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A Bibliometric Analysis of Entrepreneurial Intentions among International Students

DOI: 10.7595/management.fon.2025.0003

Abstract:

Research Question: What is the contemporary academic literature on the entrepreneurial intentions of international students? What are the theories, modern approaches and research patterns in this field? **Motivation:** Although entrepreneurial intention – one of the best indicators for entrepreneurial activity – is a well-researched concept, the entrepreneurial intentions of international students have only recently started receiving attention. This is due to a significant increase in the proportion of international students in recent years. Understanding the entrepreneurial intentions of international students can provide valuable insights to policy-makers and practitioners in fostering entrepreneurship opportunities. Therefore, examining and highlighting the academic literature surrounding the field may facilitate future studies, which in turn can lead to more effective policies regarding international students' entrepreneurial issues. **Data:** Forty studies were identified and retrieved from different academic databases: EBSCO, Google Scholar, Scopus and Web of Science, with the keywords “international student” and “entrepreneurial intention”. Specific information on each study was extracted and further utilised for the analysis, such as author information, publication year, location, research methods and research themes. **Tools:** A bibliometric analysis was carried out, from which we learned the most important quantitative characteristics, and then we supplemented this with descriptive and evaluative analyses. **Findings:** Although the number of studies from the research indicates an academic gap, the increasing number of publications from recent years shows that scholarly interest in this field is growing. All studies on this topic were published after 2010. The research has revealed that the studies are diverse in terms of scope, discipline and methodology. Entrepreneurial education is the most often researched field, followed by gender issues, self-efficacy, and the other components of the Theory of Planned Behaviour, such as attitudes, subjective norms and perceived behaviour control. Overall, there are no differences between international and national research fields based on the nature of the variables included in the studies. **Contribution:** The paper provides a bibliometric analysis of publications dealing with international students' entrepreneurial intentions. It outlines the current research patterns and outcomes and identifies areas that require further research. The paper highlights the need for research into contextual issues such as the role of cultural and other differences between the home and host countries.

Keywords: entrepreneurial intention, international students, entrepreneurship, theory of planned behaviour

JEL Classification: L26

1. Introduction

The role of entrepreneurship, its benefits for individuals and local communities, as well as its contributions to the national economies are well documented in the academic literature (e.g., Carree & Thurik, 2005; Crudu, 2019; Doran et al., 2018; Ogunlana, 2018; Stoica et al., 2020). The interplay between entrepreneurship, economic growth and innovation ecosystems (Schwab, 2018; Hope, 2016; Anjum et al., 2020), the creation of new jobs, fostering trade, supporting regional cooperation, strengthening research and development efforts (Pradhan et al., 2020) and providing unique, innovative goods and services to the market are also often highlighted benefits in the literature in the context of entrepreneurship. In the light of these advantages, promoting entrepreneurship has become one of the most important policies for countries (Mahmoud & Muharram, 2014; Luthje & Franke, 2003; Toma et al., 2014).

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The increasing significance of entrepreneurship and heightened awareness towards its benefits have prompted researchers to explore the foundational aspects of the entrepreneurship discipline (Diaz-Garcia & Jimenez-Moreno, 2010), with a concurrent exploration of entrepreneurial intentions. As a precondition for actualisation, the intent to become an entrepreneur has become a vital and hot topic in academic discourse. A person's intention is the best indicator of the action itself (Ajzen, 1991; Akinwale et al., 2019; Elnadi & Gheith, 2021). Similarly, Tan et al. (2020) remark that understanding the methodical process that forms the intention is crucial to understanding the action. In this context, entrepreneurial intention can be explained as an individual's specific state of mind directing a person's efforts to establish a business (Shapero & Sokol, 1982; Tomy & Pardede, 2020). The academic literature is saturated with solid theories and contemporary research strands analysing entrepreneurial intention from various perspectives.

In recent years, the proportion of international students in OECD countries has kept increasing. In 2022, more than 1.9 million residence permits were issued to international higher education students in OECD countries (OECD, 2024). The increase in the number of foreign students is associated with an increasing number of studies aimed at them. International students are valuable assets to national economies due to the advantages they provide, such as niche product ideas, innovative business methods, unique ways of thinking, exploring untapped markets, cultural integration and development and heightened competition (Miotto et al., 2020). Although students' entrepreneurial intentions are a common research topic in the literature, the intentions of international students still need to be addressed. Our research contributes to filling this gap by reviewing the literature published on the topic. The primary goal of this research is to create a comprehensive academic review of the entrepreneurial intentions of international students. The study also aims to identify the research focuses of the articles and draw attention to the areas currently under-represented in the literature.

2. Conceptual Background

For an extended period, academics and scholars have primarily sought to comprehend the fundamental aspects of the concept of entrepreneurship (Galanakis & Giourka, 2017). Among the various research strands the intention to become an entrepreneur and the associated motivational factors have become significant areas (Hueso et al., 2021).

Understanding the aspects of entrepreneurial intention and the drivers of entrepreneurship may lead researchers to find ways that provide opportunities for meaningful intervention. As stated by van Gelderen et al. (2018), and Ajzen (1991), intention is one of the most reliable predictors of behaviour and examining it may help understand the fundamental entrepreneurship process. Anjum et al. (2020) describe entrepreneurial intention as "the process of seeking knowledge that can be used to attain a business drive" (p.3). Within this context, the tendency of an individual to start an enterprise often depends on their intent to become an entrepreneur.

The theory of Planned Behaviour, constructed by Ajzen (1991), is one of the most widely used models of entrepreneurial intention. In this model, an individual's intention to become an entrepreneur depends on three antecedents or cognitive variables: subjective norms, perceived behaviour control and attitude towards entrepreneurship (Ajzen, 1991; Diaz-Garcia & Jimenez-Moreno, 2010). These cognitive variables are crucial in shaping an individual's actions (Barba-Sanchez & Atienza-Sahuquillo, 2018). In this context, subjective norms represent the social pressure an individual experiences to engage in a specific action. Perceived behaviour control reflects how easily one can act, while attitude towards entrepreneurship pertains to an individual's commitment to establishing and running an enterprise (Diaz-Garcia and Jimenez-Morino, 2010; La Barbera and Ajzen, 2021).

