

# A Bibliometric and Visualization Analysis of Community and Entrepreneurship Research



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**Abstract** The relationship between community and entrepreneurship is a topic that has long been studied in the field of business administration. In more detail, these studies both establish that community and entrepreneurship are interrelated and are significant for the development of any country and any locality. This paper's aim is to review previous community and entrepreneurship studies based on the bibliometric method. Furthermore, an overview of the studies of the relationship between community and entrepreneurship was provided. The study was based on 847 publications obtained from the Scopus database (including articles, conference proceedings, and books or book chapters). The analyzes were performed by using tools of VOSviewer software and Citespace software, and the analysis is done on several levels. In addition, assessments and analyzes of time, the field of study, keywords are provided. From the results of the research, it is possible to mention that the relationship between community and entrepreneurship is close. Besides, the objectives such as community sustainable development, social enterprise, and community entrepreneurship development are also interested in the research between community and entrepreneurship. The obtained results contribute to a better understanding of this research area. In addition, this study promotes potential research on community and entrepreneurship currently and in the future.

**Keywords** Entrepreneurship · Enterprise · Community · Bibliometric method · VOSviewer · Citespace

## 1 Introduction

Nowadays, there are many studies on entrepreneurship and community. However, currently, many studies mainly assess entrepreneurship, build entrepreneurial ideas, and the relationship between entrepreneurship and local socio-economic development, etc. There is little research on the relationship between community and

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entrepreneurship. It is an essential theme, but it is a relatively neglected topic (Lyons et al. 2012). In fact, the relationship between community and entrepreneurship is a complex issue that cannot be easily identified or understood. It is a partnership that must afford mutual benefit to its sides. Before it can take place, the nature and needs of those prospective partners must be clearly elaborated and appreciated (Lyons et al. 2012). Martinez et al. (2011) suggested that entrepreneurship research had not paid sufficient attention to the community in which entrepreneurship is carried out. Furthermore, Coase and Wang (2011) and Lyons et al. (2012) also suggested that the relationship between entrepreneurs and community could be the next frontier for entrepreneurship researchers.

Studying this problem directly, a lot of researchers have mentioned the relationship between community and entrepreneurship, such as: Lyons et al. (2012) have shown that there is a relationship between community and entrepreneurship: mutualistic, commensalistic, or parasitic. In addition, Lyons et al. (2012) showed the role of the community in entrepreneurship, such as: community culture, social capital, community entrepreneurship, etc. Moreover, in recent research, there has been an emphasis on the idea that both community and individual influence one's vision of and access to opportunities (Fortunato and Alter 2011). Many studies show a relation between community culture and entrepreneurship. The research of Chrisman et al. (2002) took the approach that culture will influence how entrepreneurs affect the environment, which in turn affects the strategic choices made by entrepreneurs and the rate of success of those ventures. Huggins and Thompson (2012) showed dimensions of socio-spatial culture relating to levels of dynamic entrepreneurship within local economies. Furthermore, some studies show the role of the community in providing capital for entrepreneurship, for example, Hui et al. (2014) identified community efforts to support crowdfunding work. The research of Giudic et al. (2012) identified crowdfunding which seems to play an increasingly important role in the financing of entrepreneurial projects. However, these researches have not fully assessed the role of the community in entrepreneurship.

Besides the positive effects, communities can have a negative impact on the success of enterprises and entrepreneurship (Lyons et al. 2012). In particular, the lack of motivation to create new entrepreneurs in the community will harm the sustainability of entrepreneurial activities and entrepreneurship development, which will also have a negative impact on the community (because entrepreneurship is correlated with economic growth) (Lyons et al. 2012). In summary, the nature and role of any relevant community as a factor influencing the entrepreneurship process is an issue that needs to be carefully considered in the research and evaluation of entrepreneurship (Hindle and Moroz 2010).

In general, many studies mention the importance of the community to entrepreneurship. In plus, that is making recommendations and policies for local entrepreneurship development. However, these studies are general only. Many scholars have mentioned the role and contribution of the community to stimulating entrepreneurship based on exploiting each aspect of the community. However, there is no general study on the role of the community and its contribution to stimulating entrepreneurship.

This paper aims to systematically review the existing literature to clarify current research on the relationship between community and entrepreneurship and gain a clearer view of the approach and characteristics of the community between these two objects. From there, there were discovered patterns explaining the development or change over time of entrepreneurship and community research. Besides, the informational visualization presented in this paper demonstrates the research achievements in this field. The theoretical review also provides a basic theoretical framework to lay the groundwork for potential future research. The paper ends with conclusions. Furthermore, this part presents research characteristics of the relationship between community and entrepreneurship and makes suggestions for future research directions.

The article is structured in four parts. The first part provides a literature review that highlights some of the issues related to the relationship between community and entrepreneurship. At the same time, the research results of this part show the importance of research between the community and entrepreneurship. The second part introduces the document research method used in the article. The third part includes research results and analysis results from the collected databases. The final part discusses the results of the paper and gives a summary of limitations and potential directions for future research.

