Faculty of Economics and Business

The Impact of Entrepreneurial Attitude and Entrepreneurial Education on Entrepreneurial Intentions of Millennial College Students: The Mediating Role of Entrepreneurial Self-Efficacy

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The Impact of Entrepreneurial Attitude and Entrepreneurial Education on Entreneurial Intentions of Millennial College Students: The Mediating Role of Entrepreneurial Self-Efficacy

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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ABSTRACT

Entrepreneurship is becoming increasingly significant in today's society, as it is considered a major driving force for economic growth, innovation, and employment opportunities. Despite its importance, understanding the factors influencing entrepreneurial intentions among millennials remains challenging, with inconsistent research findings on the relationships between entrepreneurial attitudes, self-efficacy, education, and intentions. This study investigates these factors, including entrepreneurial intention mediation, among millennial college students in Jinan, Shandong Province, China. A quantitative research method was employed, with a response rate of 96.7% and 405 valid questionnaires were collected. In this study, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to conduct data analysis, encompassing reliability and validity assessments, examination of impact effects, and mediation effect testing, leading to comprehensive research findings. Key findings in this study show that entrepreneurial attitude, entrepreneurial self-efficacy, and entrepreneurial education all had a positive influence on entrepreneurial intention. Of the three factors, entrepreneurial self-efficacy has the most significant influence on entrepreneurial intention. Secondly, entrepreneurial self-efficacy plays a partial mediating role in the relationship between entrepreneurial attitude, entrepreneurial education and entrepreneurial intention. The findings provide actionable insights for educational institutions, policymakers, and entrepreneurial support organizations in Jinan City to foster entrepreneurship among millennial college students. The theoretical significance of this research lies in its contribution to the understanding of how attitude, self-efficacy, and education interact to shape entrepreneurial intentions among millennial college students in Jinan City, enriching existing knowledge in entrepreneurship. The practical significance is that it provides valuable insights for educational institutions, policymakers,

and entrepreneurial support organizations to foster entrepreneurship culture among these students. Recommendation for future research is to investigate issues surrounding entrepreneurial self-efficacy among millennials. It is also recommended that longitudinal studies can be conducted for the purpose of providing better understanding and guidance for the entrepreneurship development of millennial college students.

Keywords: Entrepreneurial attitudes, entrepreneurial self-efficacy, entrepreneurship education, entrepreneurial intention

Kesan Sikap Keusahawanan dan Pendidikan Keusahawanan terhadap Niat Usahawan Pelajar Kolej Milenium: Peranan Pengantara Keberkesanan Kendiri Keusahawanan

ABSTRAK

Keusahawanan semakin penting dalam masyarakat hari ini kerana ia dianggap sebagai penggerak utama pertumbuhan ekonomi, inovasi, dan peluang pekerjaan. Walaupun begitu, memahami faktor yang mempengaruhi niat keusahawanan dalam kalangan generasi milenial masih mencabar, dengan hasil kajian yang tidak konsisten mengenai hubungan antara sikap keusahawanan, efikasi diri, pendidikan, dan niat keusahawanan. Kajian ini menyelidiki faktor-faktor ini, termasuk kesan mediasi niat keusahawanan, dalam kalangan pelajar kolej milenial di Jinan, Provinsi Shandong, China. Kaedah penyelidikan kuantitatif digunakan, dengan kadar tindak balas sebanyak 96.7% dan 405 soal selidik yang sah diperoleh. Dalam kajian ini, Pemodelan Persamaan Struktur Kaedah Kuasa Dua Terkecil (PLS-SEM) digunakan untuk menganalisis data, termasuk penilaian kebolehpercayaan dan kesahihan, pemeriksaan kesan pengaruh, serta ujian kesan mediasi, yang menghasilkan penemuan yang komprehensif. Dapatan utama kajian mendapati bahawa sikap keusahawanan, efikasi diri keusahawanan, dan pendidikan keusahawanan mempunyai pengaruh positif terhadap niat keusahawanan, dengan efikasi diri keusahawanan memberi pengaruh paling ketara. Kedua, efikasi diri keusahawanan memainkan peranan mediasi separa dalam hubungan antara sikap keusahawanan, pendidikan keusahawanan, dan niat keusahawanan. Hasil kajian ini memberikan pandangan yang praktikal kepada institusi pendidikan, pembuat dasar, dan organisasi sokongan keusahawanan di Bandar Jinan untuk memupuk semangat keusahawanan dalam kalangan pelajar kolej milenial. Dari segi teori, kajian ini menyumbang kepada pemahaman bagaimana sikap, efikasi diri, dan pendidikan berinteraksi untuk membentuk niat keusahawanan dalam kalangan pelajar kolej milenial di

Bandar Jinan, seterusnya memperkayakan ilmu keusahawanan yang sedia ada. Secara praktikalnya, kajian ini memberikan panduan berharga kepada institusi pendidikan, pembuat dasar, dan organisasi sokongan keusahawanan dalam usaha memupuk budaya keusahawanan, sekaligus meningkatkan pertumbuhan ekonomi dan penciptaan pekerjaan melalui pendidikan baik dan dasar yang disasarkan. Cadangan untuk kajian masa depan adalah untuk menyelidik isu yang mempengaruhi efikasi diri keusahawanan dalam kalangan milenial. Turut disarankan juga untuk menjalankan kajian secara longitudinal bagi memberikan pemahaman dan panduan yang lebih baik untuk perkembangan keusahawanan dalam kalangan pelajar kolej milenial.

