
THE QUANTIFIABLE IMPACT OF 2007–2022 ON STUDENTS' INTENTIONS TO BECOME ENTREPRENEURS AND THE IMPLICATIONS FOR RESEARCH AND START-UP ACTIVITIES

Nguyen Ngoc Long*

Industrial University of Ho Chi Minh City,
Vietnam

nguyenngoclong@iuh.edu.vn

Bui Thi Thuy Linh

Industrial University of Ho Chi Minh City,
Vietnam

tlinhk16iuh@gmail.com

Le Thi Kim Hoa

Industrial University of Ho Chi Minh City,
Vietnam

lenthikimhoa@iuh.edu.vn

Abstract

Utilizing bibliometric analysis, this study identifies academic gaps, research trends, and data pertaining to student entrepreneurial activities. The authors conducted a qualitative analysis of 984 selected studies from the Google Scholar database. Data that have been analyzed include trends in publishing years, the number of papers published, the number of citations, and frequently used keywords in research on students' intentions to start their own enterprises from 2007 to 2022. Additionally, by developing network visualizations, co-authorship network maps, and keyword co-occurrence network maps over a 15-year period (2007–2022), this study validates how well biometric analysis works. In this study, VOSviewer's mapping capabilities helped identify six clusters (a rise in study themes, hot themes, notable authors, eminent journals, publications, and primary research directions). The study's findings aid in directing future research into entrepreneurship and provide policymakers and directors with relevant takeaways for encouraging student entrepreneurship intentions.

Key Words

Entrepreneurial intention; bibliometrics; VOSviewer; entrepreneurship.

INTRODUCTION

Since it fosters innovation, increases job creation, and boosts labor market competitiveness, entrepreneurship is regarded as a significant contributing component and economic engine in any nation (Wennekers and Thurik, 1999). Consequently, many nations across the world have seen entrepreneurship as a strategic trend in recent years. Along with the young generation of entrepreneurs, institutions and colleges all throughout the nation are also seeing an increase in the entrepreneurial spirit. The National Committee for Vietnamese Youth reports that around 22.5% of Vietnam's population is under the age of 30, and 20% of them intend to launch their own business within the next five years (VAEFA, 2023). Thus, research on Vietnamese students' aspirations to launch their own companies is desperately needed.

Up until now, a number of scholarly studies have demonstrated factors affecting students' aspirations to launch their own companies, but they haven't provided a comprehensive examination of the entrepreneurship issues. In order to identify the common and unique traits as well as research gaps on students' entrepreneurial intentions, this study used a qualitative analytic approach called bibliometrics analysis of students' entrepreneurial intents, which is based on the Google Scholar database in the period 2007–2022. In addition, the authors offer a categorization framework that may serve as a foundation for further study and suggest some implications to encourage Vietnamese students' aspirations to pursue entrepreneurship.

The study will address three research questions in order to give an insight of the quantity and trends of research on students' entrepreneurial intentions worldwide from 2007 to 2022:

1. What is the present state of study on students' intentions to launch a business between 2007 and 2022?
2. What are the general features, particulars, and gaps in the body of knowledge about students' intentions to launch businesses?
3. In order to encourage Vietnamese students' entrepreneurial desire, what corresponding management implications are suggested?

As per the research questions, the study aims to: (1) Determine research trends on entrepreneurship over the last 15 years; (2) Identify prominent authors who have contributed to the field of entrepreneurship; (3) Determine the journals with the highest number of citations; (4) Identify key concepts in entrepreneurship research; (5) Identify popular topics; and (6) Identify primary research directions.

The theoretical framework, the implementation strategy, the research findings, and a discussion of the findings and suggested managerial implications will be the following sections of the paper.

FOUNDATIONAL THEORIES

Entrepreneurship Intention

According to Markman and Baron (2003), having an entrepreneurial aim enhances an individual's capacity to launch a firm and helps them develop into true entrepreneurs. Entrepreneurial intention refers to a person's organizational sense that results from their social environment, personal traits, and work ethic that values taking risks, being creative, being independent, and being autonomous in order to create new value for their firm (Van Gelderen et al., 2008; Engle et al., 2010; McIntyre et al., 2023).

Theory of Planned Behaviour (TPB)

The three antecedents that make up an individual's intention are their attitude toward the activity, their perception of behavioral control, and the subjective norm, according to the Theory of Planned Behaviour (TPB) of Ajzen (1991). Positive or negative behavior perceptions are implied by an individual's attitude. The term "subjective norm" describes how social pressure may affect how a given conduct is displayed. Aspects of the person's perceived ease or difficulty of behavior performance are reflected in their perceived behavioral control. Numerous research have demonstrated the impact of TPB model components on entrepreneurial intention (Lortie and Castogiovanni, 2015; Rosdi, 2015; Ayalew and Zeleke, 2018; Zaryab and Saeed, 2018; Yasir et al., 2021).

The Entrepreneurial Event Theory

According to Van Gelderen et al. (2008), attitude and perceived behavioral control factors from the theory of planned behavior are connected to the perceived desirability and perceived feasibility in Shapero Entrepreneurial Event Model (Shapero and Sokol, 1982). According to Shapero's entrepreneurial event model, displacement, perceived desirability, and perceived feasibility may truly influence entrepreneurial intention. Three elements-displacement, perceived desirability, and perceived feasibility are the three elements that Shapero's entrepreneurial event model argues can truly influence entrepreneurial intention. Lediania et al. (2023) stated that Shpero's theory further asserts that while intention is important, it is not sufficient for an action to be completed.