## 2 Literature Review

### Interdependence between Community and Entrepreneurship

Currently, a profound change in the strategy of community economic development in the past decades is the appearance of entrepreneurship (Gruidl and Markley 2014), new business models such as business innovation models (Bellini et al. 2019), business through digital platforms (Ruggieri et al. 2018), etc. Nowadays, community developers realize that entrepreneurship is essential to the vitality and development of a local economy (Collins et al. 2016). In addition, Gruidl and Markley (2014) determined that entrepreneurship is driving economic growth and job creation worldwide. Since then, the development of entrepreneurship has shown an increasingly important role for the locality. It is considered an emerging strategy that contributes to the community and local development. However, in reality, the development of entrepreneurship is also influenced and impacted by many factors. In fact, any change of nature, accidental or intentional, can affect enterprises and organizations (Păunescu et al. 2018a). In more detail, the enterprise is a socio-cultural phenomenon. The establishment and operation (the success or failure) of the enterprises are linked and it depends on the environment where the enterprise is operating (Păunescu et al. 2018a, b; Priede-Bergamini et al. 2019; Păunescu and Mátyus 2020; Păunescu and Molnar 2020). Therefore, the environment, which can stimulate or promote the enterprise activities, is an essential factor in determining the conditions under which the enterprise will operate. Shane (2003) explained that the phenomenon of entrepreneurship

cannot be explained either by environmental forces or by individual factors in the absence of the other. This view has been built upon the academic scholarship of social scientists (Fortunato and Alter 2015). They observe that culture, state and local policies, social and infrastructure, and even the degree of social interaction profoundly influence entrepreneurship (Fortunato and Alter 2015). Anderson and Giberson (2003) pointed out the strong relationship between process and location for entrepreneurship. Entrepreneurship behavior and intentions will differ in different environments, circumstances, and times (Ambad and Damit 2016; Maresch et al. 2016). Hindle and Moroz (2010) also identified community as a consideration that affects all forms of entrepreneurship.

Currently, there are studies by some researchers confirmed that entrepreneurship has a close relationship with the community, based on the community to develop, pursuing the goals and common interests of both community and entrepreneurship (Anderson 1999; Peredo 2001; Lyons et al. 2012; Stanford et al. 2021). Many aspects and characteristics of the community have a strong influence on any business and entrepreneurship, although other agents (individuals, groups, organizations) are the main character of the operation business (Hindle and Moroz 2010). On the other hand, Korsching and Allen (2004) saw entrepreneurship from a perspective broader than community development. They see community support as a catalyst for business projects (Korsching and Allen 2004). Communities provide essential services aimed at supporting startups (Darwish and Van Dyk 2018) by adopting various measures and subsidies (Prijon 2012). Therefore, it can be seen that entrepreneurship and community have an essential relationship with each other (Lyons et al. 2012; JMIGE 2021; Stanford et al. 2021).

However, community and entrepreneurship is complex relationship, not easily defined and understood (Lyons et al. 2012; JMIGE 2021). It is a partnership that must be mutually beneficial for its parties (Lyons et al. 2012). Therefore, before such a relationship can happen, the nature and needs of potential partners must be built and assessed (Lyons et al. 2012). In recent startup studies, there has been an emphasis on the idea that both the community and individual startups influence a vision and access to opportunities (Fortunato and Alter 2011). Additionally, there was a part in the entrepreneurship sector with one side focused on the individual entrepreneur, and the rest focus on the external forces influencing the entrepreneurship phenomenon (Shane 2003; Naushad et al. 2018). Fortunato and Alter (2015) argued that the collaboration between individuals and communities contributes to promoting and developing creativity, innovation, and growth. From there, it brings positive results for all individuals and communities (Fortunato and Alter 2015). Communities support entrepreneurship by creating culturally backed relationships to share opportunity information, collaborate for the benefit of the community or the region, and create an ecosystem that helps enterprises (Julien 2007; Fortunato and Alter 2011). In addition, communities (or community ecosystems) that support entrepreneurs and entrepreneurship are not just at the functional level (for example, access to capital through banks, local taxes, and land use books, availability of reasonable financing options) but also at the relational level (Wilkinson 1991). From there, the community

contributes to improving an environment that supports entrepreneurship and startup (Wilkinson 1991; Lyons et al. 2012; Stanford et al. 2021).