3. Methodology

Bibliometric analysis has been utilised to thoroughly review the existing scholarly works on numerous academic databases within the field of entrepreneurial intentions of international students. As the primary goal of this study is to analyse pertinent academic studies within a specific disciplinary domain, bibliometric analysis can help with the process above by significantly limiting the bias while generating an overarching summary of the overall knowledge in a given field (Aliaga-Isla & Rialp, 2013). Bibliometric analysis is a quantitative research method that allows researchers to create a comprehensive and exhaustive analysis of a distinct academic discipline by searching for various keywords on different academic databases. The bibliometric analysis may include various information about the studies it analyses, such as author data, collaboration patterns, contemporary trends, research scopes, publication dates, publishing locations, and

keyword co-occurrence. To identify the scholarly works relevant to the inquiry, we used a modified version of the search protocol proposed by Fahimnia, Sarkis, and Davarzani (2015) during this research.

3.1 Data collection

Initial search efforts on various academic databases exhibited a need to incorporate rigid search criteria, which is necessary to exclude studies irrelevant to our research goal. In this context, three criteria were implemented into the database article search process: keyword choice, study types, and multidisciplinary.

Keyword choice is associated with using the most appropriate keywords to identify relevant studies on pre-decided academic databases. In this study, the keywords "entrepreneurial intention" and "international student" were chosen to reflect the goal of this paper. Different versions of the keywords, such as "entrepreneurship intention" and "international students", were also incorporated into the advanced search sections of databases to avoid missing any relevant studies. Although other aspects are also relevant to the topic (motivations, attitudes, mindset), we narrow down the keywords to the most common terms used in the literature to assess entrepreneurial willingness. Keywords were decided upon based on the authors' initiative after reviewing the relevant literature.

Although bibliometric analysis is mainly applied to book chapters and journal articles, focusing only on these aspects may inadvertently result in overlooking other studies, which may have similar value. Thus, we decided to include conference proceedings and theses in our literature search to make sure to include all critical relevant publications. We searched on different academic databases to identify relevant academic studies: EBSCO, Web of Science, Scopus, and Google Scholar.

Multidisciplinary was our last criterion. As stated previously, the studies associated with business and other disciplines were included in our bibliometric research to expand our perspective and gain new insights. Entrepreneurial intentions of international studies were quite a diverse academic field that attracted scholarly attention from various fields, such as finance, sociology, psychology, education, and even veterinary.

After determining the necessary criteria for selecting and identifying studies, associated keywords were searched on the databases above with the help of the Boolean operators "AND", "NOT", and "OR". The entire process was repeated three times to strengthen the reliability of the research and the validity of the search process on databases. Our search process yielded 65 results. However, many articles had to be excluded for various reasons, such as duplication, irrelevance, or different publication languages, which reduced the number of eligible studies to 40.

3.2 Data analysis

In order to reveal the quantitative and content characteristics of the papers, we extracted different types of information from each study in the bibliometric list. We recorded the necessary information in an Excel worksheet. First, we focused on bibliometric information, the title, author data, publication location, publication year, methodology, journal name, journals' quartile rank and number of citations at the time of data collection.

As a second step, we examined which factors the authors analysed in their structured models and what relationship they discovered (positive, negative, no relationship).

An iterative process was used in data analysis to eliminate any potential bias and increase the bibliometric search rigour. Each piece of data was examined twice to ensure validity and objectivity. Interpretive data analysis calls for repetitive checks to identify each research theme, pattern of results, definition and contemporary theory, which is employed in our bibliometric analysis (Miles & Huberman, 1994).

4. Entrepreneurial Intention of International Students – The Quantitative Approach

While the topic of entrepreneurial intention is a well-established and researched subfield of entrepreneurship, the low number of hits about international students' entrepreneurial intention indicates that this field has been largely overlooked by researchers. However, the fact that the majority of the papers were published after 2010 and in increasing numbers indicates that it is an area that has been little researched but is of

growing interest. Therefore, the examination of the entrepreneurial intention of international students from a bibliometric perspective may provide value added for the researchers of the topic.

4.1 Year of publication

As the first step, the year of publication was analysed. The concept of entrepreneurial intention has been on the radar of scholars since the late 20th century, yet academic studies that highlight the entrepreneurial intentions of international students are relatively scarce. However, the number of studies published annually shows that there is sustained interest in the topic. Figure 1 visualises the number of published articles on the entrepreneurial intention of international students over a 13-year period.

As shown in Figure 1, no studies were conducted on this topic before 2011 which provides evidence that the field of entrepreneurial intentions of international students is in its early stage. Awakening of academic interest in the field can be associated with the ever-expanding globalisation of the world and liberal economic policies established by various countries, which makes international entrepreneurship much more viable. Almost 42% of the studies were conducted recently (2020-2023), further strengthening the fact that the topic is garnering more attention. The years 2014, 2017, 2020, and 2021 stand out among others with the highest number of academic studies published. These four years account for 50% of the studies published in this field, making them the most productive quantitatively. The reason for the low value in 2023 is that the data collection was carried out in this year, so our statistics for that year are incomplete. The results also predict that we will see a growing interest in the topic in the coming years.

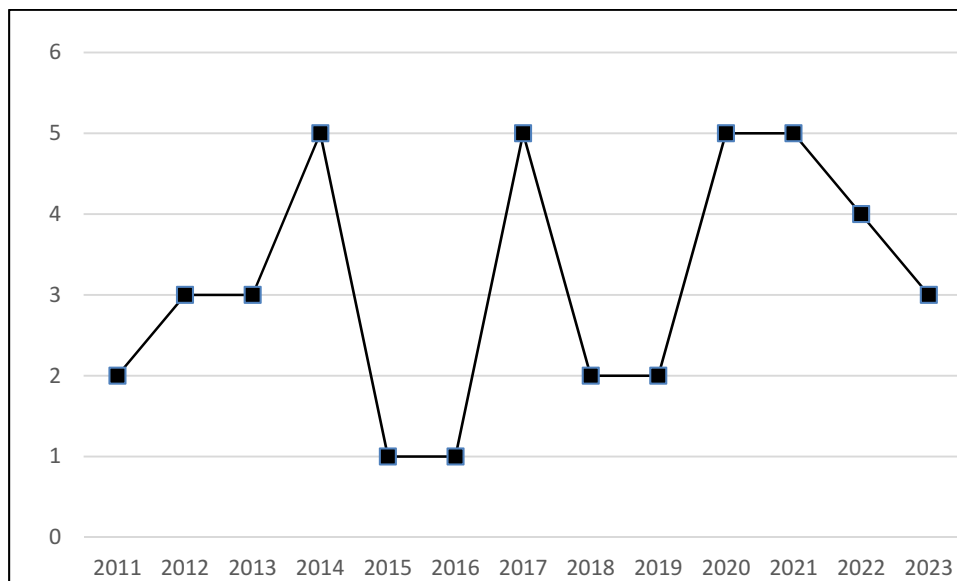


Figure 1: Number of articles published per year

4.2 Journal ranks

After the quantitative examination of the studies, we identified the academic journals that published the articles published on international students' entrepreneurial intention. Even though, in terms of its number, international entrepreneurial intention is a much less researched field than entrepreneurial intention research in general, it is noteworthy that the works that exist in this field were published primarily in prestigious scientific journals. Figure 2 shows the number of studies by academic quartile of the publishing journal.