METHODOLOGY

A new qualitative research technique to look at the development of research activities on a particular study object was introduced by Pritchard's research (1969), which introduced the idea of bibliometric analysis. This methodology offers an all-encompassing perspective on a scientific field's development trend (Donthu et al., 2022). It is simple to find notable authors, important papers on the same subject, exceptional research trends, and future research trends with this strategy (Haba, Bredillet and Dastane, 2023). This approach, in particular, helps to reduce researchers' subjective evaluations and increases the objectivity of the study findings (Lim and Kumar, 2024). Another advantage of this approach is the development of some measures to assess the output, significance, or quality of published research, as well as the production of colorful and understandable visual maps of processed data (Punj et al., 2023; Yan et al., 2024). Our decision to employ a bibliometric study of students' entrepreneurial intentions throughout the 2007–2022 period stemmed from our clear comprehension of the aforementioned advantages. The purpose of our article's bibliometrics study is to find pertinent published papers (Zupic and Čater, 2015) and enhance our comprehension of how knowledge is distributed in a certain field. By offering data, analysis, and a general review of scientific articles on the same topic or certain unique features, it can assist reveal gaps and develop the study area (Kakouris and Georgiadis, 2016; Aparicio, Iturralde and Maseda, 2019). The papers that were indexed in Google Scholar and published in reputable scientific journals served as the source of the data for this research. The authors utilized the application management system "Publish or Perish" as a tool for gathering data. There are four phases involved in preparing the list of research publications on students' entrepreneurial intention for bibliometrics analysis:

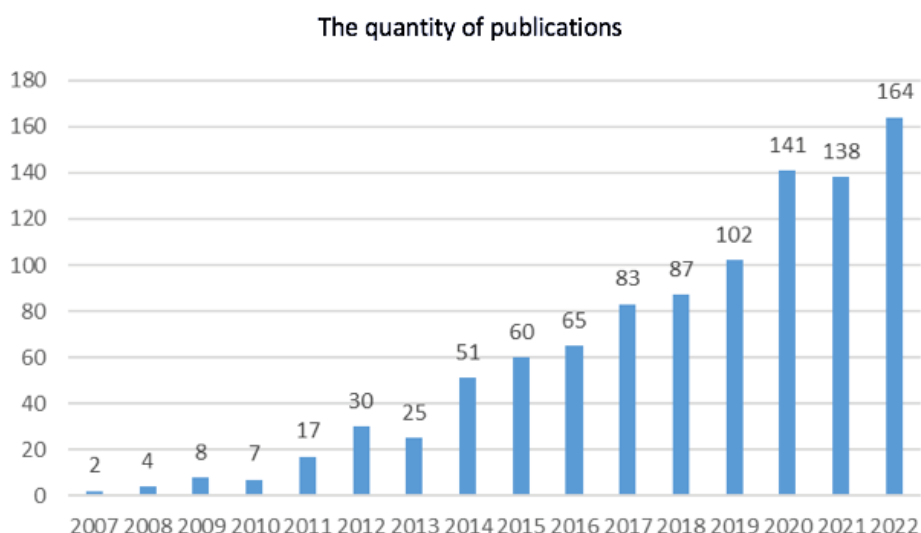
1. Identification: Using the query TITLE-ABS-KEY "entrepreneurial intention" AND "university student", the authors conducted the first search and retrieved data from Google Scholar starting at 13:00 on November 8, 2023.
2. Screening: The authors screened for inaccurate and missing data, as well as papers without abstracts, to make sure the chosen publications aligned with the study goals. One paper was removed overall.
3. Eligibility: Each article is now assessed, and those that include keywords but whose substance or research area are unrelated to the study's focus or those have been published more than once are eliminated. 14 items were removed as a result of this action.
4. Included: A total of 984 papers were chosen for the study.

RESULTS

Quantitative increase in academic research on students' entrepreneurial intentions between 2007 and 2022

A total of 984 scientific papers were found through the search that were deemed suitable for the research. With 164 articles published, 2022 is the year with the most contributions out of all of them, making up around 16.7% of the samples that were gathered. Of the samples gathered in 2020, 141 publications were obtained, representing 14.3% of the total. Subsequently, 14.0% and 10.4% of the total samples taken were from the years 2021 and 2019, respectively. 87 publications, or 8.8% of the total samples collected, were acquired in 2018. Just 83 articles, or 8.4% of the entire sample gathered, were published in 2017. There were two publications on this topic in 2007, making it the first year that they were published (0.2%). The data above indicates that since 2014, there has been a growth in the interest of researchers in this topic.

Figure 1: Publication distribution from 2007 to 2022



Analysis of citations

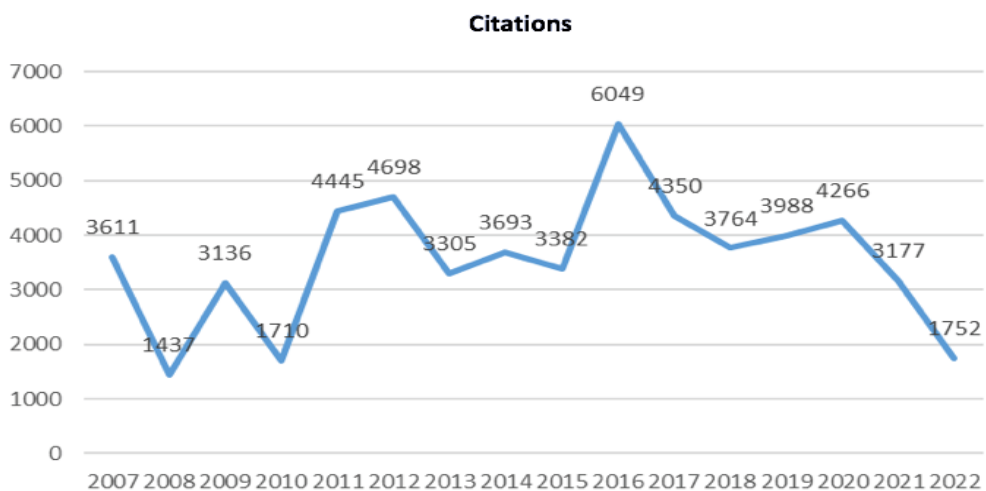
The first stage of the research trend (2007-2013): There were not many studies on students' entrepreneurial intentions at this point, with a maximum of 30 publications and a minimum of 02 publications published in a year (Figure 4.1). Research topics were also relatively limited, and there were not many authors researching in this field. Ninety-three studies were published in total throughout this time span (about 9.5% of the publications published between 2007 and 2022). Specifically, there were just two publications produced in 2007, but one of them (Souitaris at al., 2007) garnered over 3481 citations and receives over 210 citations annually, making it a fundamental paper.