In their own research, Lyons et al. (2012) have shown many factors that promote interaction between the community and entrepreneurship that are: Local people's awareness of entrepreneurship and support for local businesses; Culture and types of institutional support; The role of the entrepreneur in effective community development; Activity allocation of business activities of the enterprise; Type of business of the enterprise. Research by Reynolds et al. (2000) identified factors that determine the interaction between entrepreneurship and community related to entrepreneurial framework conditions. Entrepreneurial framework conditions that Reynolds et al. (2000) suggested include entrepreneurship opportunity, entrepreneurial capacity, social legitimacy, and finance and information technology. These conditions have a direct impact on the level of entrepreneurship activity. Furthermore, these conditions depend on the individual entrepreneur and the community (Reynolds et al. 2000). Moreover, based on the relationship and role of the community with entrepreneurship, Gruidl and Markley (2014) developed a suggestion mechanism to play a role in stimulating the entrepreneurship of the community as well as with the aim of examining what the community is currently doing to promote entrepreneurship. Besides, this mechanism is also intended to understand how communities currently support entrepreneurs (Gruidl and Markley 2014). Gruidl and Markley (2014) determined that it is unlikely that a community will score well across all categories, but this tool can suggest what they are doing well and areas where the community can improve. Therefore, the leaders of the community need to find ways to expand the number of start-up enterprises in the community and create cultural entrepreneurship and entrepreneurial motivation among community residents (Gruidl and Markley 2014). In particular, the main premise of these programs is to support the community in focusing on the needs and wants of entrepreneurs if they want to be successful (Gruidl and Markley 2014).

## **3 Methodology**

### ***3.1 Aim of the Research***

The aim of the research is to provide an overview and trends of recent research on entrepreneurship and the community. From there, the common related issues in community and entrepreneurship research can be identified. Besides, the research results will contribute and promote potential research in this field in the coming time.

### 3.2 *Research Methodologies*

In this paper, the bibliometric analysis method is the chosen research method for implementation. This bibliometric method is a method widely used in many different studies. The main purpose of this method is to identify important aspects and factors in previous studies. In addition, the results of the study also contribute to identifying future research trends based on the phrases mentioned in the bibliography (in this study, the objectives are community and entrepreneurship). More specifically, the bibliometric analysis will analyze and evaluate scientific research based on statistical methods and tools in a particular field, as well as identify relevant information to the specified research object. According to Yu et al. (2016), currently, the bibliometric method is frequently used to investigate the latest research status and trends on a particular topic, including the number of articles, geography, journal distribution, subject area, authors, and institutions, academic collation, and article citations. Therefore, the bibliometric method has been used extensively to provide a quantitative analysis of written publications or academic literature in recent years (Cicea 2020; Angarita-Zapata et al. 2021; Elihami 2021; Faruk et al. 2021; Martinho 2021; Su et al. 2021; McNicholas et al. 2022; Wei and Deng 2022). In this paper, by the bibliometric method, the information related to the relationship between community and entrepreneurship researches will be explored.

### 3.3 *Data Collection*

Nowadays, there are many databases with scientific knowledge. These databases are recognized by many organizations, individuals, scientists as well as worldwide. Among those databases, two scientific databases stand out, Scopus and Web of Sciences. These are the two databases with the largest and most reputable documents in the world. Firstly, Scopus is a database of more than 70 million scientific documents, provided by Elsevier. Secondly, Web of Sciences is the world's largest database of more than 100 million scientific documents, provided by Clarivate Analytics (Cicea and Marinescu 2021; Paperpile 2021). Because most of the results and scientific documents are cited in both of the above databases, to avoid redundancy in the analysis results, the research selects only one database to extract data from. Based on the search engine of both databases, the Scopus database is selected because the search results obtained with selected keywords in the Scopus database (938 publications) give more results than in the Web of Science database (703 publications). Besides, many scholars also use the Scopus database to analyze because of its simple interface and fast analysis (Cicea and Marinescu 2021; Trinh and Cicea 2021). Therefore, this study continues to use the Scopus database to conduct data collection.

To collect data in the Scopus database, the search engine of the Scopus database is used to conduct a simple search with the following keywords: 'Community', 'Communities', 'Entrepreneurship', 'Enterprise', 'Enterprises'. Keywords are searched with the title of the publications contained in the Scopus database. The data extraction date is December 30, 2021. A total of 938 publications were found. From the publications found, the research proceeds to select documents suitable for the research purpose. The first step is to remove publications published in 2022, which are scheduled to be published. The research choose publications published before 2022. In the second step, the documents that are Articles, Book Chapters, and Conference Proceedings are selected. Finally, the publications that are not in English are removed. The number of publications remaining is 847. After data filtering, a total of 847 publications were used for analysis compared to a total of 938 publications found initially.

