



## Research Article

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# Bibliometric Analysis of Determining Factors in Entrepreneurial Intention

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## Abstract

In entrepreneurship, its various theories and elements gain importance in the academic community for the orientation in the professional and entrepreneurial training processes that are being carried out by higher education institutions HEIs. Therefore, this paper provides a systematic review of the published literature based on the determinants of entrepreneurial intention. To that end, an analysis was conducted using bibliometric and network indicators within the Scopus data source, which was restricted to objective search criteria. The main findings show that, since 1943, certain success factors such as: attitude, learning, behavior, economic growth, education, value creation, incubation resources, personality traits, and entrepreneurial intentions have been linked.

**Keywords:** entrepreneurial intentions, bibliometry, business, scientific mapping

## 1. Introduction

Entrepreneurship is a fundamental element that contributes to the economic growth of countries, stimulates economic activity, and contributes to reducing poverty and increasing the level of employment (Baumol, 1996; Gautam and Lal, 2021; Stel et al., 2005; Xu, 2021). The axis of this relationship is the creation of a new company or economic initiative. On the other hand, the empirical evidence establishes a clear scope that entrepreneurship has gained special relevance in business dynamics and market innovation processes and in the economic structure of countries (Aparicio et al., 2016; Acs, 1992).

From this perspective, entrepreneurship has been a generator of studies with regard to social and economic aspects, and its development can be seen in many sectors and countries that address such variables with greater representation. According to Landes (1949), in the context of France, it determines crucial characteristics for entrepreneurship such as motivation, initiative, and imagination; Similarly Hoselitz (1952), proposes special skills, personality traits and business leadership; Parker (1954), attributes to the opportunities offered by nature, technology and markets; in this perspective, Williams (1983) proposes a link between entrepreneurial spirit, creativity, and innovation. Without a doubt, these are not the only elements, which requires the search for other important variables to understand, such as behavior and entrepreneurial intentions.

In the context of other countries, such as Iran, it considers independence, stability, motivation, risk and leadership to be determinants in the structure of entrepreneurs (Nasirzadeh et al., 2013); knowledge, skills, and experience are valued in the Asian Southeast (Do y Hieu, 2020). Without a doubt, they are not the only ones; according to Mohammadi (2020), there is a link with access to financing. On the other hand, Kruger et al. (2000) maintain that entrepreneurial intentions refer to the objective behavior of starting a business, explained by the attitude toward the creation of a company and the perception of entrepreneurial capacity (Boubker et al., 2021).

According to Ambad and Damit (2016); Degeorge and Fayolle (2008), students make up a potential source of entrepreneurship creation by receiving some notion on the subject; where education has a positive impact on the creation of new businesses (Franke and Lüthje, 2004). However, for Rusu et al., (2022) entrepreneurial intentions in students differ according to the environment and period; This concern prompts the following questions: Who are the most influential authors, magazines, and countries in literature? What is the current trend in this type of investigation?

## 2. Methodology

The data was considered from the Scopus database, which includes a more reliable bibliographic database with better coverage in the field of social sciences (Gómez et al., 2014; Navarro et al., 2011); with this selection of data, an analysis of the tree of knowledge is generated under a broad and precise vision of the subject, with the criteria used for the search that are listed in Table 1.

**Table 1:** Search Criteria

Search Criteria	
Space of time	Undetermined
Consultation Interval	September 10, 2022
Document types	Article, book, book chapter, conference paper
Journal type	Any kind
Field of study	Title, abstract, keywords
Search terms	(TITLE-ABS-KEY ( entrepreneurial ) AND TITLE-ABS-KEY ( determinant ) AND TITLE-ABS-KEY ( students ) OR TITLE-ABS-KEY ( factors ) AND TITLE-ABS-KEY ( intentions ))
Database	Scopus
Total result	230

Notes: This table shows the fields that allowed the search of the information

In relation to the determining factors in entrepreneurial intention, 230 records were obtained in Scopus. For the bibliometric, the quantitative method was used to analyze the provided data, observing a correlation with studies in the field of entrepreneurship where there is extensive data at the level of entrepreneurship, however, nevertheless, the search terms limited the scope of the study.