The time frame garnering a lot of interest (2014 – 2018): In comparison to the preceding period, there was a notable rise in interest during this time, and the number of publications climbed gradually over time. Based on observations, more than 50 articles are published year, with 2018 being the

largest number of publications with 87. During this time, 346 works have been published overall, making up about 35.1% of all publications from 2007 to 2022. With 6049 citations (Figure 4.2) across 65 publications, 2016 has the most citations overall. The 2014 paper by Zhang et al., (2014) has 978 citations, making it the publication with the most citations throughout this time period.

A period of very stable and strong growth (2019–2022): During this time, scientific works were produced quite regularly, and the depth and perspective of the study were increasing. There have been 545 works published in total throughout this time, which makes up around 55.4% of all papers released between 2019 and 2022. In contrast, Figure 2 shows a progressive decline in the overall number of citations each year after 2020, despite the rising rise in articles. With 4266 citations, 2020 saw the largest number of citations received during this time; citations then steadily decreased until 2022. With 1752 citations overall, 2022 is the year with the fewest citations. Jena (2020) earned the most citations in 2022 (416 citations).

Figure 2: Trends of paper’s citations for year

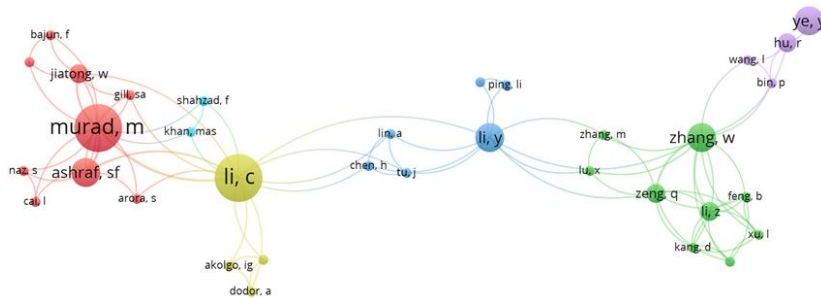


Author analysis

2003 authors have done research, according to author statistics from 984 linked publications in the Google Scholar database. Of them, 262 individuals produced two or more works, 159 contributed three or more, and 1,582 individuals submitted one scientific contribution. Majid Murad (Figure 3) has published the most works in this field of study, with a total of 5 papers in the sample that was gathered. A total of 54 publications written by 34 notable writers make up 5.5% of all the articles published in this topic, according to the statistics. This indicates that after fifteen years of development, the core

group of writers in the field of analyzing students' entrepreneurial intentions has evolved, while there is still room for improvement.

Figure 3: Bibliographic clustering of authors



Analyzing the sources

The publishers that have published the greatest number of scholarly articles on the subject of students' entrepreneurial intentions are listed in Table 1. The Emerald publisher with the highest number of publications (90) is ranked first. Among the ten papers that received the greatest number of citations, Elsevier published three, Emerald published three, Springer published two, Sage One published one, and Taylor & Francis published one. This demonstrates that these ten publishers are the ones who have released the most significant, esteemed, and important scientific studies in the entrepreneurial intention perspective.

Table 1: Top 10 publishers that released articles between 2007 and 2022 about students' entrepreneurship intentions

Item	Publishing houses	Number of articles
1	Emerald	90
2	ResearchGate	73
3	Elsevier	54
4	Springer	54
5	Academia	39
6	Frontiers	38
7	Taylor & Francis	33
8	MDPI	29
9	Sage	23
10	KoreaScience	23

Table 2: Top 10 journals that between 2007 and 2022 produced most studies on students' entrepreneurship intentions

Item	Journal title	Number of articles	Citations
1	Frontiers in psychology	36	1224
2	Education + training	18	1954
3	Sustainability	17	670
4	Journal of Innovation and Entrepreneurship	14	591
5	Asia-Pacific Journal of Business Venturing and Entrepreneurship	13	221
6	International Entrepreneurship and Management Journal	11	4845
7	Management Science Letters	10	350
8	The International Journal of Management Education	10	422
9	Journal of Global Entrepreneurship Research	8	1655

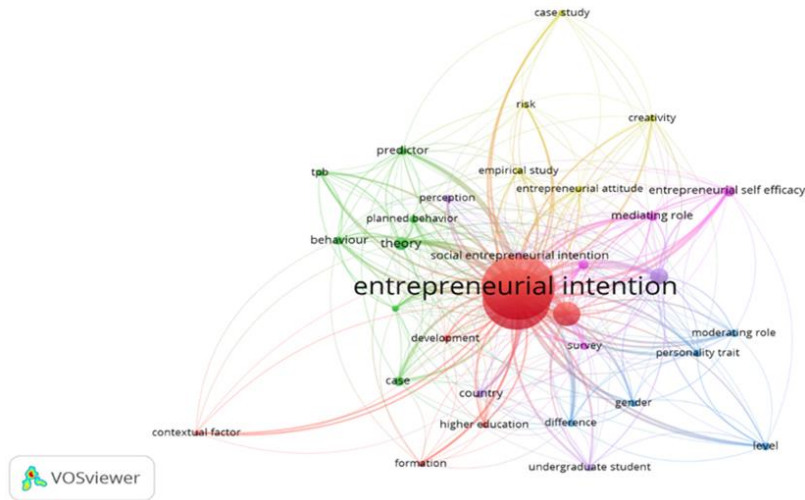
With 36 publications and a total of 1224 citations, the journal *Frontiers in Psychology* published the most articles (Table 4.2). Though it only publishes 12 articles, the *International Entrepreneurship and Management Journal* receives over 4 times as many citations as the journal *Frontiers in Psychology* (4845 citations). Furthermore, three of the top ten publications regarding students' entrepreneurial intentions with the most citations have been published in the *International Entrepreneurship and Management Journal*. This demonstrates that the journal is regarded as a trustworthy publication for research on entrepreneurship intentions.

Keyword analysis

Co-word Analysis and topic analysis

Distinct colors on the VOSviewer map correspond to distinct clusters, whereas the same color corresponds to the same cluster. Using the term "entrepreneurial intention" in VOSviewer, the mapping results are used to determine the number of clusters. A total of 308 nodes and 3475 links were created between the 33 detected keywords in 06 clusters that were constructed (Figure 4).