### **3.4 Data Analysis**

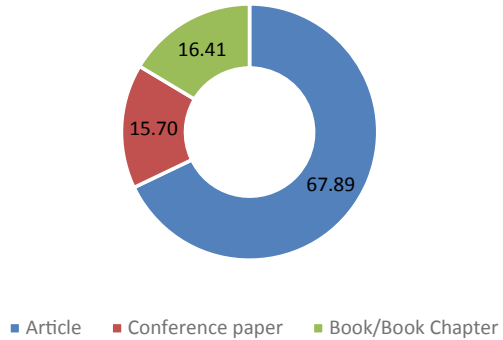
After the database has been collected from the Scopus database, in the next step, the research conducts an analysis of the content related to the research objectives of community and entrepreneurship. The analyzes were performed using the data provided by the Scopus database through the Scopus database engine, VOSViewer 1.6.17 software (van Eck and Waltman 2010), and Citespace software (Chen 2006). The analysis considered several aspects, including the subject area and distribution of scientific research, the time of publication, and the keywords terminology of the databases collected.

Besides, to ensure the validity of the research, the Scopus database was one of the reputable research databases that were reviewed (Soosay and Hyland 2015; Trinh and Cicea 2021). The systematic literature review process is explained in detail to ensure the reliability of the study. In addition, the inclusion and exclusion criteria were based on the options given in the Scopus database. The research did not use their criteria for inclusion in the exclusion list. Thus, this ensures the reliability of the database collected.

## **4 Results and Discussions**

Based on the above data collection results, a total of 847 documents related to community and entrepreneurship were used for post-screening analysis. These results are collected based on the Scopus database. In this section, an overview of the studies to date will clarify research of the relationship between communities and entrepreneurship.

**Fig. 1** Publications by types (%) . *Source* Author's own research results, using Scopus database



#### ***4.1 Analysis by Type of the Publications***

The distribution of documents related to entrepreneurship and community is shown in Fig. 1. This result is based on statistical results from the Scopus database for keywords related to entrepreneurship and community in the title of the publications. The results show an unequal distribution among the document types. Based on the chart, the most common type of document is Article (67.89%, corresponding to 575 publications), followed by Books and Book chapters (16.41%, corresponding to 139 publications), and finally the Conferences Paper (with 15.70%, corresponding to 133 publications). These three types of documents account for 90.30% of the total number of initial search document results (including other types of documents such as reviews, notes, etc.). It proves that the documents included in the analysis are appropriate and highly accurate.

#### ***4.2 Analysis by Subject Area of the Publications***

The distribution of the database of 847 publications by subject area is presented in Table 1. In more detail, the results in Table 1 provide the top 10 subject areas with the highest number of publications. It should be noted here that, in the Scopus database, a document can be in many different fields, depending on the scientific area and the journal in which it is published. Specifically, according to the results in Table 1, the number of publications in the fields of Business, Management and Accounting accounted for the biggest number (361 documents, 42.62% of all documents), followed by Social Sciences with 353 documents (41.68% of all documents). The next areas are Economics, Econometrics and Finance, Computer Science, etc.



**Table 1** Top 10 subject area of publications

Ranking	Subject area	Number	Percent (%)
1	Business, Management and Accounting	361	42.62
2	Social Sciences	353	41.68
3	Economics, Econometrics and Finance	220	25.97
4	Computer Science	111	13.11
5	Environmental Science	89	10.51
6	Engineering	78	9.21
7	Arts and Humanities	62	7.32
8	Medicine	46	5.43
9	Agricultural and Biological Sciences	43	5.08
10	Decision Sciences	38	4.49

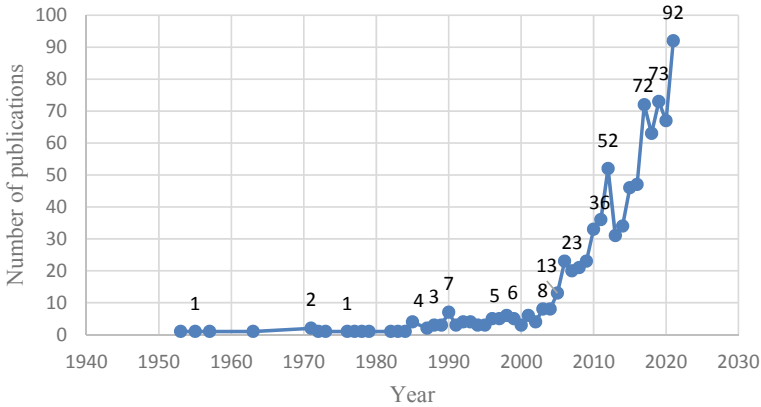
Source Author's own research results, using Scopus database

### 4.3 Analysis by Publication Time

Figure 2 shows the distribution over time in the number of articles published. From Fig. 2, there is an existence an increase in the number of published articles related to entrepreneurship and community. The first published paper related to community and entrepreneurship was in 1953. By the end of 2021, there were 92 corresponding publications. Looking at Fig. 2 of the increase in publications, the results consider that the expansion in publications is related to economic and social fluctuations. During the period from 1953 to 2000, there were 1 to 5 scientific articles per year (with the highest number in 1990 with seven publications). From 2001 there was a boom in the number of publications. The number of publications reached the highest value in 2021, with 92 documents. In the period 2010–2021, there were 646 publications published, accounting for 76.27% of the number of publications from 1953 to 2021. From 2010 to 2021, 54 articles are published on average per year. Undoubtedly, the boom in the number of scientific articles registered after 2010 is due to the growing interest of researchers in this field. This increase is suitable with the change of the global economy and society.