Kata kunci: *Sikap keusahawanan, efikasi diri keusahawanan, pendidikan keusahawanan, niat keusahawanan*

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LIST OF ABBREVIATIONS

EA	Entrepreneurial Attitude
EE	Entrepreneurship Education
EI	Entrepreneurial Intention
ESE	Entrepreneurial Self-Efficacy
SCT	Social Cognitive Theory
TPB	Theory of Planned Behavior

CHAPTER 1

INTRODUCTION

1.1 Research Background of Study

In contemporary social and economic contexts, entrepreneurial spirit and endeavours are imperative for societal and individual advancement. Especially millennial college students represent the future group of entrepreneurs and innovators, so it is crucial to understand and promote their entrepreneurial intentions. Millennials are people born between 1981 and 2000, also known as the first millennium or Y generation (Llopis-Amorós et al., 2019). Millennials typically have a high spirit of innovation and entrepreneurship willingness (Mahmood et al., 2019). They grew up in the digital age, with a strong interest in cutting-edge technologies and innovative business models. They are willing to create their own businesses or innovative projects (Indriyani, 2021). In Jinan city, a vibrant city with many college students, they may consider entrepreneurship as a career development path in their future career choices.

In 2022, the Office of the Employment Work Leading Group of Jinan City issued the "Implementation Rules for 40 Policies to Support College Graduate Employment and Entrepreneurship". This policy provides great support for graduates' entrepreneurship, maximizing the policy effects of tax exemptions, social security subsidies, job search subsidies, training subsidies, and entrepreneurship subsidies, ensuring that employment and entrepreneurship policies for college graduates are implemented and effectively. In addition, this policy plays an important role in continuously optimizing the employment and entrepreneurship environment, attracting more college graduates to come to the province for

employment and entrepreneurship, and building a strong provincial talent highland (Jinan Public Service Employment Center, 2022).

The Jinan government has also realized that in a fiercely competitive environment, entrepreneurship support for the younger generation can promote the stability and development of the current employment environment. Therefore, relevant support policies have been introduced. In this context, research on the impact of factors related to millennial college students' entrepreneurship intentions is particularly significant. Frye (2018) believes that entrepreneurial education prepares entrepreneurs and boost entrepreneurial initiatives. Entrepreneurship education is the foundation for entrepreneurial awareness among college students (Fu et al., 2022).

Apart from receiving entrepreneurship education, individuals are often motivated to demonstrate more constructive entrepreneurial intentions by fostering a constructive entrepreneurship mindset and enhancing their self-efficacy (Anwar et al., 2020; Liu et al., 2019; Mahfud et al., 2022). Entrepreneurship attitudes reflect an individual's positive or negative views on entrepreneurship. A positive entrepreneur's attitude can cultivate individuals' belief and willingness in entrepreneurship, making them more likely to consider engaging in entrepreneurship activities (Yousaf et al., 2021). When individuals perceive entrepreneurship as an attractive and promising choice, they are more likely to demonstrate encouraging entrepreneurial intentions. For self-efficacy in entrepreneurship, Bohlayer and Gielnik (2023) suggest that when individuals have a high level of entrepreneurship self-efficacy, they are more confident in facing challenges and overcoming difficulties, which improves entrepreneurial intentions. The increase in self-confidence makes individuals more

inclined to pursue entrepreneurial opportunities and believes that they can cope with uncertainty and risks.

In summary, the intricate and interactive relationship between entrepreneurial attitude, entrepreneurship self-efficacy, entrepreneurship education, and entrepreneurial intention underscores the significance of comprehending and examining their connections. This understanding is essential for fostering and facilitating the growth of entrepreneurship spirits and advancing entrepreneurial prosperity. This study examined the impact of entrepreneurial attitudes, self-efficacy, and entrepreneurship education on entrepreneurial intentions of millennial college students, as well as the mediating role of self-efficacy.

1.2 Problem Statement

The importance of entrepreneurship in contemporary society is increasingly recognized as a key driving force for economic growth, innovation, and job creation (Stoica et al., 2020). However, the entrepreneurial intentions of millennial college students in China still face entrepreneurial challenges. When college students face uncertain market environments, competitive pressures, and the risk of failure in the entrepreneurship process, their entrepreneurial attitude may be negatively affected (Zhang & Li, 2020). For many college students, entrepreneurship may be seen as a high-risk career path, especially when they lack clear direction or sufficient confidence, which can lead to hesitation and withdrawal from entrepreneurship (Xie et al., 2024). Secondly, the expectations of the social environment and cultural atmosphere can also affect college students' entrepreneurial attitude (Du, 2024). Many families still believe that traditional stable careers are the most suitable choice for graduates, and entrepreneurship is seen as an uncertain and high-risk activity (Shahzad et al., 2021). This social mindset may lead to a lack of motivation among

college students when faced with entrepreneurial choices, and even a negative attitude towards entrepreneurship.

