysis in this study. The academic discourse on entrepreneurship and social media was initiated by Zhu Donghong et al. in 2013, with their groundbreaking publication in the Journal of Business Ethics. The production of document articles regarding this topic fluctuates over time. Since 2018, numerous researchers have published articles on the subject of entrepreneurship and social media, resulting in a steady increase from 52 articles in 2018 to 125 articles in 2020. However, the quantity of articles published decreased slightly in 2020 and 2021, with only a five-document increase. Despite this, the number of articles published dramatically increased in 2022, with a total of 166 articles published. The trend is expected to continue, albeit at a decreasing rate, as the number of articles published in 2023 is still increasing until the end of the year. It can be inferred that the study issue of entrepreneurship and social media continues to attract the interest of researchers.

3.2   Countries Publication

The data analysis has led to the identification of 96 countries that generate document articles, which can be broadly classified into two categories: developed and developing countries. The published articles focus on entrepreneurship and social media. Based on the data, it is evident that the United States, representing a developed country, holds the top position in terms of contributions to these publications, with 161 document articles. However, the United Kingdom has the second-highest number of document publications, with 90 articles, which is half that of the United States. Several countries have also made substantial contributions and secured their positions among the top ten contributors. These countries' cumulative contributions are divided as follows: India (54 articles), Australia (54 articles), China (48 articles), Indonesia (46 articles), Malaysia (44 articles), and Canada (35 articles).

3.3   Journal Publication

The proliferation of entrepreneurship and social media research is disseminated across a diverse array of academic journals, including highly regarded periodicals with a large number of publications, such as the Journal of Sustainability and the International Journal of Entrepreneurial Behavior and Research. Scholars who have access to a broad range of academic resources have analyzed the rapid growth in the quantity of research and discourse on this topic. The specific niche of these publications has been uncovered, and theoretical frameworks explicating entrepreneurship and social media are increasingly utilized to emphasize particular phenomena. Consequently, a number of publications have produced papers on this subject, providing explanations for the concerns addressed in their respective investigations.

An examination of relevant articles revealed that 799 publications were released in various esteemed journals. The journal with the most contributions is the "Journal of Sustainability (Switzerland)" with 16 articles, followed by "Technological Forecasting and Social Change" with 14 articles, "Journal of Business Research" with 14 articles, "Emerald Emerging Markets Case Studies" with 14 articles, "Social Media and Society" with 11 articles, "Journal of Small Business and Enterprise Development" with 9 articles, and "Journal of Research in Marketing and Entrepreneurship" with 9 articles. Therefore, it can be inferred that the "Journal of Sustainability (Switzerland)" is the primary source of these published articles, which may indicate that it is the authors' preferred publication for article submissions.

3.4   Authors Publication

The data analysis of the study on entrepreneurship and social media has identified Jr as the studies with the highest number of documents. Because he has published three articles compared to other authors. Ngammoh N, et al. is in second place with two articles, followed by Martin-Rojas, et al. B., Mahdiyah D, et al., Kozinets R, Kishor J, Drummond et al., Cant M, and Baulche et al. Each of these authors has published two articles, demonstrating their substantial contributions to this expanding academic field. In this study, the focus was on academic publications from the last ten years, ensuring the incorporation of recent and pertinent insights regarding the landscape of entrepreneurship and social media.

3.5   Most Cited Authors

Numerous research papers on entrepreneurship and social media have been published over time, and this bibliometric study employs a technique that sorts articles by the number of times they have been cited by other scholars. This number indicates how much an author has contributed to publications on the topic of entrepreneurship, a method utilized in previous studies. The more a paper is cited, the more influence and contribution it is believed to have had on the scientific community. The utilization of Scopus can identify the authors whose work on entrepreneurship and social media is most frequently cited.

Out of the 799 articles identified in this study, Toffoletti K stands out as the most cited author with a total of 138 citations. Drummond C, Mc Grath H et al is the second-most-cited author with 81 citations, followed by Drummond C, O'toole T, et al in third place with 50 citations in this discipline. Subsequently, Baulch E, and Pramiyanti A, (47 citations), Ukpere C L, Slabbert A D et al, (44 citations), Steel G (33 citations), and Kozinets R V (30 citations) are the next most cited authors.

3.6   Keyword Trends

The purpose of this section is to analyze and exhibit the most commonly used keywords in these publications. The software VOSviewer is used to generate an interactive link map displaying which keywords appear most frequently together. The results list the top ten keywords used in articles about entrepreneurship and social media. It also generated a visual representation of these keywords, which is discussed in the following