Figure 4: Cluster of keyword co-occurrence



Red cluster - Entrepreneurship education

There are seven keywords in Topic 1 (Red Network). Keywords associated with this cluster include contextual factor, development, education, entrepreneurial intention, formation, higher education, and university student. According to the graphic, one of the hotspots in student entrepreneurial intention research is entrepreneurship education, as seen by the red cluster that expands around the term "education" as a high-frequency phrase.

Green cluster – Theory of planned behavior (TPB)

With seven keywords, Topic 2 (green network) is the second biggest cluster. The theory of planned behavior (TPB) is used in six of the ten most widely cited studies on the entrepreneurial intentions of students. This demonstrates that TPB is a very important underlying theory for studies on students' entrepreneurship intentions. The most often used terms in research utilizing TPB background theory are behavior, case, planned behavior, predictor, subjective norm, and theory.

Blue cluster – Gender

Keywords that typically appear in topic 3 are difference, gender, level, moderating role, and personality traits. The phrase "gender" is an interesting phrase in studies on entrepreneurial intention of students in this color cluster.

Yellow cluster – Entrepreneurial attitude

The keywords case study, creativity, empirical study, entrepreneurial attitude and risk are associated with Topic 4 (yellow network). The yellow network is

displayed on the graph surrounding the term "entrepreneurial attitude" This indicates that the focus of this cluster is on how students see entrepreneurship (the attitude).

Purple cluster – Country

Topic 5 (purple network) is centered mostly on the term "country". Of all the keywords, this one appears the most frequently. In the purple cluster, perception, relationship, social entrepreneurial intention, undergraduate student are some of the other important phrases. The purple cluster specifically focuses on entrepreneurial intention and country characteristics.

Pink cluster – Entrepreneurial self-efficacy

The cluster known as Topic 6 (pink network) was established in the area of entrepreneurial intention using the notion of self-efficacy. Additionally, data, entrepreneurial self-efficacy, mediating role, and survey are the essential phrases in this cluster.

Visualizing the subject domain network of entrepreneurial intention using VOSviewer

Table 3: Statistics of keyword co-occurrence

No.	Keywords	Cases	Total link strength	No.	Keywords	Cases	Total link strength	No.	Keywords	Cases	Total link strength
1	Theory	63	117	8	Planned behaviour	28	70	15	Behaviour	22	34
2	entrepreneurial self-efficacy	52	58	9	Variable	26	37	16	Case study	22	31
3	Support	39	60	10	Gender	25	36	17	Undergraduate	22	31
4	Control	34	58	11	University student entrepreneurship	24	28	18	Creativity	22	30
5	Predictor	33	58	12	Culture	23	27	19	Subjective Norm	21	41
6	Country	32	40	13	Entrepreneurial orientation	23	29	20	Motivation	20	22
7	Social entrepreneurial intention	31	40	14	TPB	23	47				

The terms that appear most frequently in the research are displayed in Table 3. This feature illustrates the present state of scientific study on entrepreneurial intention, related subjects, and their linkages. Out of the 2786 keywords, 73 satisfied the predetermined criteria in this analysis.

The following are the co-occurring terms that appear most frequently: Theory (63), entrepreneurial self-efficacy (52), Support (39), Control (34), Predictor (33), Country (32) and several other frequently occurring keywords combine to generate representative phrases for the study area. The connection strength between the terms "Theory," "Planned Behavior," "Support," "Entrepreneurial Self-Efficacy," "Control," and "Predictor" ranges from high to low.

Figure 5: Map of keyword co-occurrence (78 terms, each with at least 10 appearances)

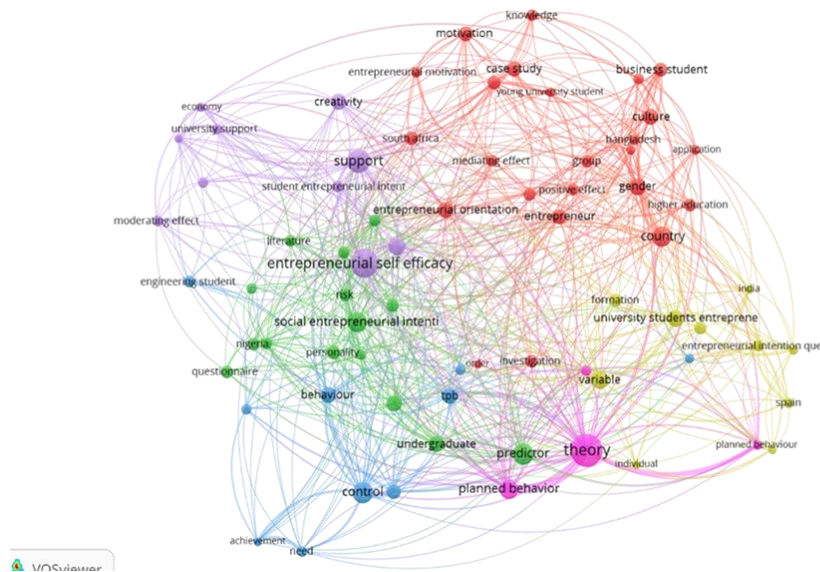
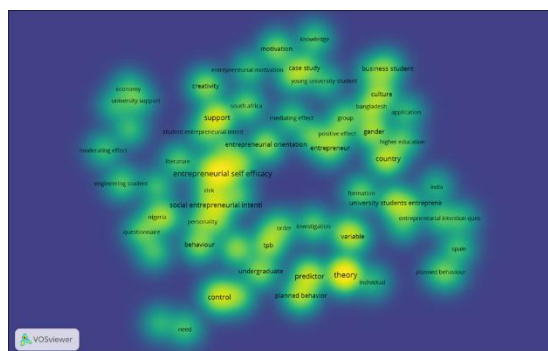
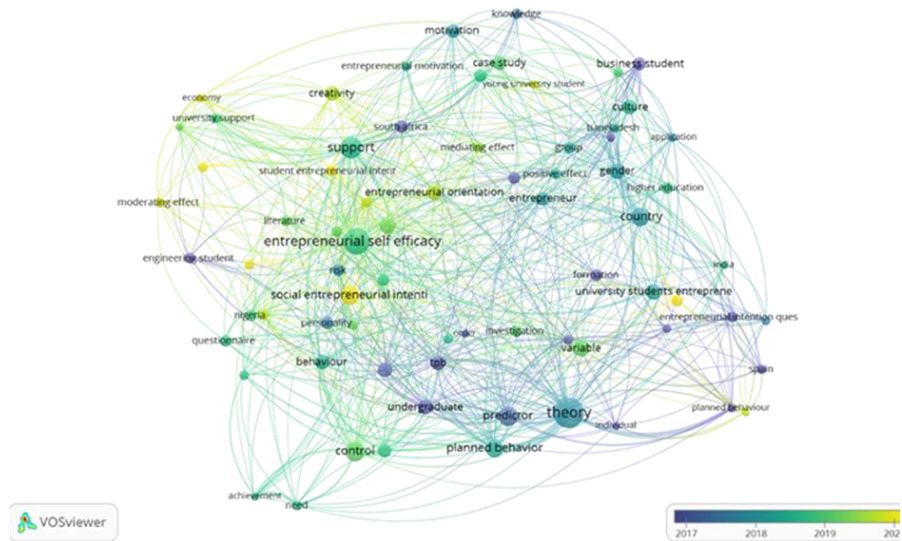