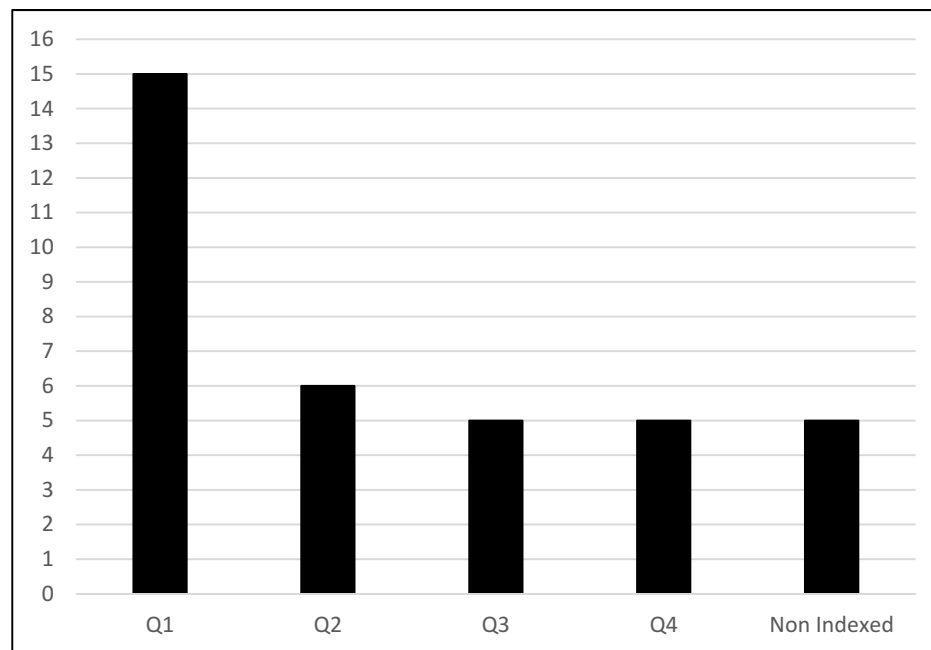


Figure 2: Number of articles by quartile of publishing journal

The majority of articles in the list were published in journals belonging to the top quartile. Our analysis shows that 15 articles (37.7%) were published in journals with a Q1 ranking. Six studies (15%) were published in Q2-ranked journals, while ten were distributed in Q3 and Q4 journals. Lastly, five studies, accounting for 12.5% of all studies, are in journals not ranked by SCImago Journal Rank.

Our bibliometric research identified 31 different journals, indicating that the field is not concentrated in specific groups of journals but instead spread around various academic circles. Some examples of journals that have chosen to publish articles on the topic are *Small Business Economics*, *Education and Training*, *Frontiers in Psychology*, and *Journal of Innovation and Entrepreneurship*. The research areas and scopes of these journals vary widely, which adds richness to the academic field. Figure 3 provides a visual representation of the journals' research scopes and the number of articles in each area.

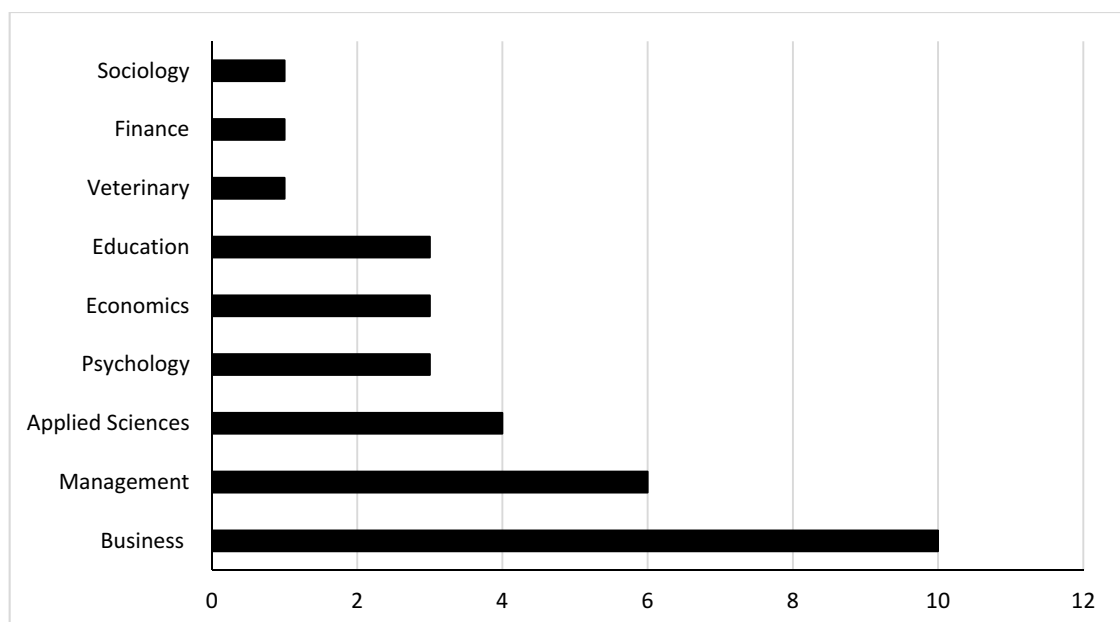


Figure 3: Number of articles per journal scope

The 31 journals cover nine distinct research areas. The areas were identified based on the journals' aim and scope section. Figure 3 shows that 25% of studies (10 articles) were published in business-oriented journals like the *Journal of International Entrepreneurship* and the *Journal of Global Entrepreneurship Research*. Management-focused journals like the *Journal of Management Analytics* and the *European Journal of Management* published six articles, followed by four from applied sciences journals like *Sustainability*.

Figure 3 highlights that the articles were published in journals with significantly diverse research scopes. Therefore, the entrepreneurial intentions of international students is a topic that draws attention not only from business disciplines but also from other academic areas, such as psychology and education.

4.3 Methodologies used by the authors

We reviewed the methodology the authors used. Examining the research methods can help gain new perspectives on existing literature and understand the extent of research activities. It can also help understand the scientific reasoning behind the studies and determine whether they follow inductive or deductive approaches.