College students' entrepreneurial self-efficacy often faces many challenges, which stem from their own lack of experience, but also from multiple pressures from the external environment. Firstly, many college students lack practical entrepreneurship experience, which makes them feel overwhelmed when confronted with complex business decisions, market competition, and management tasks (Xin & Xin, 2024). This lack of experience directly affects their self-efficacy and makes them doubt entrepreneurial success. In addition, college students often face time conflicts between studying and entrepreneurship. The pressure of balancing academic and entrepreneurial pursuits may lead to fatigue and anxiety when managing energy and resources (Cai et al., 2022).

Moreover, the entrepreneurship education system college students receive has certain limitations, mainly reflected in insufficient practicality, the disconnection between course content and actual entrepreneurship needs, and limited access to entrepreneurship resources (Long, 2023). Although some universities offer courses related to entrepreneurship, most still focus on theoretical teaching and lack practical opportunities for real entrepreneurial projects, which makes it difficult for students to apply the knowledge they have learned to the actual entrepreneurial process (Chen et al., 2021).

While existing research has established a consensus on the pivotal role of a positive entrepreneurial attitude in shaping higher entrepreneurial intentions among college students, a significant research gap persists in understanding the nuanced interplay between entrepreneurial attitudes and intentions (Alam et al., 2019; Karimi, 2020; Nguyen et al., 2019). However, there are also studies that have yielded different research conclusions.

Schwarz et al. (2009) found that students who hold a positive attitude towards competitiveness are less likely to support them in becoming entrepreneurs. While Fitzsimmons and Douglas (2005) highlighted the significance of entrepreneurial attitudes in elucidating career decisions, their research also revealed the variability in the influence of individual entrepreneurial attitudes on entrepreneurial intentions across different countries. This suggests that further research is warranted to explore the relationship between entrepreneurial attitude and entrepreneurial intention within various research contexts.

Entrepreneurial education influences students' entrepreneurial intentions. Researchers have found that exposure to entrepreneurship education, including courses and experiential learning opportunities, positively correlates with increased intentions to start businesses (Lv et al., 2021; Uddin et al., 2022). However, the extent of this influence may vary depending on program quality, content, and delivery methods (Anwar & Abdullah, 2021). Some studies have indicated that practical experiences, such as internships or startup competitions, may be particularly effective in shaping students' intentions (Lu et al., 2021). Despite evidence demonstrating the positive influence of entrepreneurship education on fostering creative intent, contradictory findings exist in the literature. For instance, NońSki et al. (2019) discovered that entrepreneurship education does not uniformly affect entrepreneurial intentions across all countries. Given the contentious nature of research findings regarding entrepreneurship education and entrepreneurial intention, this study aims to delve deeper into their relationship.

Various perspectives exist regarding whether entrepreneurial self-efficacy influences entrepreneurial intention directly or indirectly. For example, Şahin et al. (2019) demonstrated that high levels of entrepreneurial intention can be achieved through diverse

entrepreneurial self-efficacy configurations. Furthermore, several researchers have consistently reached similar conclusions (Soomro & Shah, 2022; Udayanan, 2019; Xiaoping & Hua, 2019). Additionally, other studies have identified a mediating effect of entrepreneurial self-efficacy. For instance, research on Vietnamese college students revealed that entrepreneurship education positively impacts entrepreneurial intention, with self-efficacy serving as a mediator (Hoang et al., 2020). Similarly, Chan & Lay's (2021) study found that self-efficacy mediates the relationship between teacher attitude and teaching. Consequently, focusing on entrepreneurship among millennial college students, this study not only examines the direct influence of self-efficacy on entrepreneurial intention but also explores whether entrepreneurial self-efficacy can mediate the relationship between entrepreneurship education, entrepreneurship attitude, and entrepreneurial intention.

Exploring the relationships between entrepreneurial attitude, entrepreneurship self-efficacy, entrepreneurship education, and entrepreneurial intentions among millennial college students offers valuable insights for both theoretical advancements and practical applications. Research consistently underscores the impact of fostering a positive entrepreneurial attitude, which is a pivotal driver of entrepreneurial intention (Alam et al., 2019; Karimi, 2020). Additionally, the study highlights the role of self-efficacy, demonstrating that belief in entrepreneurial abilities can significantly shape intentions and action readiness (Soomro & Shah, 2022; Hoang et al., 2020). Carefully structured entrepreneurship education programs further contribute to this effect by providing knowledge and skills that support self-confidence and autonomy, which are essential for developing a sustainable entrepreneurship mindset (Lv et al., 2021; Uddin et al., 2022). This research contributes to a nuanced understanding of how these factors interact to influence entrepreneurial intentions, enriching the field's knowledge base and guiding both

educational practices and policy design aimed at nurturing entrepreneurship talent. Ultimately, such efforts promote an innovation-driven culture that empowers millennial college students to engage actively in entrepreneurship, thereby supporting broader socio-economic growth (Gupta et al., 2022).