### 4.4 Analysis by Geography of the Publications

Regarding the geographical distribution, it can be said to be very diverse. According to statistical results, there are 104 countries and territories that have researched on community and entrepreneurship. Countries with at least ten publications (articles, yearbooks, book chapters) addressing the issue are presented in Table 2. A total of 21 countries and territories have 10 or more publications. The results show that the United States has the highest number of publications with 207 documents (24.44%



**Fig. 2** Documents by year. *Source* Author’s own research results, using Scopus database

of all documents), followed by the United Kingdom (130 documents, 15.35% of all documents) and Australia (69 documents, 8.15% of all documents). It is not surprising that these countries have a high number of publications because these are developed economies and have a lot of research on business and community activities. Besides, for the number of citations for each country, the United States still accounts for the largest number of citations with 3474 citations, followed by the United Kingdom and Canada with 2313 citations and 1451 citations, respectively. Currently, Asian countries are also emerging as countries and regions with a lot of research into community and entrepreneurship. Countries such as Thailand, China, and Indonesia occupy the 5th, 6th, and 7th positions, respectively, in terms of the number of studies.

Conducting an assessment of publication times by country, the results in Table 2 and Fig. 3 show the average publications year in detail. The results show that the countries with the most recent research on community and entrepreneurship focus mainly on countries and territories in Asia and Africa. The emerging research is from countries (such as Thailand, Indonesia, South Africa, and Nigeria). It shows a tendency to move research towards community and entrepreneurship studies from European and American countries to Asian and African countries.

### 4.5 Keywords and Co-keywords Analysis

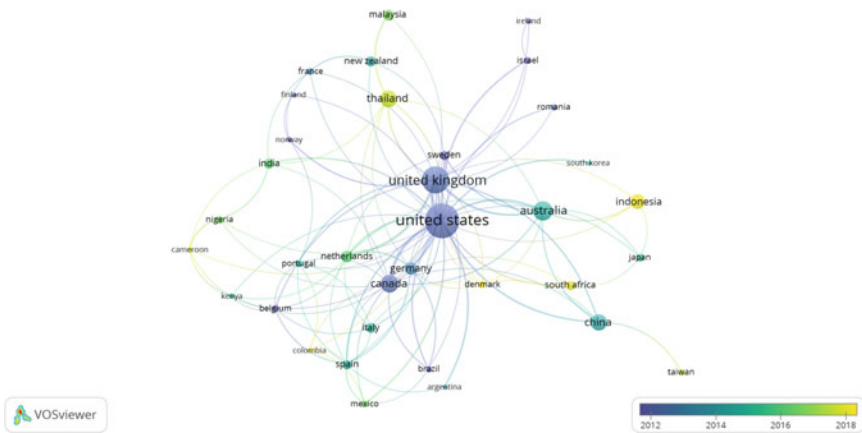
The first part of this analysis was performed using VOSViewer software (Version 1.6.13) (van Eck and Waltman 2010). This software can create a list of keywords, authors, citations, etc., and determine the correlation or suggested association between keywords. Using VOSviewer software, the research has selected the minimum number of occurrences of a keyword as five (threshold). There are 57

**Table 2** Countries have documents more than 10 publications

Ranking	Country/Territory	Number of documents	Percent (%)	Citations	APY
1	United State	207	24.44	3473	2012
2	United Kingdom	130	15.35	2313	2012
3	Australia	69	8.15	836	2014
4	Canada	55	6.49	1451	2012
5	Thailand	51	6.02	111	2017
6	China	50	5.90	161	2014
7	Indonesia	41	4.84	125	2017
8	Germany	28	3.31	298	2013
9	Netherlands	24	2.83	202	2015
10	Malaysia	22	2.60	46	2016
11	India	20	2.36	136	2016
12	New Zealands	20	2.36	303	2014
13	Italy	18	2.13	124	2014
14	South Africa	17	2.01	100	2017
15	Spain	16	1.89	147	2014
16	Sweden	15	1.77	302	2011
17	Japan	12	1.42	48	2015
18	Nigeria	11	1.30	59	2016
19	Mexico	10	1.18	55	2016
20	Portugal	10	1.18	71	2014
21	France	10	1.18	91	2013

Note APY: Average publications year

Source Author’s own research results, using Scopus database and VOSviewer



**Fig. 3** Evolution of publications by time of countries over time. Source Author’s own research results using Scopus database and VOSviewer

keywords out of a total of 1823 keywords that were used to conduct the analysis. The keywords with occurrences of more than ten are shown in Table 3.