Analysing the studies' methodologies revealed that quantitative research methods are more commonly used than qualitative ones. The results show that 84% of the studies (34 articles) used quantitative research methods. Among those, 31 used questionnaires, while three used secondary data. Only three studies (8%) used qualitative research techniques: two carried out in-depth interviews and one used a grounded theory approach. Finally, three studies employed mixed research techniques. Figure 4 illustrates the methodologies used by the studies.

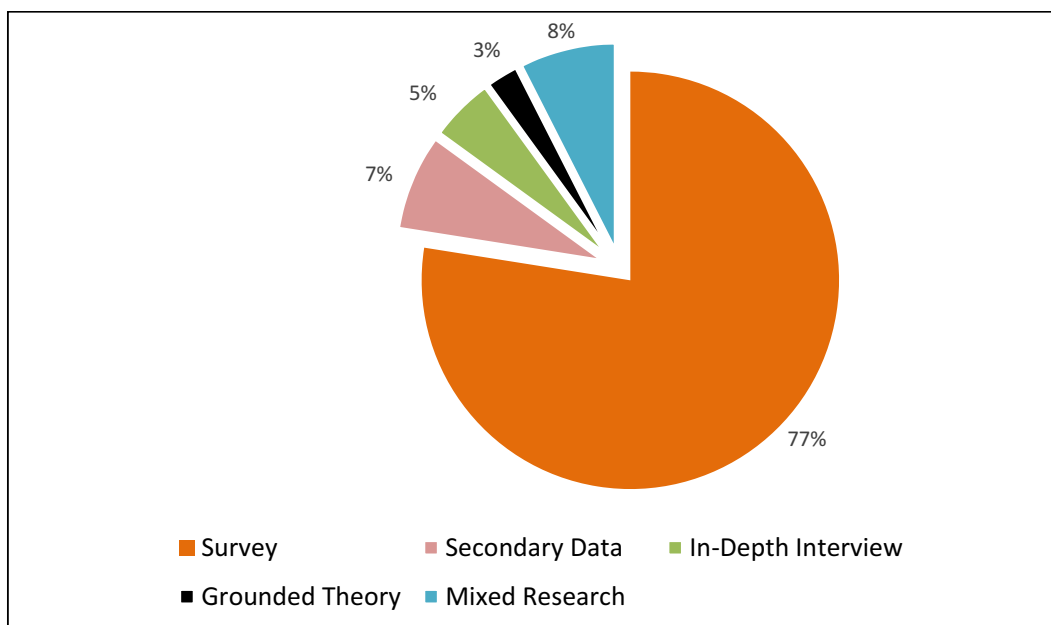


Figure 4: Research methods of the papers

The predominance of quantitative methods can be explained by an extensive use of well-established theories that can be approached most successfully on a quantitative basis. The theory of Planned Behaviour is widely observed among the studies, and most works focused on testing this theory. The articles typically follow deductive reasoning.

4.4 Location of the research

Examining the countries in which the studies are published can also highlight countries where researchers deliberately focus on international students' entrepreneurial intentions. In this sense, researchers in countries with better foresight regarding the entrepreneurial intentions of international students may prioritise creating and supporting commercial environments that foster entrepreneurial activities for international students.

Additionally, analysing where the studies are published may provide valuable insights into global trends and disparities in research output and academic engagement related to international students' entrepreneurial intentions. By identifying regions with significant contributions to this field, policymakers, and educational institutions can tailor initiatives and support mechanisms to enhance the entrepreneurial ecosystem for international students, ultimately fostering innovation and economic growth on a global scale. In this context, Figure 5 shows the number of studies published each year and their publication locations. In case of articles, the location identifies the country where the journal is being published. Regarding book chapters, the location is the country where the publisher's headquarters is located.

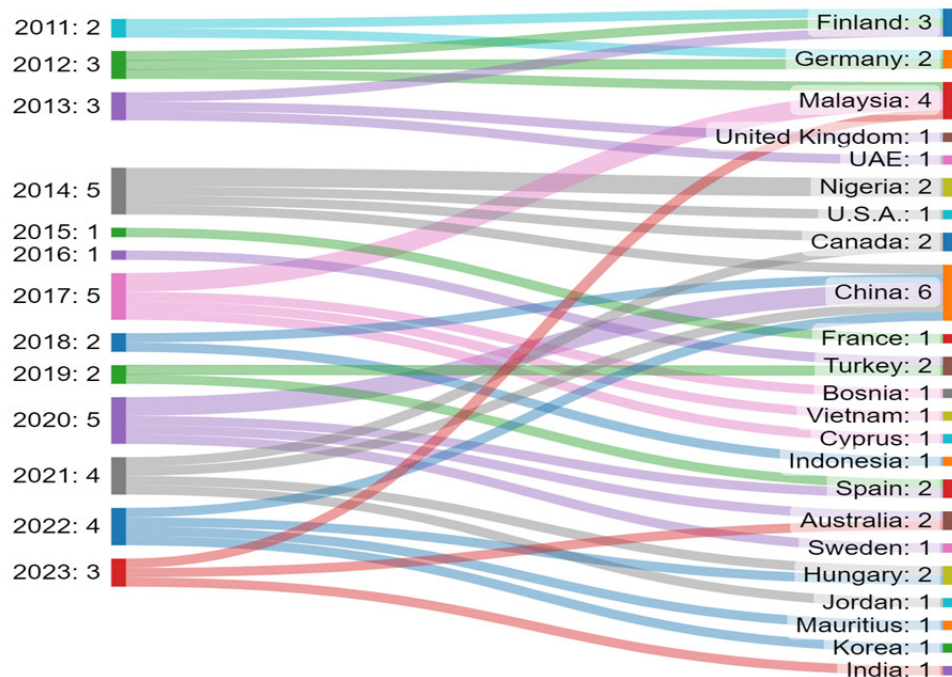


Figure 5: Alluvial diagram of publication years and locations

As shown in Figure 5, researchers in certain countries, such as China, Malaysia, Finland, Turkey, and Hungary, published more papers. In case of China, it is noticeable that the studies focusing on the entrepreneurial intentions of international students are evenly distributed across the years 2014 to 2022. Additionally, China leads in the number of studies, with six publications. China is followed by Malaysia, with four publications between the years 2012 to 2023. Conversely, three studies of Finland are concentrated between the years 2011 to 2013.

5. Entrepreneurial Intention of International Students – Main Research Directions

Entrepreneurial intentions among international students is an area of interest for scholars and researchers from various academic fields. The articles in this field usually have multidisciplinary characteristics, drawing theories, methods, and conjectures from different academic realms. The same observation can also be applied to the studies in our research. After thoroughly examining the articles, eight different research groups and numerous associated research themes were identified. Namely, these research groups are personal traits, personality factors, social environment, demographic factors, educational factors, economic environment, political environment, and the components of the theory of planned behaviour. Table 1 shows the research groups, their associated themes, and the number of articles that focused on those groups and themes.