While this study has garnered valuable insights into the connections among entrepreneurial attitude, entrepreneurial education, entrepreneurial self-efficacy, and entrepreneurial intentions among millennial college students through existing literature, there exists a notable gap in our comprehension of the contextual and cultural factors that might moderate or influence these relationships, particularly within the specific context of Jinan City. Jinan, as a vibrant city with numerous universities and millennial college student groups, provides a vast stage for entrepreneurship (Chen & Sun, 2023). Therefore, exploring the impact of entrepreneurial attitudes, entrepreneurial self-efficacy, and entrepreneurial education on entrepreneurial intentions of millennial college students in Jinan has significant theoretical and practical value.

The research topic related to millennial college students' entrepreneurial intentions holds significant implications for both academia and practical policy-making. By exploring the relationships between entrepreneurship attitudes, entrepreneurship education, entrepreneurship self-efficacy, and entrepreneurial intention, the study can provide insights into how to foster economic growth, address unemployment challenges among recent graduates, enhance entrepreneurship education, encourage innovation, and formulate policies that support young entrepreneurs in Jinan City. Furthermore, this research contributes to the academic understanding of the complex dynamics between attitudes, education, self-efficacy, and entrepreneurial intentions among millennial college students.

Ultimately, it has the potential to shape not only local policies but also the broader discourse on entrepreneurship and education. It emphasizes the importance of cultivating entrepreneur mindsets to drive innovation and human capital development.

Many studies have confirmed that entrepreneurial attitudes and self-efficacy have a certain impact on entrepreneurship, However, there are still relatively few related studies which specifically focus on millennials in Jinan, China. Therefore, taking millennial college students from Jinan as the research object can help fill the research gap. There are still inconsistent research conclusions on entrepreneurship education and entrepreneurship intentions, therefore further research is needed to verify the relationship between the entrepreneurial attitudes, self-efficacy and entrepreneurship intention.

1.3 The Objective of Study

The overarching aim of this study is to examine and comprehend the determinants impacting the entrepreneurial intentions of millennial college students in Jinan City, specifically emphasizing the roles of entrepreneurial attitude, entrepreneurial education, and entrepreneurial self-efficacy in shaping their inclination towards engaging in entrepreneurship pursuits. The specific objectives of the study are to examine the relationships between entrepreneurial attitude, entrepreneurial self-efficacy, entrepreneurial education, and the entrepreneurial intentions of millennial college students in Jinan City, as well as to investigate whether entrepreneurial self-efficacy mediates the interactions among these variables.

1.4 Research Questions

i. What is the relationship between entrepreneurial attitude and entrepreneurial intentions of millennial college students in Jinan city?

ii. What is the relationship between entrepreneurial self-efficacy and entrepreneurial intentions of millennial college students in Jinan city?

iii. What is the relationship between entrepreneurial education and entrepreneurial intentions of millennial college students in Jinan city?

iv. Does entrepreneurial self-efficacy play a mediating role in entrepreneurial attitude, entrepreneurship education, and entrepreneurship intention?

1.5 Significance of the Study

The theoretical significance of this research lies in its contribution to the broader body of knowledge in entrepreneurship and education. By investigating the interplay between entrepreneurial attitudes, self-efficacy, and education within the context of millennial college students in Jinan City, it enriches our conceptual understanding of the factors that shape entrepreneurial intentions. These insights can enhance existing entrepreneurship theories and models, potentially leading to more context-specific and comprehensive frameworks. Furthermore, the research's theoretical contributions can serve as a foundation for future studies exploring similar phenomena in diverse regional and cultural contexts. Ultimately, this research advances the field of entrepreneurship research. This is done by providing a deeper understanding of how individuals' intentions to engage in entrepreneurial activities are shaped and influenced.

The practical significance of this research resides in its ability to provide insights and guidance for diverse stakeholders, including educational institutions, policymakers, and entrepreneurial support organizations. These findings can help them cultivate a entrepreneurship culture among millennial college students in Jinan City. By elucidating the factors influencing entrepreneurship intentions, especially entrepreneurial attitudes, self-efficacy, and education, this research can provide actionable insights. Educational institutions can utilize these findings to refine their entrepreneurship education initiatives, ensuring their efficacy in inspiring and equipping students for entrepreneurship pursuits. Policymakers can develop targeted policies to create a supportive ecosystem for young entrepreneurs in Jinan City, leading to economic growth and job creation. Entrepreneurial support organizations can tailor their initiatives to align with millennial college students' specific needs and challenges.