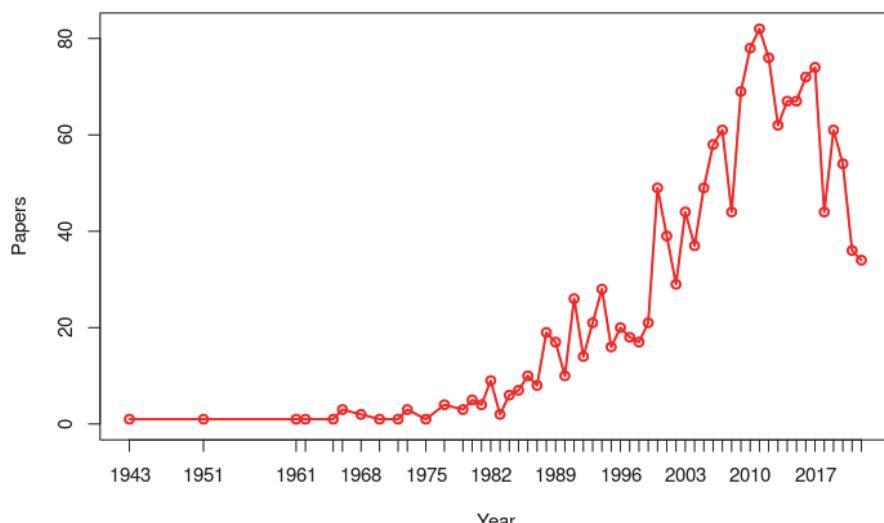
Scientific mapping was developed at the core of science. As voluminous, complex, and difficult-to-manage research streams emerged (Aria and Cuccurullo, 2017), the systematic review was strengthened in the R studio language with the application in version 4.2. In addition, the open-source code of bibliometrix was used, this tool is recommended for the broad field of social sciences (Kurtuluş and Tatar, 2021; Buitrago, et al., 2020) used in similar studies (Forlano et al., 2021; Guleria and Kaur, 2021; Skare et al., 2022).

### 3. Results

With the objective of mapping scientific research, the theoretical structure, the tree of knowledge and the trend of the variables; An analysis of bibliometric indicators that allow for greater insight in the literature related to the factors influencing students' entrepreneurial intent was generated, thus establishing an agenda for future research facilitating the generation of new knowledge. To fulfill this purpose, information was taken from the Scopus database; the results obtained were exported under bib extension and entered into the Core Science platform presented in the Tree of science (ToS) tool. Additionally, the R studio and bibliometrix tools were used to determine the evolution of scientific production.

#### 3.1 Number of publications and authors

Following that, the number of publications registered in the Scopus data base can be demonstrated using the search fields described below, with no time limit. In this approach, Figure 1 depicts the results of the investigative evolution, observing that the first article published and identified by Core Science as a subfield of entrepreneurship is by Maslow, A. (1943), which is centered on human motivation. Nonetheless, since the year 2000, the trend of publications has significantly increased their interest in the subject, finding the highest level of the curve in the year 2011.