Table 1: Research themes, groups and clusters

Clusters	Research Groups	Research Themes	Studies
Individual Factors	Personal Traits	Self-efficacy	Akolgo et al., 2018, Al-Ali, 2021, Chornidio, 2018, Nanere et al., 2020, Rasul et al., 2017, Shimoli et al., 2020, Sultana et al., 2020, Wan-Ismael et al. 2017, Wu et al., 2022, Zhang et al., 2022,
		Risk tolerance	Ammeer et al., 2021, Sultana et al., 2020, Yao et al., 2020
		Opportunity identification	Akolgo et al., 2018, Casas, 2015, Davey et al., 2011, Majumdar, 2013, Sultana et al., 2020,
		Need for achievement	Akolgo et al., 2018, Davey, 2011, Shimoli et al., 2020, Sultana et al., 2020
	Theory of Planned Behaviour	Perceived behavioural control	Al-Ali, 2021, Chowdhury et al., 2012, Etienne et al., 2014, Gieure et al., 2019, Mahmoud et al., 2014, Majumdar et al., 2013, Mao et al., 2021, Nanere et al., 2020, Nguyen, 2017, Sharma, 2023, Usman, 2016, Usman, 2019, Wan-Ismael et al., 2017
		Subjective norms	Usman, 2019, Nguyen, 2017, Etienne et al., 2014, llesanmibenga, 2017, Mahmoud et al., 2014, Usman, 2016, Al-Ali, 2021, Nanere et al., 2020, Chowdhury et al., 2012, Sharma, 2023, Gieure et al., 2019, Wan-Ismael et al., 2017, Sultana et al., 2020
		Attitude towards entrepreneurship	Usman, 2019, Nguyen, 2017, Etienne et al., 2014, llesanmibenga, 2017, Mahmoud et al., 2014, Usman, 2016, Al-Ali, 2021, Nanere et al., 2020, Chowdhury et al., 2012, Sharma, 2023, Gieure et al., 2019, Palalic et al., 2017, Majumdar et al., 2013, Wan-Ismael et al., 2017, Chornidio, 2018
	Personal Factors	Entrepreneurial experience/skills	Auwalu, 2014, Davey, 2011, Falck, 2012, Gieure et al., 2019, Majumdar et al., 2013, Palalic et al., 2017, Wu et al., 2022, Wu & Rudnak, 2021,
		Family background	Falck, 2012, llesanmibenga, 2017, Sultana et al., 2020, Wan-Ismael et al., 2017, Wu et al., 2022,
	Cultural/Social Factors	Social Environment	Social power
Language proficiency			Mao et al., 2021
Cultural cognition			Casas, 2015, Jannesari et al., 2022, Mao & Ye, 2021, Sultana et al., 2020, Wu & Rudnak, 2021, Yao et al., 2014, Yao et al., 2020,
Demographic Factors		Gender	Bakkar et al., 2021, Etienne et al., 2014, Feakes et al., 2023, Graham et al., 2021, Kakkonen, 2011, Majumdar et al., 2013, Nanere et al., 2020, Palalic et al., 2017, Wu & Rudnak, 2021, Yao et al., 2020,
		Age	Al-Ali, 2021, Bakkar et al., 2021, Etienne et al., 2014, Feakes et al., 2023, Majumdar et al., 2013, Wu & Rudnak, 2021,
		Nationality	Ammeer, 2021, Ao et al., 2014, Bernhofer et al., 2014, Davey et al., 2011, Etienne et al., 2014,
Educational Factors	Curriculum	Bernhofer et al., 2014, Casas, 2015, Graham et al., 2021, Kakkonen, 2012,	
	Entrepreneurial education	Al-Ali, 2021, Ao et al., 2014, Bernhofer et al., 2014, Chowdhury et al., 2012, Davey et al., 2011, Falck et al., 2012, Gierure et al., 2019, Graham et al., 2021, llesanmibenga, 2017, Majumdar et al., 2013, Mao & Ye, 2021, Nanere et al., 2020, Rae et al., 2013, Usman, 2019, Wan-Ismael et al., 2017, Wu & Rudnak, 2021, Zhang et al., 2023,	
	Studying abroad	Casas, 2015, Feakes et al., 2023, Kakkonen, 2011, Nanere et al., 2020, Pinto, 2020, Wu & Rudnak, 2021,	

Clusters	Research Groups	Research Themes	Studies
Economic/Political Factors	Economic Environment	Social networks	Mao & Ye, 2021, Wu & Rudnak, 2021
		Socioeconomic status Personal	Ilesanmighbenga, 2017, Jannesari et al., 2022, Yao et al., 2020
		Socioeconomic status Country	Akolgo et al., 2018, Bakkar et al., 2021, Bernhofer et al., 2014, Davey et al., 2011, Ilesanmighbenga, 2017, Palalic et al., 2017,
	Political Environment	Governmental support	Al-Ali, 2021, Ao et al., 2014, Auwalu, 2014, Bakkar et al., 2021, Bernhofer et al., 2014, Zhang et al., 2023,
		Laws & regulations	Akolgo et al., 2018, Auwalu, 2014, Bakkar et al., 2021, Bernhofer et al., 2014, Falck et al., 2012, Graham et al., 2021,

As highlighted in Table 1, specific research themes are much more common among the studies within the field than others. Specifically, topics such as self-efficacy, components of the Theory of Planned Behaviour, entrepreneurial education, and gender often emerge as some of the most extensively researched topics in the studies of the analysis.

Seventeen studies (42% of all studies) analysed entrepreneurial education, and almost every single one of them has found that effective entrepreneurial education leads to an increase in entrepreneurial intentions of international students. Yet, the specific role of education for international students and international studies is mentioned only in a few models. This phenomenon presents an alluring research gap for future research.

Gender is another topic that is quite common among the studies. Among the ten studies that examined the effect of gender on entrepreneurial intentions, five did not identify any meaningful impact. In contrast, the remaining five studies revealed that men have a higher intention to start an enterprise.

Self-efficacy, a person's belief in himself or herself to make the right decisions, is another theme that receives significant attention from the authors. Ten papers analysed self-efficacy, all pointing out that self-efficacy is one of the most significant drivers of entrepreneurial intention among international students.