Figure 5 displays a total of 989 nodes across all the terms. The demographic issues of country, gender, culture, and education are included in Cluster 1 (red). Cluster 2 (purple) covers aspects related to entrepreneurial self-efficacy, support, education, and creativity. Topics on social entrepreneurial, predictors, as well as relating risks are included in Cluster 3 (green). Topics including intention, behaviour, subjective norms about entrepreneurship or the TPB theory of entrepreneurial intention are included in Cluster 4 (blue). Cluster 5 (pink) represents topics focusing on theory, the theory of planned behavior (TPB) affecting students' entrepreneurial intentions. Cluster 6 (yellow) covers study forms and factors influencing students' entrepreneurial intentions.

Density map of topic analysis

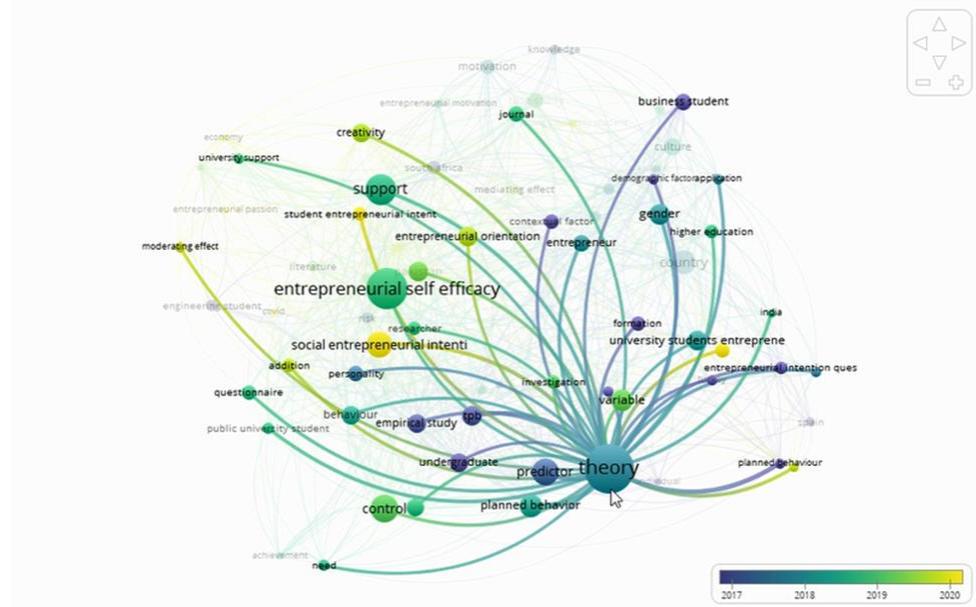
Figure 6: Density map of the keyword for entrepreneurial intentions





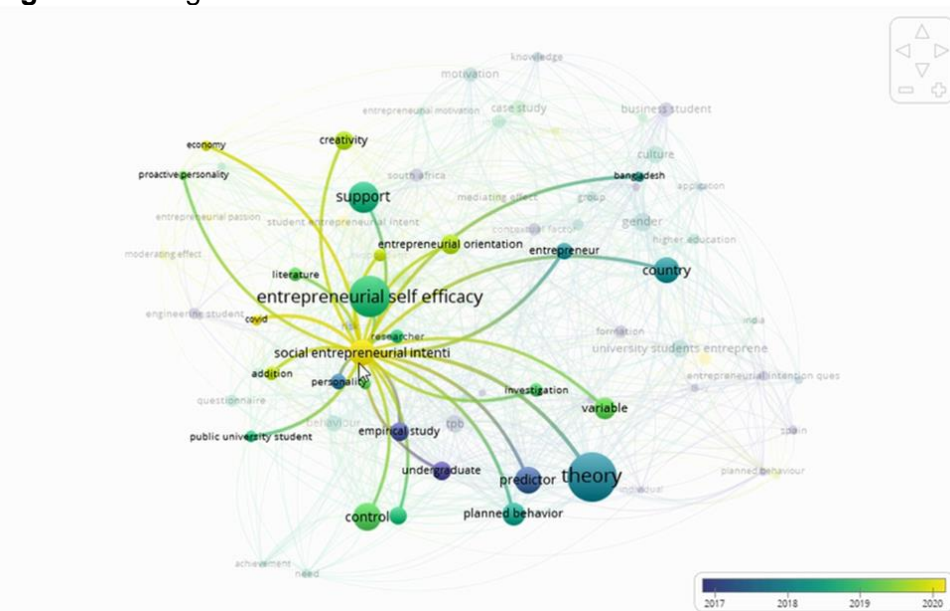
The diagram for the cluster network is shown in Figure 4.8. There is a link between two or more terms in each cluster (Maryanti *et al.*, 2023). The first blue cluster denotes the time frame spanning from 2017.0 to 2017.5. The network diagram's arrangement reveals that "Predictor" is the most often used phrase in relation to entrepreneurial intention (average year of publication: 2017.33, relationship strength of 58, 33 occurrences). The likelihood that a startup concept will succeed is determined in part by predictive criteria.