1.6 Research Scope

Focusing on millennial students was warranted due to their demonstrated entrepreneurial aspirations and potential in the current socio-economic landscape. This cohort typically exhibited strong innovative thinking and digital competencies, which enabled them to adapt effectively to dynamic market demands. Moreover, their upbringing fostered a preference for socially responsible and sustainable business models, diverging from traditional entrepreneurship paradigms. Thus, understanding their entrepreneurial intentions not only deepened insights into this generation's characteristics but also provided valuable guidance for educational institutions, policymakers, and entrepreneurship support organizations. This guidance was invaluable in formulating strategies to motivate and assist young entrepreneurs.

Jinan was selected as the research site due to its status as the capital of Shandong Province. It boasts abundant higher education resources and a vibrant entrepreneurship ecosystem. The city is home to numerous universities and a large pool of young talent, creating an ideal foundation for studying millennial college students' entrepreneurial intentions. Additionally, Jinan's steady economic growth and favorable policy landscape, highlighted by recent initiatives designed to promote student entrepreneurship, create conducive conditions for entrepreneurship activities. Therefore, Jinan serves as an ideal location for comprehensively exploring millennial college students' entrepreneurial behaviors and driving factors.

1.7 Definition of Key Terms

The following are the definition of key terms used in this study.

Entrepreneurial attitude: According to Anwar et al. (2021), entrepreneurial attitude reflects the extent to which an individual is inclined or disinclined to engage in entrepreneurial activities.

Entrepreneurial self-efficacy: In the research by Elnadi and Gheith (2021), entrepreneurial self-efficacy is defined as the level of confidence individuals have in their ability to effectively perform the responsibilities and tasks associated with entrepreneurship.

Entrepreneurship education: Entrepreneurship education is designed to develop the knowledge, skills, and mindsets essential for entrepreneurship, enabling students to gain a better understanding of and actively engage in entrepreneurial activities (Ghafar, 2020).

Entrepreneurship intention: Entrepreneurial intention is characterized as an individual's psychological readiness to start a business, shaped by cognitive experiences, emotional influences, and external environmental factors (Belchior & Lyons, 2021).

1.8 Organization of the Thesis

This thesis consists of five chapters, and it is organised in the following sequence.

Chapter 1 serves as an introductory chapter, providing essential context and outlining the key components of the research. It begins with an introduction to the research purpose and context, followed by an exploration of the research background. This sets the stage for the study. The problem statement highlights the specific issue under investigation. The general and specific objectives of the research are laid out to establish the study's purpose and direction. In addition, the research questions provide a framework for inquiry. The chapter outlines the significance of the research, emphasizing its potential impact and relevance. Finally, key research items are defined to ensure clarity on terminology and concepts. Overall, Chapter One serves as a comprehensive introduction that prepares the reader for the subsequent chapters and the research's exploration and analysis.

Chapter 2 offers a comprehensive literature review of entrepreneurial attitudes, entrepreneurial self-efficacy, entrepreneurship education, and entrepreneurship intentions. It delves into the definitions of these concepts, explores the underlying theories, identifies gaps in existing literature, and lays the groundwork for hypothesis development. A research framework is proposed, drawing upon the theory of planned behavior, and several research hypotheses are formulated accordingly.

Chapter 3 elaborates on the research methodology of the paper, summarizing the design and execution process of the study, including the selection of research design and sampling methods, as well as a detailed discussion of data collection, analysis, and sampling strategies. At the same time, it also introduces the preparation of research survey questionnaires and pilot test.

Chapter 4 analyses and synthesizes the data systematically collected throughout this study. Beyond merely scrutinizing demographic characteristics, this chapter employs sophisticated data analysis software to rigorously validate the hypotheses put forth in the initial stages of the research. The obtained results, gleaned from meticulous analysis, are seamlessly integrated with prior examinations. This provides a holistic understanding of the intricate relationships and patterns identified within the dataset. This meticulous process ensures a robust foundation for discussions and interpretations.

In Chapter 5, a thorough review of the research objectives and questions formulated in the initial stages of the article is conducted. This chapter serves as a reflective synthesis, encapsulating the essence of the research journey. The accumulated findings, distilled through an in-depth exploration of the research process, are succinctly summarized to offer readers a clear understanding of the study's outcomes.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Entrepreneurship activities have the potential to stimulate employment growth, establish novel markets and industries, and exert a positive influence on economic development and innovation. As a significant source of young talent, millennial college students' entrepreneurial intentions and actions significantly impact overall economic development. Therefore, it is crucial to study the factors that affect millennial college students' entrepreneurial intentions. This can provide valuable insights and guidance for entrepreneurship education, policy formulation, and support measures. This chapter critically summarizes and analyzes the perspectives of different researchers by reviewing the literature on entrepreneurship attitudes, self-efficacy, entrepreneurship education, and entrepreneurial intentions. Additionally, it discusses the research theory, research framework, and research hypotheses of this study.