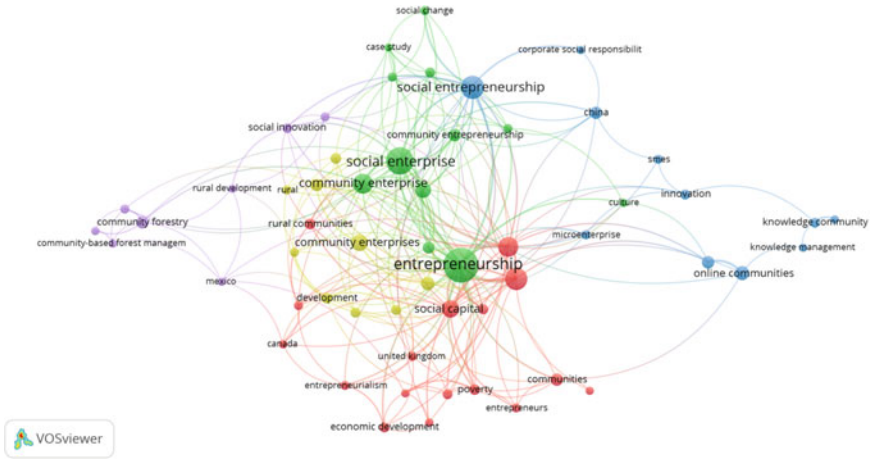
Going deeper into the analysis, Fig. 4 shows the results of the keyword network visualization map by different clusters. Analyzing Fig. 4, there are a total of 5 clusters formed from the analysis results of VOSviewer software. From there, the red cluster (Cluster 1) includes keywords in the community area. In this cluster, there are community and community development keywords, such as ‘Community’, ‘Community development’, ‘Communities’, ‘Social capital’, ‘Economic development’, ‘Rural communities’, etc. The slight difference between them is that cluster 1 (red) contains some issues of the entrepreneur (for example, ‘Entrepreneurs’, ‘Entrepreneurialism’). The second cluster (in green) contains words related to entrepreneurship and community entrepreneurship, including ‘Entrepreneurship’, ‘Community entrepreneurship’, ‘Community engagement’, ‘Community of practice’, ‘Education’, ‘Culture’, etc. The third cluster (in blue) considers social entrepreneurship issues, including keywords

**Table 3** Keywords have more than 10 occurrences

Ranking	Keywords	Cluster	Occurrences	Total link strength	Link	APY
1	Entrepreneurship	2	77	79	34	2015
2	Social enterprise	2	48	55	26	2017
3	Social entrepreneurship	3	35	41	20	2016
4	Community	1	32	36	20	2015
5	Community development	1	25	32	19	2014
6	Community enterprise	2	25	23	16	2016
7	Social capital	1	20	27	15	2015
8	Community enterprises	4	18	14	8	2016
9	Sustainability	2	17	21	13	2016
10	Online communities	3	13	10	5	2014
11	Thailand	4	12	18	12	2016
12	Communities	1	11	10	8	2014
13	Community entrepreneurship	2	11	17	11	2016
14	Community forestry	5	11	11	7	2014
15	Management	4	11	18	11	2014
16	China	3	10	9	8	2016
17	Enterprise	3	10	11	4	2015

Note APY: Average publications year

Source Author’s own research results, using Scopus database and VOSviewer

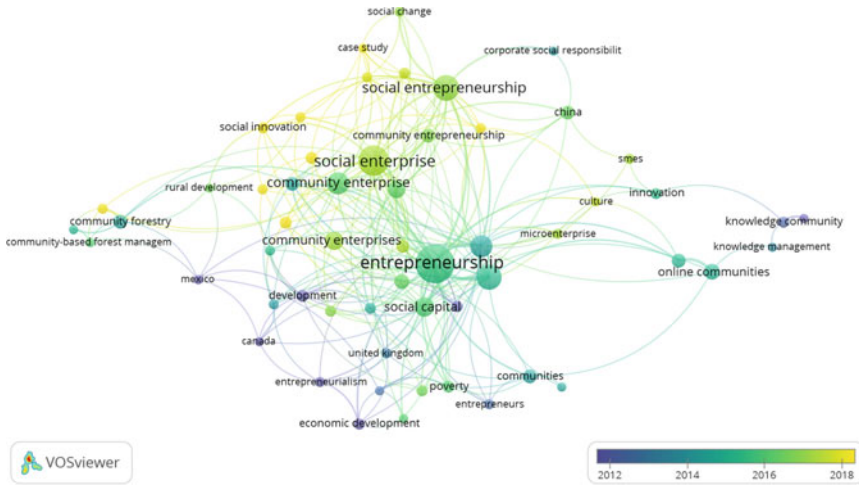


**Fig. 4** Keyword group by clusters. *Source* Author’s own research results, using Scopus database and VOSviewer

‘Social entrepreneurship’, ‘Smes’, ‘Microenterprises’, ‘Knowledge management’, ‘Innovation’, ‘Corporate social responsibility’, etc. The fourth cluster (in yellow) relates to community enterprises, such as ‘Community enterprises’, ‘Community-based enterprises’, ‘Management’, ‘Empowerment’, etc. Finally, the fifth cluster (in purple) contains phrases related to forms of community development and management, including ‘Community forestry’, ‘Community-based forest management’, ‘Rural development’, ‘Community forest enterprise’, etc.