Figure 9: Diagram 2 of a cluster network



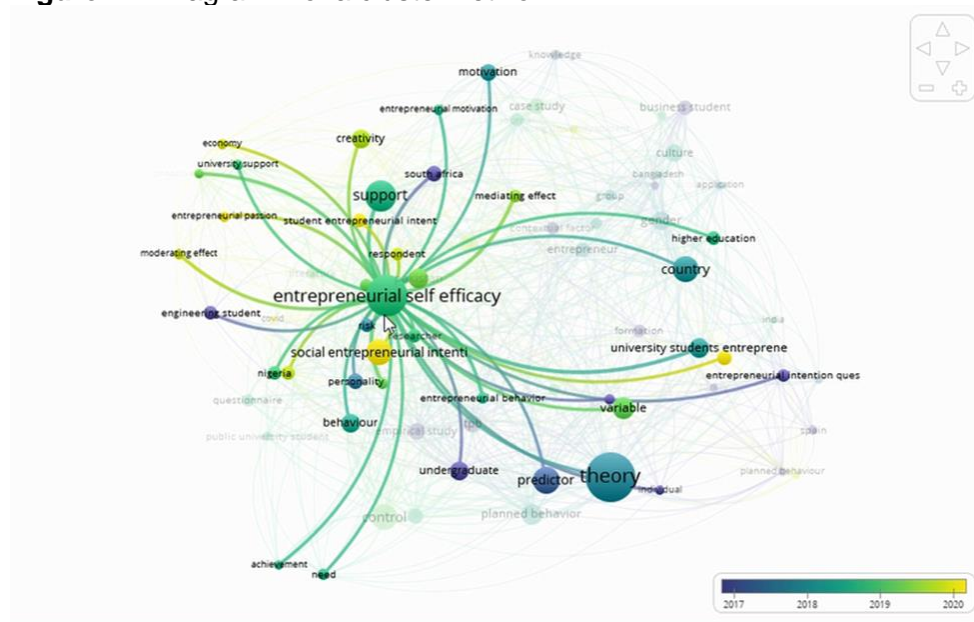
The diagram 2 of a cluster network, as illustrated in Figure 9, indicates that "theory" is the most cited term during this time, with 63 occurrences, an association strength of 118, and an average year of publication of 2017.86. Due to the wide range of theoretical foundations that have been explored and utilized in this field of study, the word "theory" is most frequently referenced in this section. The two most popular theories are Shapero and Sokol's (1982) event model of entrepreneurship and Ajzen's (1991) theory of planned behavior (TPB). According to Zaremohzzabieh et al. (2019), these two theories have been the cornerstones of many studies' investigations (e.g. Branchet et al., 2017; Hockerts, 2017; Jie and Harms, 2017; Osorio et al, 2017; Trivedi, 2017; Basit et al., 2018).

Figure 10: Diagram 3 of a cluster network



The network map of cluster 3, Figure 10, shows that "social entrepreneurial intention" is the most popular subject (31 occurrences, link strength 40, average publication year: 2020.00). During that period, it was also the phrase that received the most citations. Due to the processes of globalization and economic growth, urbanization, and income differentiation, the gap between the rich and the poor across population classes has widened (Tiwari et al., 2017). Social entrepreneurial intention has been shown to be an important factor contributing to promoting the economy (Stoica, Roman and Rusu, 2020; Buhalis, 2022; Scuotto et al., 2022). Furthermore, diseases, natural catastrophes, and abrupt changes in the environment have a detrimental impact on the lives of people from a wide range of socioeconomic backgrounds, particularly the most vulnerable. These problems encourage the emergence of social entrepreneurial intentions, which are defined as commercial endeavours motivated by social concerns (Huda et al., 2019).

Figure 11: Diagram 4 of a cluster network



With 52 occurrences, 51 link strength, and an average publication year of 2018.81, "entrepreneurial self-efficacy" is the most popular and often referenced phrase in cluster 4 of Figure 11, which has a noticeable green node. "Entrepreneurial self-efficacy" has become a primary psychological notion in entrepreneurial intention research, and several studies on undergraduate and graduate students have examined this concept (Newman et al., 2019). Additionally, it has been demonstrated that "subjective norms"—such as having an entrepreneur in the family or an entor assistance—and individual differences—such as gender, personality, and drive for achievement—have an impact on entrepreneurial self-efficacy (Christensen et al., 2023).

DISCUSSION AND MANAGEMENT IMPLICATIONS

Using Harzing's Publish & Perish tool, this study gathered 984 high-quality documents published between 2007 and 2022 from the Google Scholar database. The obtained documents were analyzed using quantitative techniques. Here are some compelling research results from our investigation. Firstly, there has been a steady increase in the number of published works covering students' entrepreneurial intentions over the period of 2007–2022, with studies on this topic seeing the largest growth in citations in 2016, and the number of academics and authors investigating this topic has also increased over time. Secondly, authors are regarded as major authors if they have two or more publications (Murad has the most publications, with five). Thirdly, the journal with the greatest number of

articles in this discipline is *Frontiers in Psychology*; on the other hand, the journal with the most citations is *International Entrepreneurship and Management Journal*. It is surprising that prestigious entrepreneurial publications like *Entrepreneurship Theory and Practice*, *Strategic Entrepreneurship Journal*, etc. are not included in this study's rankings. This indicates that prominent entrepreneurship journals may not have paid enough attention to the issue of research on students' entrepreneurial intentions. Fourthly, a total of six study themes have been identified regarding students' entrepreneurial intentions, which include: 1/ Entrepreneurship education, 2/ Theory, 3/ Gender, 4/ Entrepreneurial attitude, 5/ Nation and. 6/ Self efficacy. Fifthly, four hot themes in this sector from 2017 to 2020 are shown by the overlay visualization results: theory, predictive variables, self-efficacy, and social entrepreneurship intention. Sixthly and last, the density visualization findings indicate that there are now two primary research directions: studies on the self-efficacy of students who are exhibiting entrepreneurial intentions, and studies on theoretical research to explain students' entrepreneurial intents.