2.2 The Concept of Entrepreneurship and Millennial Students

This section outlines the key concepts of entrepreneurship, student entrepreneurship, and millennial students. Clarifying these concepts is essential for understanding millennial students' behavioral characteristics and motivations within the entrepreneurial process. Furthermore, this conceptual clarification establishes a robust theoretical foundation for empirical analysis. This facilitates an in-depth exploration of the core factors influencing this demographic group's entrepreneurial intentions.

2.2.1 The Definition, Development, and Importance of Entrepreneurship

Entrepreneurship refers to the process of individuals or teams creating, developing, and managing new business opportunities in an environment of uncertainty and risk (Tripathi et al., 2022). Student entrepreneurship refers to students engaging in business-related activities, such as creating startups or pursuing business opportunities, during their high school or university years (Marchand & Hermens, 2014). The entrepreneurial process involves various stages from creativity, innovation, and resource integration to business planning and organizational operations, aiming to generate economic value and meet market demands (Rosário et al., 2022). Entrepreneurs usually possess a certain entrepreneurial spirit, including creativity, decision-making ability, confidence, and the ability to take risks (Papagiannis, 2018).

The concept of entrepreneurship has undergone extensive development and evolution in the past few decades. Initially viewed as the act of starting a new business, but later research gradually expanded it to a wider range of fields, including innovation, the cultivation of entrepreneurial spirits, social entrepreneurship, and entrepreneurial activities within large companies (Perrini, 2006). Entrepreneurship is also seen as a significant force in promoting economic growth, creating employment opportunities, and promoting social change (Rosário et al., 2022).

The field of entrepreneurship research has achieved significant development, resulting in numerous theories and frameworks, such as entrepreneurship process theory, entrepreneurship lifecycle models, entrepreneurial ecosystems, etc (Cantner et al., 2021; Leyden & Link, 2015; Stam & Spigel, 2016). Furthermore, entrepreneurship education is steadily evolving, equipping individuals with the essential knowledge and skills required for

entrepreneurship. With the continuous development of the global entrepreneurial ecosystem, the status and importance of entrepreneurship in modern society are becoming increasingly prominent. This is attracting more and more individuals and organizations to participate in it. Entrepreneurship not only contributes positively to economic growth but also exerts a wide-ranging positive influence on society and individuals (Tripathi et al., 2022). It is a key force driving innovation and social change, thus occupying a significant position in modern society (Rosário et al., 2022).

2.2.2 The Concept of Millennial Students

Entrepreneurship refers to the process of individuals or teams creating, developing, and managing new business opportunities in an environment of uncertainty and risk (Tripathi et al., 2022). Student entrepreneurship refers to students engaging in business-related activities, such as creating startups or pursuing business opportunities, during their high school or university years (Marchand & Hermens, 2014). The entrepreneurial process involves various stages from creativity, innovation, and resource integration to business planning and organizational operations, aiming to generate economic value and meet market demands (Rosário et al., 2022). Entrepreneurs usually possess a certain entrepreneurial spirit, including creativity, decision-making ability, confidence, and the ability to take risks (Papagiannis, 2018).

The concept of entrepreneurship has undergone extensive development and evolution in the past few decades. Initially viewed as the act of starting a new business, but later research gradually expanded it to a wider range of fields, including innovation, the cultivation of entrepreneurial spirits, social entrepreneurship, and entrepreneurial activities within large companies (Perrini, 2006). Entrepreneurship is also seen as a significant force

in promoting economic growth, creating employment opportunities, and promoting social change (Rosário et al., 2022).

The field of entrepreneurship research has achieved significant development, resulting in numerous theories and frameworks, such as entrepreneurship process theory, entrepreneurship lifecycle models, entrepreneurial ecosystems, etc (Cantner et al., 2021; Leyden & Link, 2015; Stam & Spigel, 2016). Furthermore, entrepreneurship education is steadily evolving, equipping individuals with the essential knowledge and skills required for entrepreneurship. With the continuous development of the global entrepreneurial ecosystem, the status and importance of entrepreneurship in modern society are becoming increasingly prominent. This is attracting more and more individuals and organizations to participate in it. Entrepreneurship not only contributes positively to economic growth but also exerts a wide-ranging positive influence on society and individuals (Tripathi et al., 2022). It is a key force driving innovation and social change, thus occupying a significant position in modern society (Rosário et al., 2022).

2.3 Entrepreneurial Intentions

This section presents the key concepts and evolution of entrepreneurial intention while highlighting the challenges millennial students currently face in developing their entrepreneurial intentions. It also emphasizes the significance of studying entrepreneurial intention among millennial students, providing critical insights into the factors shaping their entrepreneurship mindsets and behaviors.

2.4 The Concept and Development of Entrepreneurial Intentions

Entrepreneurial intention refers to the psychological state characterized as an individual's readiness to establish a business, influenced by cognitive experiences, emotional

factors, and external environmental conditions (Fu et al., 2022). This concept emphasizes the interest and desire of individuals or teams in entrepreneurship, which usually precedes actual entrepreneurship actions. Entrepreneurial intention stands as a pivotal concept in entrepreneurship research, helping comprehend the motivations behind individuals' decisions to initiate a business venture. It serves as a predictive measure to gauge their likelihood of engaging in entrepreneurship activities in the future (Lazarova et al., 2015).