section. Keywords that appear most frequently can be used to emphasize important research in the subject areas[15]. This is considered a standard method for evaluating the significance of publications by analyzing the connections between citations or keywords[16]. This network illustrates the relationships between the research keywords in the fields of entrepreneurship and social media depicted in **Fig. 1**. Following the incorporation of all metadata into keyword analysis, a total of 2,333 keywords were identified in the 799 relevant publications.
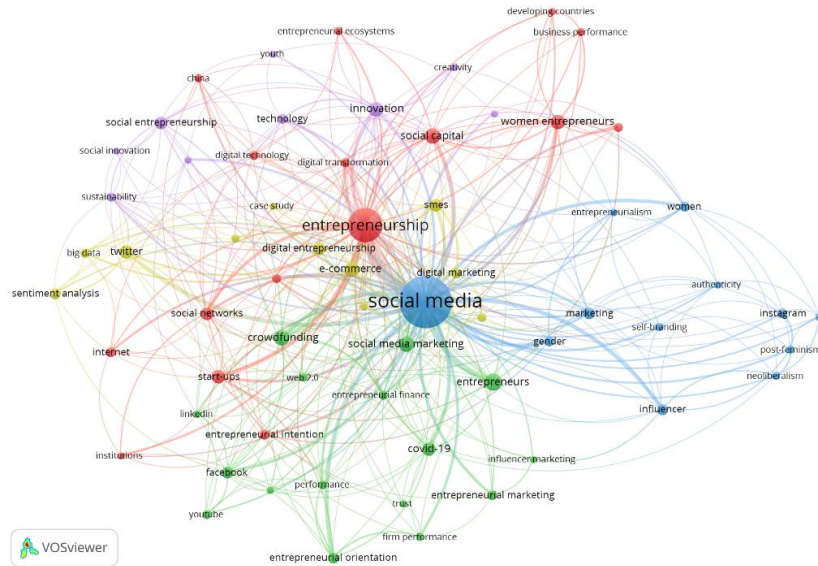

Fig. 1. Keyword occurrence from VOSviewer

The overall size of the nodes or circles and the words serve to visually represent the frequency of each keyword. The greater the size of the circle indicates that the keyword appears more frequently than the other keywords[17]. The lines between the keywords vary in thickness; broader lines indicate that the keywords are more likely to co-occur and be interconnected[18]. Every color of the circles is divided into some cluster. According to the results, the keyword "social media" appears the most, 273 times. "entrepreneurship" is the second most prevalent keyword, appearing 118 times. Other keywords that appear frequently are "entrepreneurs" (31 times), "social media marketing" (25 times), "crowdfunding" (24 times), "social capital" (24 times), "women entrepreneurs" (23 times), "innovation" (22 times), "e-commerce" (22 times), and "twitter" (20 times). These ten keywords have had a substantial impact on this study's topic. Particularly, "social media" and "entrepreneurship" are used frequently as focus keywords in the study. The keywords visualization in VOSviewer illustrates how intensely these two keywords are related.

The software VOSviewer executes a comprehensive analysis of the prevalence of keyword utilization throughout publication years. This reveals the trend of keyword usage

between the years 2013 and 2023. In addition, the hue color of a node signifies the cumulative number of publications linked to that article's keyword from one year to the next year[19]. Earlier periods of the research period are represented by blueish nodes, whereas more recent publications are represented by yellowish nodes. This classification of the most common keywords provides valuable insights into the most discussed and least explored topics. In reference to **Fig. 2**, the study of digital entrepreneurship is viewed as containing novel areas of interest for certain keywords. These also include some keywords such as entrepreneurial finance, influencer, digital technology, authenticity, sustainability, SMEs, sentiment analysis, covid-19. As the most recent study, these terms emerged over the course of this research. This suggests that there is still a great deal of space to investigate and define what entrepreneurship is and how it relates to social media. This is consistent with themes or topics previously covered in this study.
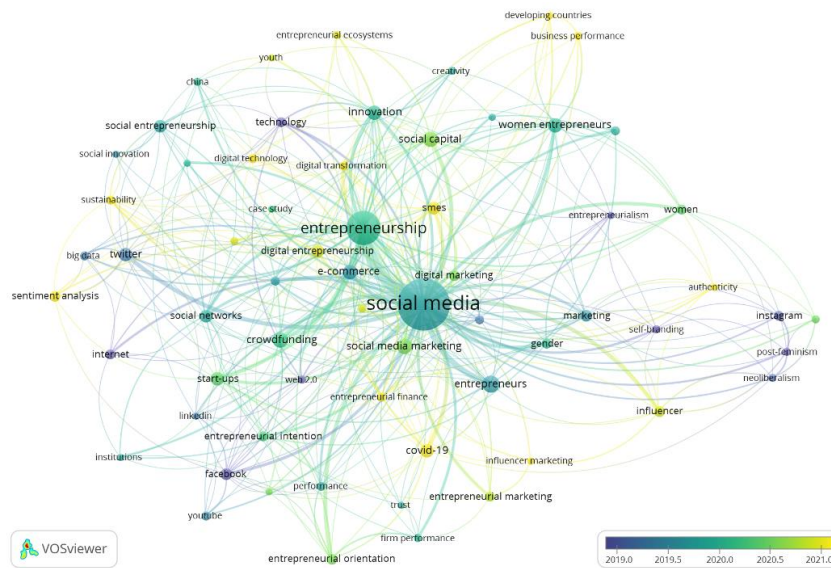
Fig. 2. Overlay Visualization from VOSviewer

4   Conclusion

This study employs bibliometric techniques to examine the evolution of global research trends in entrepreneurship and social media by gathering 799 relevant documents from the Scopus database using specific keywords. The prevalence of keyword utilization in these articles can serve as a guide for future research, directing academicians towards the most pertinent topics. The results of this study can provide numerous beneficial contributions to researchers, entrepreneurs, and business owners alike. Academics and scholars can utilize this information to direct their research, entrepreneurs or business owners can gain a better understanding of market trends, and researchers can unearth

relevant information about entrepreneurship and social media in a business context. This information can inspire additional research and discovery in the field.

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