In addition, the VOSviewer program also provides the ability to analyze the time evolution of the analyzed keywords. The results of the evolution of keywords are shown in Fig. 5. Besides, Table 3 also shows the time of keywords with a frequency greater than 10. The results show that, before 2016, researchers focus on aspects of entrepreneurship development, entrepreneurs in the community (the keywords usually appear are ‘Entrepreneurship’, ‘Entrepreneurialism’, ‘Entrepreneurs’, ‘Knowledge management’, etc.); In the next phase, researchers focus on research aimed at community development and community enterprise (keywords are ‘Community’, ‘Community development’, ‘Online community’, ‘Community-based enterprise’, ‘Community enterprise’ etc.). In the last phase, in the recent period from 2019–2021, the studies all focused on the research of social enterprises and rural community (keywords are: ‘Social entrepreneurship’, ‘Social enterprise’, ‘Social innovation’, ‘Rural community’, ‘Community engagement’, etc.).

More specifically, the links between keywords are analyzed. These links represent the number of links that one keyword associates with other keywords. The research analyzes the links between the keywords with the highest links. Based on the statistical results in Table 3, a total of 6 keywords were selected for analysis: ‘Entrepreneurship’, ‘Social enterprise’, ‘Social entrepreneurship’, ‘Community’,



**Fig. 5** Evolution of keywords overtime. *Source* Author’s own research results, using Scopus database and VOSviewer

‘Community development’, ‘Community enterprise’. The results of analyzing the strongest links of the six keywords above are presented in Table 4. The results show that the keyword ‘Entrepreneurship’ has the strongest association with ‘Community’. Besides, there is a strong interdependence between ‘Entrepreneurship’ and ‘Social capital’, ‘Entrepreneurship’ and ‘Social entrepreneurship’, ‘Social enterprise’ and ‘Social change’, ‘Social enterprise’ and ‘Community development’, ‘Community’ and ‘Social capital’, ‘Community enterprise’ and ‘Social enterprise’ (Table 4).

Furthermore, to determine the driving force of research in the field of the relationship between community and entrepreneurship in different periods, keywords phrases that are extracted according to the Strongest Citation Bursts in the period 2001–2021 by Citespace software are conducted. The research chose this period because it is the most recent period, with a rapidly increasing number of publications. In addition, this period is also a period when many events take place that affects the community and entrepreneurship. Therefore, it makes sense to look at research trends for community and entrepreneurship in this period. The obtained information is divided into three time periods: 2001–2010, 2010–2015, and 2015–2021. The results are presented in Fig. 6. From the analysis of the three periods in Fig. 6, the research was able to identify the driving forces in the area of the relationship between community and entrepreneurship research. In this regard, for the period from 2001 to 2010, many papers focused on aspects of the economic development and business development in Asia–Pacific (The keywords are ‘Business development’, ‘Business objective’, ‘Asia’, ‘Canada’, ‘Entrepreneurialism’, ‘Development’). During the second period (from 2011 to 2015), the attention of researchers focused on community research and factors affecting the community (Keywords are ‘Community development’, ‘Community care’, ‘Online community’, ‘Social capital’, ‘Industry’). The final stage (from 2016 to 2021), the research on green development direction and environmental

**Table 4** Top 6 keywords according to their number of links

Ranking	Keyword	Link	Co-occurrence keyword	Link strength
1	Entrepreneurship	34	Community	9
			Social capital	6
			Social entrepreneurship	5
			Resilience	4
			Social enterprise	4
2	Social enterprise	26	Community development	6
			Entrepreneurship	4
			Sustainability	4
			Community enterprise	4
			Social entrepreneurship	4
3	Social entrepreneurship	20	Entrepreneurship	5
			Social change	4
			Social enterprise	4
4	Community	20	Entrepreneurship	9
			Social capital	4
5	Community development	19	Social enterprise	6
			Entrepreneurship	3
			Social entrepreneurship	3
6	Community enterprise	16	Social enterprise	4

Source Author's own research results, using Scopus database and VOSviewer

protection of rural communities (Keywords appear such as 'Timber', 'Forestry', 'Rural area', 'Agency'). In addition, the results that search by the keyword with the Strongest Citation Bursts are 'Industry', 'Online system', 'Online community', 'Human' (values are 8.61, 4.51, 4.10, 3.77, respectively). Besides, another important keyword is 'Community development' (2.5). From this result, the research provides a strong interest in community development through human factors, industry, and technological development, in which it is necessary to have the participation of stakeholders for community development.