The development of entrepreneurial intentions can be traced back to entrepreneurship research in the 1960s and 1970s (Hisrich et al., 2007). As interest in entrepreneurship behavior and processes grows, researchers are increasingly focusing on understanding the motivations behind individuals' decisions to embark on their own business ventures. The notion of entrepreneurial intention has emerged as a significant factor in elucidating and forecasting entrepreneurship conduct (Belchior & Lyons, 2021; Munir et al., 2019). The exploration of entrepreneurial intention draws upon theoretical frameworks from various disciplines, including psychology, sociology, economics, and management (Shi et al., 2020). Researchers attempt to understand individuals' key entrepreneurship motivations, attitudes, and subjective norms, which constitute the core of entrepreneurial intentions (Alferaih, 2022).

To study entrepreneurial intention, researchers have developed various measurement tools and questionnaire surveys to evaluate individual entrepreneurial intention (Engle et al., 2010; Jena, 2020; Liñán & Chen, 2009). These tools typically include questions related to entrepreneurship to understand whether individuals intend to start a business. Research has found that entrepreneurial intention is influenced by multiple factors, including individual characteristics (Elnadi & Gheith, 2023), social environment (Santos et al., 2016), family

background (Georgescu & Herman, 2020), attitude (Mahfud et al., 2020), self-efficacy (Elnadi & Gheith, 2021), education (Hassan et al., 2021), and culture (Mukhtar et al., 2021). These factors can promote or hinder entrepreneurial intentions.

Research has shown that entrepreneurial intentions can be used to predict whether individuals will actually participate in entrepreneurial activities (Su et al., 2021). Highly positive entrepreneurial intentions are usually positively correlated with actual entrepreneurial behavior (Neneh, 2019). In short, entrepreneurial intention is a crucial concept used to explain and predict entrepreneurial behavior. It has significant application importance in entrepreneurship research and policy formulation, helping to understand why people choose entrepreneurship and how to support entrepreneurial activities.

Entrepreneurial intention in this research is operationalized through a series of 5-point Likert scale items that measure an individual's intent and determination to start a business. These items include assessing the respondent's goals, determination to create a firm, and future plans for business activity. This study allows quantitative analysis of entrepreneurial intentions.

2.4.1 Entrepreneurial Intentions of Millennium Students

Millennial students have a positive spirit of innovation in corporate furniture, and their work methods are very flexible (Zheng et al., 2023). They proficiently use technical tools, but also pay attention to social issues, pursue sustainability, are willing to take risks, start businesses, and focus on diversity and cooperation (Chaudhuri, 2020). This generation of student entrepreneurs has had a profound impact on the entrepreneurial ecosystem and future business models, integrating innovation and social value, and bringing new possibilities to business and society.

Millennial entrepreneurs face numerous challenges throughout the entrepreneurial process. One major hurdle is the difficulty in securing funding during the early stages of entrepreneurship, particularly for young entrepreneurs who lack savings and access to investment channels, making financial support relatively limited (Hasan et al., 2022). Despite their technological proficiency, millennials often struggle due to insufficient experience in areas such as business management and market operations. This intensifies the challenges of establishing themselves in a highly competitive market (Dewi et al., 2020). Additionally, uncertainty and external pressures inherent in entrepreneurship, particularly when faced with failure or setbacks, often impose significant psychological burdens (Hashim et al., 2022). Furthermore, many millennial college students lack a robust professional support network, such as mentors or business advisors, which hampers their ability to make critical decisions effectively (Dewi et al., 2020). The complexity of regulatory policies and legal frameworks also creates high entry barriers, further constraining startups' growth potential (Gupta et al., 2022). Moreover, balancing academic responsibilities with entrepreneurial ventures remains a significant challenge for student entrepreneurs, as the high-intensity time and energy required make it particularly difficult to coordinate these dual commitments (Benati & Fischer, 2020).

Millennial student entrepreneurs not only shape future business models but as well play a positive role in innovation, sustainability, and social change (Chaudhuri, 2020). Studying the entrepreneurial intentions of millennial college students is of particular importance, mainly due to their unique backgrounds and traits. The millennial generation has grown up amidst rapid technological advancements and economic changes, and their proficiency in technology gives them a natural advantage in the digital economy and innovation fields (Pandita, 2021). However, they also face unique challenges such as a lack

of funding in the early stages of entrepreneurship. They also face a lack of business management experience, and the dual burden of balancing academic and entrepreneurship responsibilities, among other psychological pressures. Studying millennial college students' entrepreneurial intentions can help us to understand their driving forces and obstacles to innovation and entrepreneurship. This has practical significance for supporting and cultivating future entrepreneurs. By gaining a deeper understanding of their entrepreneurial intentions, guidance can be provided to universities and policymakers to create a more favorable entrepreneurship environment for these students. This will promote broader social and economic development.