Based on the aforementioned findings, this study has provided a thorough and extremely methodical response to the original research questions. First, there has been a consistent rise in the number of studies on entrepreneurship throughout time, and the pattern (Figure 1) indicates that this trend may continue in the years to come. Second, the primary areas of interest for entrepreneurship research in this period include self-efficacy, attitudes, gender, and nations, as well as entrepreneurship education and behavioral intention theories. This demonstrates the multitude of significant facets that startup research between 2007 and 2022 has failed to address (e.g., business lines, variations in the qualifications of entrepreneurs). Additionally, studies on entrepreneurial intention during this time have not taken into account the role of startup funding, a factor believed to be important in startup activities (Cavallo et al., 2019).

Managerial implications

On the one hand, the study's findings have given researchers several ideas for other research projects in future. First, despite a decline in citations recently, research on students' entrepreneurship intentions still has a lot of untapped potential and receives substantial attention from academics and industry professionals. Second, the study's findings demonstrated how uncommon it is for academics to have four or more research publications. Therefore, in order to completely comprehend this field of study, academics must do more in-depth research on a wide range of entrepreneurship-related issues. Third, there is a lack of research on students' entrepreneurial intentions in some well-known publishers (Inderscience, Wiley, for example) and in some prestigious journals (*Entrepreneurship Theory and Practice*, *Entrepreneurship and Regional Development*, etc.). To encourage academics to do high-quality, in-depth research on students' entrepreneurial purpose, publishers or researchers could offer research call programs that focus on student entrepreneurship subjects or specific challenges. In

addition, related topics and keywords reveal that research on students' entrepreneurial intentions still has many gaps that require further investigation. The function of investment funds and startup money is still disregarded, the basic theories of entrepreneurship connected to technological platforms are few, and a noteworthy topic—entrepreneurship restart—was left out of the 2007–2022 research period. To close these gaps in the future, researchers must carry out further studies.

On the other hand, according to research findings, students' entrepreneurial intention is significantly influenced by entrepreneurship education, entrepreneurial self-efficacy, gender, entrepreneurial attitude, and national cultural characteristics. These findings may have policy implications that policymakers should consider. The final question posed in the study's first section is likewise addressed by these managerial recommendations and ideas provided for academics above. First, in order to change public perceptions of student entrepreneurship, the government should, as suggested by Sukumar et al. (2021), develop communication strategies and initiatives to honor students who have founded profitable enterprises or who have come up with innovative startup concepts.

Second, by offering career guidance and inspiration through seminars, talks, and consultations, educational institutions and staff members may help students realize the importance of entrepreneurship for themselves. Additionally, curriculum development, skill enhancement, and knowledge expansion should be used to spark students' imaginations and boost their self-esteem, assisting them in becoming more aware of and interested in the world of business, as well as to strengthen their own capacity to launch a venture. Otherwise, as recommended by Ljubotina and Vadnjak (2023), universities should also encourage students from business-oriented families to actively participate in entrepreneurship activities and families with a business tradition should also collaborate with entrepreneurship education institutions to share real-world experiences.

Third, in order to enable students to engage and study whenever and wherever they want, educational institutions must provide user-friendly learning platforms like machine learning for startups, virtual learning materials, and electronic learning materials.

Fourth, in order to plan startup exchanges that are appropriate for each student group, universities that offer both economics and non-economic degrees must establish connections with businesspeople.

Limitations and future research directions

This research is still subject to certain limitations. At first, this study's data came from a single data source (Google Scholar). Retrieving data from the Google Scholar database has certain drawbacks, such as the inability to filter data by publishers or eliminate less respectable journals or subpar research papers. Consequently, the vast amount of information available on Google Scholar may obscure papers or respected publications about entrepreneurship, such as *Entrepreneurship Theory and Practice*, *Entrepreneurship and Regional Development*, etc., from our search results.

Due to this flaw, the study findings in the paper can be slightly skewed. Future research may try to gather information from more sources, such as the Web of Science or Scopus databases.

Second, the analysis does not take into consideration the bias of previous studies or distinguish the environment in which a particular citation was created, even when more recent research may have made important contributions. The context and methods for evaluating study quality should be carefully considered in future research. Third, only numerical indications are the subject of this investigation. Citation counts alone as a metric of journal performance can be deceptive (Sukumar et al., 2021). Thus, more research using different measures might provide more details on the relative reach and strengths and shortcomings of a journal. Fourth, the study was unable to identify the main drivers and reasons of the increase in publications about the goals of entrepreneurs. Further research endeavors ought to probe more thoroughly into the causes and motivators behind the remarkable surge in student studies on entrepreneurial purpose. Further studies could explore the relationship between technology applications and entrepreneurship in more detail, taking into account variables such as technological accessibility, contextual factors (such as opportunities, perceived government support, and recent economic and market awareness), and social factors (such as previous experience and role models) to see how these factors affect students' propensity for entrepreneurship. Conducting cross-national empirical research in the future ought to be intriguing.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179–211.
- Aparicio, G., Iturralde, T., & Maseda, A. (2019). Conceptual structure and perspectives on entrepreneurship education research: A bibliometric review. *European research on management and business economics*, 25(3), 105–113.
- Ayalew, M. M., & Zeleke, S. A. (2018). Modeling the impact of entrepreneurial attitude on self-employment intention among engineering students in Ethiopia. *Journal of Innovation and Entrepreneurship*, 7(1), 1–27.
- Basit, A., Sing, M., & Hassan, Z. (2018). Factors affecting entrepreneurship intention among the students in private sector of Malaysia. *International Journal of Education, Learning & Training*, 3(2), 42–64.
- Branchet, B., Boissin, J.-P., & Hikkerova, L. (2017). Modeling entrepreneurship intentions: an essay of typology'. *Management international*, 21(2), 109–122.
- Buhalis, D. (2022). *Encyclopedia of Tourism Management and marketing*. Edward Elgar Publishing Northampton, USA.
- Cavallo, A. et al. (2019). Fostering digital entrepreneurship from startup to scaleup: The role of venture capital funds and angel groups. *Technological Forecasting and Social Change*, 145, 24–35.
- Christensen, B. T. et al. (2023). The design entrepreneur: How adaptive cognition and formal design training create entrepreneurial self-efficacy and entrepreneurial intention. *Design Studies*, 86, 101181.
- Donthu, N. et al. (2022). Mapping of journal of services marketing themes: a retrospective overview using bibliometric analysis. *Journal of Services Marketing*, 36(3), 340–363.