Lastly, the components of the Theory of Planned Behaviour are among the most popular research themes analysed by the studies. The Theory of Planned Behaviour consists of three sub-concepts: perceived behavioural control is an individual's perception towards the difficulty of performing specific actions; subjective norms are associated with the belief of whether other people approve of specific behaviour; and attitude towards entrepreneurship refers to a person's perception of a specific activity or behaviour (Ajzen, 1991; Conner & Armitage, 1998). Most of the studies that examined the Theory of Planned Behaviour and its sub-components found a positive relationship between the components of the model and the entrepreneurial intentions of international students. However, this outcome is not uniform in all studies. Instead, some of the studies find that components have no direct relationship with the entrepreneurial intentions of international students.

Some of the themes are not very popular among the authors. The social, economic, and political environment and related research themes have generally attracted very little attention from scholars, along with other research themes such as language proficiency, risk tolerance, social networks, personal socioeconomic status. It is similar with the analysis of the country in which the international student would like to build up and run an enterprise - in their home country, host country, or a third country.

Discussion & Conclusion

As a result of the gradual increase in the proportion of international students (OECD, 2024), there is a growing research interest in this student group. Within entrepreneurship, research on entrepreneurial intentions as a successful predictor of entrepreneurial activity is receiving more and more significant attention. Since 2010, the first articles exploring this topic related to international students have been published.

This article used bibliometric research in which we collected articles dealing with the entrepreneurial intentions of international students from four databases (EBSCO, Scopus, Web of Science, and Google Scholar). We analysed them based on the year and place of publication and other bibliometric indicators. We analysed 40 academic studies, including articles, book chapters, theses and conference proceedings. While this number highlights the novelty of this field, the years of the publications reveal that the field has grown bigger in recent years. The first papers were published after 2010, but 42% of the studies were published after 2019, strengthening the fact that the field is continuing to attract attention. This trend may continue in the future. While the number of studies is low, studies were published in reputable journals. The bibliometric analysis concluded that 37.5% of the articles were published in journals with Q1 rankings, followed by 15% of the articles published in Q2 and 12.5% in Q3 and Q4 journals. Five of the academic articles were published in journals with no rankings.

We examined in detail which topics the articles relate to within the entrepreneurial intentions of international students. The articles dealt with 24 different research themes that can be classified into four clusters (individual, cultural/social, educational, and economic/political factors) and eight research groups. Some research topics are more popular among the studies within the field. The role of entrepreneurial education has been examined by 42% of the studies, and their uniform results suggest that entrepreneurial education has a positive impact on the entrepreneurial intentions of international students.

The Theory of Planned Behaviour and its subcomponents of perceived behaviour control, subjective norms, and attitude (Ajzen, 1991) are also popular research topics. 30% of the studies have analysed perceived behaviour control, whereas the percentages for subjective norms and attitude amount to 32.5% and 35%, respectively. While most of the studies argue that there is a positive relationship between subcomponents of Theory of Planned Behaviour and entrepreneurial intention, some failed to find a direct link between them. Gender is another research focus, with 25% of the studies analysing its role. Only five of those studies have identified gender as an influential factor in the entrepreneurial intentions of international students; all five studies remark that men are more inclined to be entrepreneurially oriented than females. Finally, significant attention on self-efficacy as an influencing factor was found. 25% of the studies examined the impact of it, and all of them uniformly pointed out that high self-efficacy increases the entrepreneurial intention of international students.

The research examining the entrepreneurial intentions of international students typically examines the same topics listed in the literature in case of other students. Thus, a research gap arises in those areas that would affect the differences between national and international students and their synergies, such as culture, economic development and other contextual factors. Their research will undoubtedly be much more specific in the future.

This study has limitations. First and foremost, only four different academic databases were used. While the explored databases are the most prominent ones in academic leagues, incorporating additional databases may further increase the number of studies, providing additional insights. Additionally, our chosen keywords impacted the articles in the sample, so articles relevant to the topic may have remained undiscovered. While the choice of the keywords was deliberate, additional keywords may expand the scope of the articles. In this context, future articles may want to include additional databases in their search process or incorporate additional keywords to broaden the search. Lastly, examining the research themes uncovered in this study (such as the role of gender, self-efficacy, and entrepreneurial education) may provide valuable research strands for scholars in the future.

Acknowledgments

Project no. K 147241 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the „OTKA” (K_23) funding scheme.

The research was supported by TÜBİTAK 2214 International Research Scholarship Program for PhD students.