## 5 Conclusion

At present, the research of the relationship between community and entrepreneurship is still attracting the attention of researchers with the aim of improving the effectiveness and the role of the community in the development of entrepreneurship in the context that entrepreneurship is the main driving force for the development not only of the economy but also of the society. In this paper, an analysis was performed for

Period	Keywords	Strength	Begin	End	2001 - 2021
2001-2010	Development	1.21	2003	2007	
	Canada	2.25	2004	2009	
	Business development	1.63	2004	2006	
	Entrepreneurialism	1.27	2005	2007	
	Asia	1.06	2005	2009	
	Conservation	1.88	2008	2010	
2010-2015	Business objective	1.07	2009	2012	
	Industry	8.62	2011	2014	
	Online system	4.51	2011	2014	
	Online community	4.10	2011	2014	
	Social capital	2.95	2011	2014	
	Behavioral research	1.09	2012	2014	
	Community development	2.50	2013	2015	
	Business	1.71	2013	2016	
2015-2021	Community care	1.26	2014	2016	
	Timber	3.35	2015	2017	
	Forestry	2.85	2015	2017	
	Agency	1.06	2016	2019	
	Rural area	2.65	2017	2021	
	Human	3.77	2018	2021	

**Fig. 6** Top 20 keywords with the strongest citation bursts between 2001 and 2021. *Source* Author’s own research results, using Scopus database and Citespace

articles related to community and entrepreneurship for nearly 70 years (1953–2021). For a long time, there was little interest in research on the relationship between community and entrepreneurship. After that, this interest began to grow explosively from 2010 and beyond. In 2021, the number of publications in this field will reach 92 documents. It is the highest number ever. The analysis was performed on 847 publications from the Scopus database. The results indicated that the most widely used research is through journals and less so through book chapters and conference proceedings (67.89% are articles in journals, books/book chapters are 16.41%, and 15.70% are Conference proceedings).

In addition, the studies focused mainly on the United States, Australia, and the United Kingdom. These are countries with a high number of entrepreneurship development levels and a large number of researchers in economics and business administration. Besides, the study also shows the increase in research of Asian and African countries. The countries in these regions have quite a large number of studies and the time of publication of the studies carried out in recent times.

Analyzing the keyword aspect of scientific publications, the research topics for the relationship between community and entrepreneurship mainly revolve around the following main areas: community sustainable development (‘Community development’, ‘Economic development’, ‘Sustainability’, ‘Cultural’, ‘Social change’, ‘Rural development’, ‘Poverty’, ‘Knowledge community’, ‘Community-based forest management’, etc.); community enterprise development (‘Community



enterprise', 'Community enterprises', 'Community entrepreneurship', 'Microenterprises', 'Smes', 'Entrepreneurship', etc.); social enterprise development ('Social enterprise', 'Social entrepreneurship', 'Corporate social responsibility', 'Social capital', 'Social innovation', etc.). Besides, the link between keywords among each other for the top 6 keywords with the largest number of links always has community and entrepreneurship. It shows a strong link in research between entrepreneurship and community, not only studies on the relationship between entrepreneurship and community but also other related studies.

Finally, using the Citespace software, the paper is able to identify important factors in the research of the relationship between community and entrepreneurship, according to their citation buster. The results also show that have a link between practice and research, based on current studies. Furthermore, a strong interest in community development through human, industrial, and technology development is provided. From there, it is necessary to involve stakeholders in community development. In the current period, these buster keywords (such as 'Human', 'Rural area') are content that has had an impact on recent entrepreneurship and community research. From these analyses, it can be determined that research trends on the relationship between entrepreneurship and community have changed over time. This change is consistent with the changing socio-economic issues of the community and the characteristics of entrepreneurship. Regarding keyword analysis by using Citation Bursts, the results also show that the presence of many keywords (such as 'community care', 'human', 'community development', 'business development', etc.) has an important association with entrepreneurship and community because these keywords are the essential features and elements in the relationship between entrepreneurship and community.

This study has certain limitations. The research papers are based on the Scopus database. Although the Scopus database is reputable and highly influential, it does not yet include all scientific results in the area analyzed. Another limitation related to the tools used for the analysis is the VOSviewer software and Citespace software. In addition, the research was conducted based on finding the titles of the documents for assessment (the content, abstracts, etc. not analyzed). These are the methodological limitations of the aforementioned tools. Therefore, from the point of view of these limitations, the paper suggests some directions for future research. Firstly, it is possible to conduct an in-depth analysis of the content of the articles obtained. From there, a more detailed look at research trends in this field is provided. Secondly, it is possible to use a combination of different databases to have a more accurate and objective assessment of the current state of research on community and entrepreneurship because other databases may carry additional information for the study already performed. Finally, some other software can be used as a tool to analyze to obtain more results and conclusions.

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