- Engle, R. L. et al. (2010). Entrepreneurial intent: A twelve-country evaluation of Ajzen's model of planned behavior. *International Journal of Entrepreneurial Behavior & Research*, 16(1), 35–57.
- Van Gelderen, M. et al. (2008). Explaining entrepreneurial intentions by means of the theory of planned behaviour'. *Career development international*, 13(6), 538–559.
- Haba, H. F., Bredillet, C., & Dastane, O. (2023). Green consumer research: Trends and way forward based on bibliometric analysis. *Cleaner and Responsible Consumption*, 8, 100089.
- Hockerts, K. (2017). Determinants of social entrepreneurial intentions. *Entrepreneurship theory and practice*, 41(1), 105–130.
- Huda, M. et al. (2019). Towards cooperative with competitive alliance: Insights into performance value in social entrepreneurship. Creating business value and competitive advantage with social entrepreneurship, 294–317.
- Jena, R. K. (2020). Measuring the impact of business management Student's attitude towards entrepreneurship education on entrepreneurial intention: A case study. *Computers in Human Behavior*, 107, 106275.
- Jie, S., & Harms, R. (2017). Cross-cultural competences and international entrepreneurial intention: A study on entrepreneurship education. *Education Research International*. Hindawi.
- Kakouris, A., & Georgiadis, P. (2016). Analysing entrepreneurship education: a bibliometric survey pattern. *Journal of global entrepreneurship research*. Springer, 6, 1–18.
- Lediana, E. et al. (2023) Sustainable Entrepreneurial Intention of Youth for Agriculture Start-Up: An Integrated Model. *Sustainability*, 15(3), 2326.
- Lim, W. M., & Kumar, S. (2024). Guidelines for interpreting the results of bibliometric analysis: A sensemaking approach. *Global Business and Organizational Excellence*, 43(2), 17–26.
- Ljubotina, P., & Vadjal, J. (2023). Career Decisions in the Mediterranean: To Be or Not to Be an Entrepreneur? *International Journal of Euro-Mediterranean Studies*, 16(2).
- Lortie, J. and Castogiovanni, G. (2015). The theory of planned behavior in entrepreneurship research: what we know and future directions. *International entrepreneurship and management journal*, 11, 935–957.
- Markman, G. D., & Baron, R. A. (2003). Person–entrepreneurship fit: why some people are more successful as entrepreneurs than others. *Human resource management review*, 13(2), 281–301.
- Maryanti, R. et al. (2023). A computational bibliometric analysis of science education research using VOSviewer. *Journal of Engineering Science and Technology*, 18(1), 301–309.
- McIntyre, N. et al. (2023). Investigating the impact of religiosity on entrepreneurial intentions. *Journal of Business Research*, 156, 113528.
- Newman, A. et al. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. *Journal of vocational behavior*, 110, 403–419.
- Osorio, A. E., Settles, A., & Shen, T. (2017). The influence of support factors on entrepreneurial attitudes and intentions of college students. *Academy of Management Proceedings*. Academy of Management Briarcliff Manor, NY 10510, p. 10901.
- Pritchard, A. (1969). Statistical bibliography or bibliometrics. *Journal of documentation*, 25, 348.
- Punj, N. et al. (2023). Mapping the field of green manufacturing: A bibliometric review of the literature and research frontiers. *Journal of Cleaner Production*, 138729.
- Rosdi, S. A. (2015). Understanding Entrepreneurial intention (EI): a case study of Lenggong Valley, Malaysia. *Advances in Environmental Biology*, 9(3), 43–45.
- Scuotto, V. et al. (2022). Extending knowledge-based view: Future trends of corporate social entrepreneurship to fight the gig economy challenges. *Journal of Business Research*, 139, 1111–1122.
- Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.

- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? *Journal of Business Venturing*, 22(4), 566–591.
- Stoica, O., Roman, A., & Rusu, V. D. (2020). The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. *Sustainability*, 12(3), 1186.
- Sukumar, A., Jafari-Sadeghi, V., & Xu, Z. (2021). The influences of social media on Chinese start-up stage entrepreneurship. *World Review of Entrepreneurship, Management and Sustainable Development*, 17(5), 559–578.
- Tiwari, P., Bhat, A. K., & Tikoria, J. (2017). Predictors of social entrepreneurial intention: an empirical study. *South Asian Journal of Business Studies. Emerald Publishing Limited*, 6(1), 53–79.
- Trivedi, R. H. (2017). Entrepreneurial-intention constraint model: A comparative analysis among post-graduate management students in India, Singapore and Malaysia. *International Entrepreneurship and Management Journal*, 13(4), 1239–1261.
- Wennekers, S. and Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small business economics*, 13, 27–56.
- Yasir, N. et al. (2021). The integrated role of personal values and theory of planned behavior to form a sustainable entrepreneurial intention. *Sustainability*, 13(16), 9249.
- Zaremohzzabieh, Z. et al. (2019). Predicting social entrepreneurial intention: A meta-analytic path analysis based on the theory of planned behavior. *Journal of Business Research*, 96, 264–276.
- Zaryab, A. and Saeed, U. (2018) 'Educating entrepreneurship: a tool to promote self employability', *International Journal of Entrepreneurship and Small Business*, 35(2), pp. 143–161.
- Zhang, Y., Duysters, G., & Cloudt, M. (2014). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International entrepreneurship and management journal*, 10, 623–641.
- Zupic, I., & Čater, T. (2015). *Bibliometric methods in management and organization. Organizational research methods*. Sage Publications Sage CA.