REFERENCES

- [1] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. DOI: 10.1016/0749-5978(91)90020-T
- [2] Akinwale, Y. O., Ababtain, A. K., & Alaraifi, A. A. (2019). Structural equation model analysis of factors influencing entrepreneurial interest among university students in Saudi Arabia. *Journal of Entrepreneurship Education*, 22(4), 1-14. DOI: 10.1016/j.ijme.2021.100458
- [3] Akolgo, I. G., Li, C., Dodor, A., Udimal, T. B., & Adomako, K. W. (2018). An empirical study on the influencing entrepreneurial intention factors of international students based on the theory of planned behavior. *International Journal of small business and entrepreneurship research*, 6(2), 15-31.
- [4] Al-ali, A. H. (2021). Determinants of entrepreneurial intention of local and international university students: A case from Jordan. *Academy of Strategic Management Journal*, 20, 1-13.
- [5] Aliaga-Isla, R., & Rialp, A. (2013). Systematic review of immigrant entrepreneurship literature: previous findings and ways forward. *Entrepreneurship & Regional Development*, 25(9-10), 819-844. DOI: 10.1080/08985626.2013.845694
- [6] Ammeer, M. A., Haddoud, M. Y., & Onjewu, A. K. E. (2021). A personal values view of international entrepreneurial intention. *International Journal of Entrepreneurial Behavior & Research*, 28(3), 577-601. DOI: 10.1108/IJEER-06-2021-0480
- [7] Anjum, T., Farrukh, M., Heidler, P., & Díaz Tautiva, J. A. (2020). Entrepreneurial intention: Creativity, entrepreneurship, and university support. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 11. DOI: 10.3390/joitmc7010011
- [8] Ao, J., & Liu, Z. (2014). What impact entrepreneurial intention? Cultural, environmental, and educational factors. *Journal of Management Analytics*, 1(3), 224-239. DOI: 10.1080/23270012.2014.994232
- [9] Auwalu, I. N. (2014). *Entrepreneurial Intention Among Foreign Students in UUM: A Case of Nigerian Students*. Doctoral dissertation, Universiti Utara Malaysia, Malaysia.
- [10] Bakkar, Y., Durst, S., & Gerstlberger, W. (2021). The impact of institutional dimensions on entrepreneurial intentions of students—International Evidence. *Journal of Risk and Financial Management*, 14(4), 174. DOI: 10.3390/jrfm14040174
- [11] Bernhofer, B. L., & Li, J. (2014). Understanding the entrepreneurial intention of Chinese students: the preliminary findings of the China project of “Global university entrepreneurial spirits students survey” (GUESSS). *Journal of Entrepreneurship in Emerging Economies*, 6(1), 21-37. DOI: 10.1108/JEEE-10-2013-0024
- [12] Barba-Sanchez, V., & Atienza-Sahuquillo, C. (2018). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European Research on Management and Business Economics*, 24(1), 53-61. DOI: 10.1016/j.iedeen.2017.04.001
- [13] Carree, M. A., & Thurik, A. R. (2005). *Understanding the role of entrepreneurship for economic growth* (No. 1005). Papers on Entrepreneurship, Growth and Public Policy, University of Maastricht
- [14] Casas, A. M. (2015). International student exchanges and entrepreneurial capabilities: insights from colombian students studying in France.
- [15] Chornidio, F. A. (2018). *Analysis Of Factors Influencing Entrepreneurial Intention Among Students of International Programs*. Doctoral dissertation, Universitas Muhammadiyah Surakarta, Indonesia.
- [16] Chowdhury, M. S., Shamsudin, F. M., & Ismail, H. C. (2012). Exploring potential women entrepreneurs among international women students: The effects of the theory of planned behavior on their intention. *World Applied Sciences Journal*, 17(5), 651-657.
- [17] Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429-1464. DOI: 10.1111/j.1559-1816.1998.tb01685.x
- [18] Crudu, R. (2019). The role of innovative entrepreneurship in the economic development of EU member countries. *Journal of Entrepreneurship, Management and Innovation*, 15(1), 35-60. DOI: 10.7341/20191512
- [19] Davey, T., Plewa, C., & Struwig, M. (2011). Entrepreneurship perceptions and career intentions of international students. *Education + Training*, 53(5), 335-352. DOI: 10.1108/00400911111147677
- [20] Díaz-García, M. C., & Jimenez-Moreno, J. (2010). Entrepreneurial intention: the role of gender. *International Entrepreneurship and Management Journal*, 6, 261-283. DOI: 10.1007/s11365-008-0103-2
- [21] Doran, J., McCarthy, N., & O'Connor, M. (2018). The role of entrepreneurship in stimulating economic growth in developed and developing countries. *Cogent Economics & Finance*, 6(1), 1442093. DOI: 10.1080/23322039.2018.1442093
- [22] Elnadi, M., & Gheith, M. H. (2021). Entrepreneurial ecosystem, entrepreneurial self-efficacy, and entrepreneurial intention in higher education: Evidence from Saudi Arabia. *The International Journal of Management Education*, 19(1), 100458. DOI: 10.1016/j.ijme.2021.100458

- [23] Fahimnia, B., Sarkis, J., & Davarzani, H. (2015). Green supply chain management: A review and bibliometric analysis. *International Journal of Production Economics*, 162, 101-114. DOI: 10.1016/j.ijpe.2015.01.003
- [24] Falck, O., Heblich, S., & Luedemann, E. (2012). Identity and entrepreneurship: do school peers shape entrepreneurial intentions? *Small Business Economics*, 39, 39-59. DOI: 10.1007/s11187-010-9292-5
- [25] Feakes, A., Lindsay, N., Palmer, E., & Petrovski, K. (2023). Business Intentions of Australian Veterinary Students—My Business or Yours? A Cluster Analysis. *Animals*, 13(7), 1225. DOI: 10.3390/ani13071225
- [26] Galanakis, K., & Giourka, P. (2017). Entrepreneurial path: decoupling the complexity of entrepreneurial process. *International Journal of Entrepreneurial Behavior & Research*, 23(2), 317-335. DOI: 10.1108/IJEBr-03-2016-0079
- [27] Gieure, C., Benavides-Espinosa, M. D. M., & Roig-Dobón, S. (2019). Entrepreneurial intentions in an international university environment. *International Journal of Entrepreneurial Behavior & Research*, 25(8), 1605-1620. DOI: 10.1108/IJEBr-12-2018-0810
- [28] Graham, N., & Pottie-Sherman, Y. (2022). Higher education, international student mobility, and regional innovation in non-core regions: International student start-ups on “the rock”. *The Canadian Geographer/Le Geographe canadien*, 66(2), 234-247. DOI: 10.1111/cag.12730
- [29] Hope, K. (ed.) (2016). Annual Report on European SMEs 2015/2016. SME Recovery Continues. European Commission. Retrieved from https://ec.europa.eu/jrc/sites/jrcsh/files/annual_report_-_eu_smes_2015-16.pdf on February 12, 2021
- [30] Hueso, J. A., Jaen, I., & Linan, F. (2021). From personal values to entrepreneurial intention: a systematic literature review. *International Journal of Entrepreneurial Behavior & Research*, 27(1), 205-230. DOI: 10.1108/IJEBr-06-2020-0383
- [31] Jannesari, M. T., Zolfagharian, M., & Torkzadeh, S. (2022). Effect of social power, cultural intelligence, and socioeconomic status on students' international entrepreneurial intention. *Psychology Research and Behavior Management*, 1397-1410. DOI: 10.2147/prbm.s360901
- [32] Joseph, I. (2017). Factors influencing international student entrepreneurial intention in Malaysia. *American Journal of Industrial and Business Management*, 7(04), 424. DOI:10.4236/ajibm.2017.74030
- [33] Kakkonen, M. L. (2011). Students' Perceptions of Their Business Competences and Entrepreneurial Intention. *Management*, 6(3), 18544223
- [34] Kakkonen, M. L. (2012). The relationship between self-perceived generic competences and entrepreneurial intention. *Industry and Higher Education*, 26(3), 217-227. DOI:10.5367/ihe.2012.0096
- [35] La Barbera, F., & Ajzen, I. (2021). Moderating role of perceived behavioral control in the theory of planned behavior: A preregistered study. *Journal of Theoretical Social Psychology*, 5(1), 35-45. DOI: 10.1002/jts5.83
- [36] Luthje, C., & Franke, N. (2003). The ‘making’ of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management*, 33(2), 135-147. DOI: 10.1111/1467-9310.00288
- [37] Mahmoud, M. A., & Muharam, F. M. (2014). Factors affecting the entrepreneurial intention of PhD candidates: A study of Nigerian international students of UUM. *European Journal of Business and Management*, 6(36), 17-24.
- [38] Majumdar, S., & Varadarajan, D. (2013). Students' attitude towards entrepreneurship: does gender matter in the UAE? *Foresight*, 15(4), 278-293. DOI: 10.1108/FS-03-2012-0011
- [39] Mao, Y., & Ye, Y. (2021). Specific antecedents of entrepreneurial intention among newly returned Chinese international students. *Frontiers in Psychology*, 12, 622276. DOI: 10.3389/fpsyg.2021.622276
- [40] Miotto, G., Del-Castillo-Feito, C., & Blanco-Gonzalez, A. (2020). Reputation and legitimacy: Key factors for Higher Education Institutions' sustained competitive advantage. *Journal of Business Research*, 112, 342-353. DOI: 10.1016/j.jbusres.2019.11.076
- [41] Nanere, M., Plant, E., Trebilcock, P., Pattinama, M., Arwani, M. (2020). An Entrepreneurial Case Study from Australia. In: Ratten, V. (eds) *Entrepreneurship and Organizational Change*. Springer, Cham. pp 167–176. DOI: 10.1007/978-3-030-35415-2_9
- [42] Nguyen, C. (2017). Entrepreneurial intention of international business students in Viet Nam: a survey of the country joining the Trans-Pacific Partnership. *Journal of Innovation and Entrepreneurship*, 6(1), 7. DOI: 10.1186/s13731-017-0066-z
- [43] OECD (2023), International Migration Outlook 2023, OECD Publishing, Paris, DOI: 10.1787/b0f40584-en.
- [44] Ogunlana, F. (2018). The Role of Entrepreneurship as the Driver of Economic Growth. Business Management Thesis. Centria University of Applied Sciences, Finland
- [45] Palalic, R., Ramadani, V., Dilovic, A., Dizdarevic, A., & Ratten, V. (2017). Entrepreneurial intentions of university students: a case-based study. *Journal of Enterprising Communities: People and Places in the Global Economy*, 11(03), 393-413. DOI: 10.1108/JEC-12-2016-0046