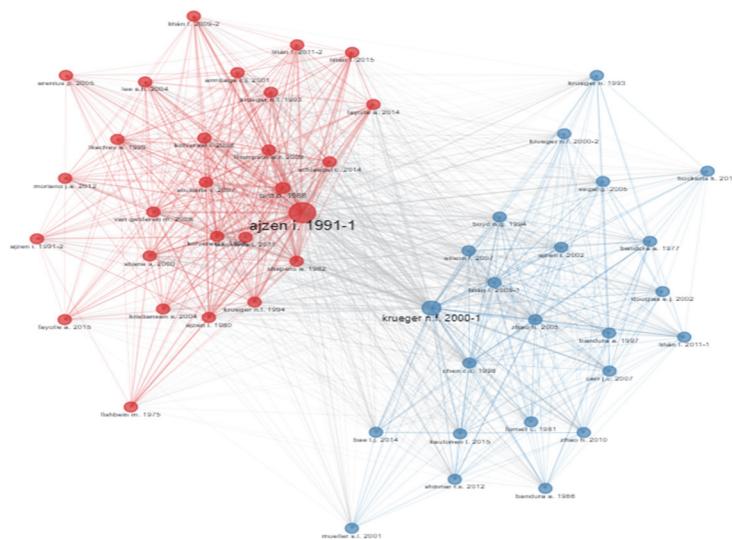


**Figure 1:** Annual scientific production

**Notes:** The graph depicts the evolution of scientific production over time based on the Core Science tool.

From a sample of 230 publications, it is determined that the most popular authors are Ajzen (1991) with 20 publications followed by Krueger et al. (2000) with 18 and Liñan et al. (2010) with 17 publications. Similarly, Bandura (1977) and Kolvereid (1997) with 12 publications that contribute with works regarding the determinants of entrepreneurship.

When analyzing the network of citations and the data provided, in Figure 2, two predominant currents or groups are visualized where the authors with the highest score described in the previous paragraph stand out, being the most influential in the field of entrepreneurial intention.



**Figure 2:** Network of citations

**Notes:** The figure represents the network of citations and relevant authors determined from the information search criteria.

### 3.2 Citations for relevant journals and publications

Since the year 2018 to 2022; Based on Scopus, the article called “Competing models of entrepreneurial intentions” whose author is Krueger (2000) was cited 2,678 times, establishing itself as the most cited document in 2018. The article published by Hockerts, K. (2017) has 239 citations, representing 4% of the total studied. Based on this analysis, the rise of this subject stands out in 2018, followed by 2020 and 2021 Table 2.

**Table 2:** Citation index

Documents	Citations	<2018	2018	2019	2020	2021	2022	Total
		Total	1756	481	669	983	1297	1206
Competing models of entrepreneurial intentions	2000	1238	235	270	312	353	276	2687
Determinants of Social Entrepreneurial Intentions	2017	6	26	27	52	75	53	239
The impact of desirability and feasibility on entrepreneurship...	2008	98	21	28	32	32	17	229
Understanding entrepreneurial intentions: A developed integr...	2019		2	16	37	57	52	165
Scientists' transition to academic entrepreneurship: Economic...	2012	53	19	16	29	26	19	162

Documents	Citations	<2018	2018	2019	2020	2021	2022	Total
	Total	1756	481	669	983	1297	1206	6403
Identity and entrepreneurship: Do school peers shape entrepreneurial intentions?	2012	76	11	15	17	22	14	155
Gender-role orientation as a determinant of entrepreneurial intentions...	2008	71	13	7	16	12	12	131
ADHD-like behavior and entrepreneurial intentions	2015	16	14	14	17	25	12	98
Knowledge context and entrepreneurial intentions among students...	2012	37	8	12	9	10	11	87
Using privacy calculus theory to explore entrepreneurial intentions...	2019			6	11	28	40	86
The Big Five Personality-Entrepreneurship Relationship: Evidence...	2015	10	6	10	15	20	20	81
Impact of personality traits and entrepreneurship education...	2019			6	18	30	24	78
A study of entrepreneurial intention of university students	2015	13	6	9	18	13	18	77
Personality traits and theory of planned behavior comparison...	2019			2	16	22	31	71
Examining determinants of entrepreneurial intentions in Slovakia...	2018			12	24	22	13	71

Notes: This table shows the relevant publications and the number of times cited

Table 3 links to the most relevant journals that have been published in the field of determining factors in entrepreneurial intention. The largest number of publications is centered on the journal *Entrepreneurship Theory and Practice* with a total of 739. The *Journal of Business Venturing* with a relative frequency of 25.97%; in *Small Business Economics* journal it presents a 10.98%. On the other hand, a similar percentage is found in the *International Entrepreneurship and Management Journal* and the *Journal of Small Business Management* at 9.43%. From this perspective, it can be considered that there is a preference in two journals with an h-index of 196 (Sage Journals) and 169 (Science Direct).