- [46] Pinto, F. (2020). The effect of university graduates' international mobility on labour outcomes in Spain. *Studies in Higher Education*, 47(1), 26–37. DOI: 10.1080/03075079.2020.1725877
- [47] Pradhan, R. P., Arvin, M. B., Nair, M., & Bennett, S. E. (2020). The dynamics among entrepreneurship, innovation, and economic growth in the Eurozone countries. *Journal of Policy Modeling*, 42(5), 1106–1122. DOI: 10.1016/j.jpolmod.2020.01.004
- [48] Rasul, O., Bekun, F. V., & Saint Akadiri, S. (2017). The impact of self-efficacy on international student entrepreneur intention. *International Review of Management and Marketing*, 7(1), 169–174.
- [49] Schwab, K., Sala-i-Martin, X. The Global Competitiveness Report 2017–2018; World Economic Forum: Geneva, Switzerland, 2017.
- [50] 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*.
- [51] Sharma, S., & Virani, S. (2023). Antecedents of international entrepreneurial intentions among students of international business: The mediating role of international entrepreneurship education. *Journal of International Entrepreneurship*, 21, 1–25. DOI: 10.1007/s10843-023-00329-2
- [52] Shimoli, S. M., Cai, W., Abbas Naqvi, M. H., & Lang, Q. (2020). Entrepreneurship success traits. Do Kenyans possess the desired entrepreneur personality traits for enhanced E-entrepreneurship? Case study of Kenyan students in the people's republic of China. *Cogent Business & Management*, 7(1), 1847863. DOI: 10.1080/23311975.2020.1847863
- [53] 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. DOI: 10.3390/su12031186
- [54] Sultana, N., & Rahman, M. T. (2020). Explaining Entrepreneurial Intentions of International Student in Sweden by Means of the Theory of Planned Behaviour. Master's thesis, Halmstad University, Sweden.
- [55] Tan, L. P., Le, A. N. H., & Xuan, L. P. (2020). A systematic literature review on social entrepreneurial intention. *Journal of Social Entrepreneurship*, 11(3), 241–256. DOI: 10.1080/19420676.2019.1640770
- [56] Toma, S. G., Grigore, A. M., & Marinescu, P. (2014). Economic development and entrepreneurship. *Procedia Economics and Finance*, 8, 436–443. DOI: 10.1016/S2212-5671(14)00111-7
- [57] Tomy, S., & Pardede, E. (2020). An entrepreneurial intention model focussing on higher education. *International Journal of Entrepreneurial Behavior & Research*, 26(7), 1423–1447. DOI:10.1108/IJEBr-06-2019-0370
- [58] Usman, B. (2016). A glimpse of entrepreneurial intention: empirical finding of international students' perspectives in Turkey. In *International Students Social Sciences Congress* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2822927
- [59] Usman, B., & Yennita. (2019). Understanding the entrepreneurial intention among international students in Turkey. *Journal of Global Entrepreneurship Research*, 9(1), 10. DOI: 10.1186/s40497-018-0136-0
- [60] Van Gelderen, M., Kautonen, T., Wincent, J., & Biniari, M. (2018). Implementation intentions in the entrepreneurial process: concept, empirical findings, and research agenda. *Small Business Economics*, 51, 923–941. DOI:10.1007/s11187-017-9971-6
- [61] Wan-Ismael, W. N. A., & Olabinjo, I. A. (2017). Entrepreneurial intention and its influence among international students of Universiti Utara Malaysia. *Journal of Advanced research in Business, Marketing, and Supply Chain Management*, 17(1), 68–75.
- [62] Wu, J., & Rudnak, I. (2021). Exploring the impact of studying abroad in Hungary on entrepreneurial intention among international students. *Sustainability*, 13(17), 9545. DOI: 10.3390/su13179545
- [63] Wu, J., Alshaabani, A., & Rudnak, I. (2022). Testing the influence of self-efficacy and demographic characteristics among international students on entrepreneurial intention in the context of Hungary. *Sustainability*, 14(3), 1069. DOI: 10.3390/su14031069
- [64] Yao, H., Jannesari, M. T., Sun, J., Lai, Q., & Ji, J. (2020). Impact of sense of status on the international entrepreneurial intention of undergraduates in China. *Social Behavior and Personality: an International Journal*, 48(10), 1–12. DOI: 10.2224/sbp.9408
- [65] Zhang, J., Li, B., Zhang, Y., Gong, C., & Liu, Z. (2022). From entrepreneurship education, government support, and global competence to entrepreneurial behavior: the serial double mediating effect of the self-efficacy and entrepreneurial intention. *Frontiers in Psychology*, 13, 838232. DOI: 10.3389/fpsyg.2022.838232

Received: 2024-04-11

Revision requested: 2024-10-21

Revised: 2024-12-04 (1 revision)

Accepted: 2024-12-10



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