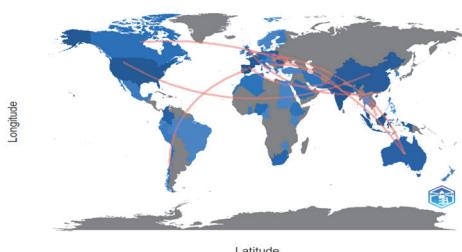
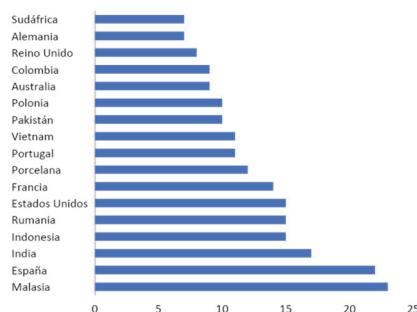
**Table 3:** Most relevant journals

Journal	Frequency	Impact Factor
<i>Entrepreneurship Theory and Practice</i>	739	9,993
<i>The Journal of Business Venturing</i>	705	13,139
<i>Small Business Economics</i>	298	7,096
<i>International Entrepreneurship and Management Journal</i>	298	6,15
<i>Journal of Small Business Management</i>	256	4,544
<i>Journal of Business Research</i>	143	10,969
<i>Journal of Small Business and Enterprise Development</i>	113	4,05
<i>International Journal of Entrepreneurship and Small Business</i>	83	1,5
<i>Journal of Developmental Entrepreneurship</i>	80	1,197

Notes: This table shows the frequency of publications in journals with impact factor

### 3.3 Countries with the highest contribution and trend.

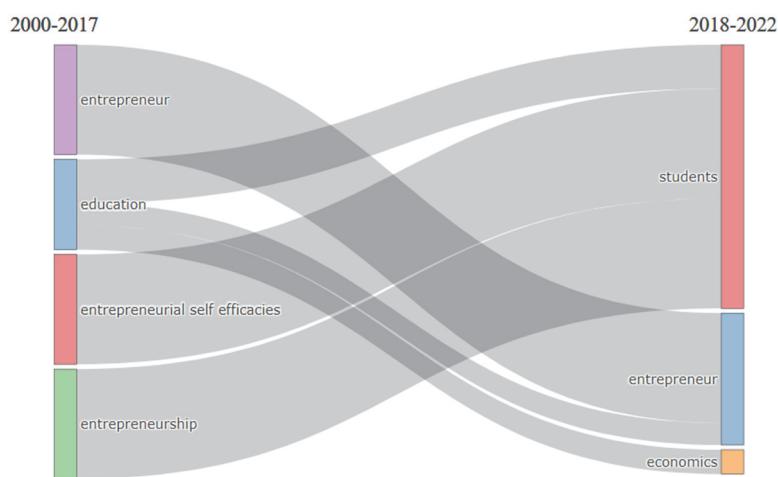
Figure 3 shows that the countries with the highest incidence of publication is Malaysia with a representativeness of 11% among the 17 highest scores in the Scopus database, followed by Spain with 10% and India with 8%. At the level of America, the United States stands out with 15 publications, while in Colombia it presents 7 publications, establishing itself with 4% of the analysis group. The publications have a greater predominance in the English language with 97.46%; otherwise in Spanish there are only 6 publications.



**Figure 3:** Countries with the highest contribution in scientific publications

**Notes:** The graph represents the countries that provide the most publications on the subject of study.

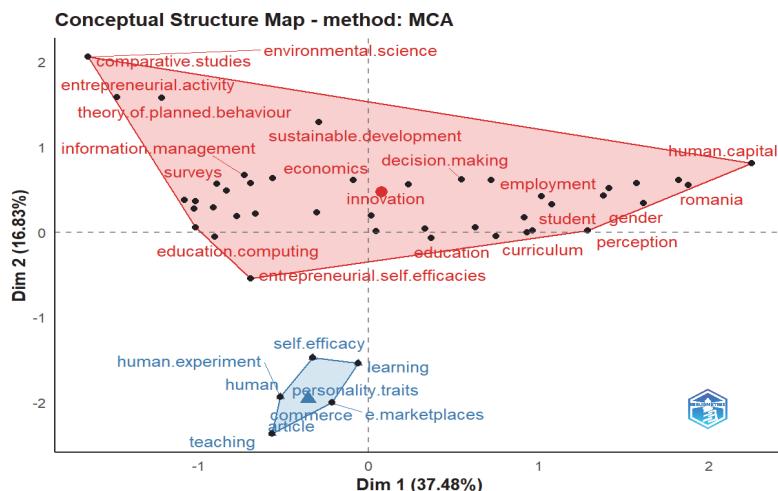
In order to analyze the trend and evolution in the field of entrepreneurship, Figure 4 for the period 2000-2017 is presented, which reflects an evolution of entrepreneurship in the field of education and this, in turn, linked to the economic subject.



**Figure 4:** Trend of publications in the study area

**Notes:** The trend by periods of the study variables

The conceptual structure allows observing a first evolution of the subjects (Zhang et al., 2015; Van Eck and Waltman, 2007). In the bibliometrix analysis tool, two clearly established dimensions are presented, conforming the first to determinants of innovation, employment, behavior, sustainable development, economy, market decisions, education, and in dimension two there is personality, commerce, learning, teaching, and self-efficacy. Figure 5.



**Figure 5:** Knowledge trends

**Notes:** The figure represents the dimensions and trend factors of the study topic

### 3.4 Cluster-delimited subtopics

In the cloud of words, more recurrent terms are observed that allow to focus the tendencies of a new knowledge, for the analysis, it was designed in R studio under the bibliometrix code, which determined 3 clusters divided into: central axis of the investigation, keywords of authors and similar titles. Table 4, where it allows to determine information associated with each other, which groups documents under a shared area being entrepreneurship, entrepreneurial intention, and determinants. From there, 5 documents are chosen from each category to demonstrate that each publication has a significant relationship with the factors being studied.

**Table 4:** Information cluster

Cluster	Criteria	Documents	Word Cloud
1	Central Axis of Research	Biswas, A. y Verma, R. (2021) Arshad et al. (2020) Dimitrov et al. (2019) Scheiner, C. (2009) Busenitz, L. y Barney, J. (1997)	
2	Author keyword	Romaní et al. (2022) Nowiński et al. (2017) Pittaway, L. y Cope, J. (2007) Oosterbeek et al. (2010) Karimi et al. (2014)	
3	Similar titles	Fornell, C. y Larcker, D. (1981) Popescu et al. (1989) Lee, S. y Peterson, S. (2000) Smilor, R. (1997). Carter et al. (2003).	

Notes: This table displays the conformed clusters for trend analysis.

Within the analysis of the tree of science studied, it is detected that there are 8.3% of root documents provide the structure of the investigations related to determining entrepreneurial intent. In the studies considered as trunk they correspond to 41.7%, otherwise for those who are considered leaves, there is a trend of publications that refer to them in 50%.

In the word cloud, more recurrent terms such as intention, determinant, behavior, human perception, sustainability, self-efficiency, and education, among others, are observed. Continues to be a key theme in discussions on entrepreneurial intent and determining factors, implying that research is being conducted. It is noted that students are an essential source of entrepreneurial activity and that successful businesses will emerge as their behavior and education evolve.

#### 4. Conclusions

The growing number of published scientific articles shows that the determining factors of entrepreneurship is a current and important topic for researchers worldwide. Based on a more rigorous existing database, the study identifies attitude, learning, behavior, economic growth, business education, value creation, incubation resources, personality traits and entrepreneurial intention as the main determinants of entrepreneurial intention.

Through the tree of knowledge, it is determined that the study of the factors influencing entrepreneurship begins in 1943. Identifies the most prominent scientists in the scientific network based on the author's renown with the most publications, this is based on the number of times it has been mentioned in other studies, making it the most influential in the topic of Ajzen (1991) and Krueger's et al. (2000). entrepreneurial intent. According to the most relevant journals, Entrepreneurship Theory and Practice has a factor of influence of 9.993 and an h-index of 196. Malaysia has the highest concentration of publications, followed by Spain; on the other hand, South America exhibits Colombia's growth in this research topic. The language used for this type of study is English as it is considered a universal language.

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