2.5 Entrepreneurial Attitudes

This section presents the key concepts and development of entrepreneurial attitudes, while addressing the challenges millennial students currently encounter in forming entrepreneurial attitudes. It also underscores the importance of studying entrepreneurial attitudes among millennial students. This offers valuable insights into the factors influencing their perceptions and dispositions towards entrepreneurship.

2.6 The Concept and Development of Entrepreneurial Attitudes

As per Ajzen (1991), entrepreneurial attitude signifies the extent to which an individual is predisposed or disinclined to engage in entrepreneurship endeavors. These attitudes can affect whether a person chooses to engage in entrepreneurship, as well as their performance and decision-making during the entrepreneurship process. Entrepreneurial attitudes typically include concepts such as tolerance for risks, awareness of opportunities, views on innovation, and confidence in entrepreneurship success (Liguori et al., 2020).

Entrepreneurship attitudes usually involve psychological factors such as individual cognition, emotion, and motivation (Wikansari et al., 2023). Additionally, attitudes towards entrepreneurship can influence individuals' decisions to engage in entrepreneurship pursuits (Liguori et al., 2020). Individuals with a favorable entrepreneurial attitude are more inclined to pursue entrepreneurship opportunities (Jena, 2020). Entrepreneurship attitudes can also affect performance and decision-making during entrepreneurial processes (Crovini et al., 2021). A positive entrepreneurial attitude is usually associated with a higher success rate in entrepreneurship, as they encourage individuals to be more optimistic, determined, and willing to face challenges (Liguori et al., 2020). Innovation is one of the driving forces of economic growth, and a positive entrepreneurial attitude encourages innovative thinking and action (Yuan et al., 2022). Therefore, they are crucial for social and economic development.

Entrepreneurial attitudes are important in entrepreneurship research and practice. They can predict entrepreneurship behavior and success but also affect innovation and economic growth. Therefore, understanding and cultivating a positive entrepreneurial attitude is crucial for supporting entrepreneurship activities. Entrepreneurial attitude is operationalized by gauging the respondent's general perception and emotional response to entrepreneurship. This is measured using 5-point Likert scale items that evaluate their attraction to entrepreneurship. These items evaluate the perceived benefits versus disadvantages, and their satisfaction with the idea of becoming an entrepreneur. The responses scored on the scale reflect individuals' attitudes towards entrepreneurship.

2.7 Entrepreneurial Attitudes of Millennium Students

A multitude of complex factors shape millennial students' entrepreneurial attitudes, and the maintenance of a positive entrepreneurial mindset and motivation is fraught with

challenges. Firstly, this generation frequently grapples with a conflict between business realities and their personal ideals in the pursuit of innovation and self-actualization, leading to a more cautious approach to entrepreneurship (Tuunainen & Kantasalmi, 2024). Secondly, millennials often exhibit insufficient psychological resilience and patience when confronted with long-term challenges, making them susceptible to a decline in confidence following setbacks, which ultimately impacts their long-term commitment to entrepreneurship endeavors (Abdul Hami, 2020).

Additionally, their heightened awareness of social responsibility and sustainable development frequently results in ethical dilemmas, particularly when business interests clash with personal values, potentially causing indecision in their decision-making processes (Sierra & Suárez-Collado, 2021). Finally, while millennials place a significant emphasis on work-life balance, the intense demands associated with entrepreneurship can blur the lines between personal and professional commitments, further intensifying their reservations and caution regarding entrepreneurial pursuits (Zimmerman, 2021). Collectively, these factors significantly influence millennial students' decision-making processes and shape their expectations and choices concerning future career trajectories.

Researching millennial students' entrepreneurial attitudes is particularly pertinent due to the unique social, economic, and technological context in which this generation has developed. Millennials' emphasis on innovation, technology integration, and social responsibility positions them as key players in the evolving business landscape (Chopra & Bhilare, 2020). Furthermore, millennials prioritize work-life balance and ethical decision-making, which introduces unique challenges in maintaining entrepreneurial motivation (Zimmerman, 2021). Understanding their entrepreneurial attitudes is crucial for

fostering environments that support their entrepreneurship potential, as they are poised to drive significant changes in business practices, sustainability, and innovation in the coming decades. This research can inform policymakers, educators, and business leaders about how to better support millennial entrepreneurs. This will ensure that their distinctive values and challenges are addressed in a way that promotes long-term success.

2.8 Entrepreneurial Self-Efficacy

This section presents the key concepts and importance of entrepreneurial self-efficacy, while addressing the challenges millennial students currently face in building their entrepreneurial self-efficacy. It also highlights the significance of studying entrepreneurial self-efficacy among millennial students, providing crucial insights into the factors that shape their confidence in entrepreneurship abilities and their potential for success.

2.8.1 The Concept and Importance of Entrepreneurial Self-Efficacy

In Chen et al. (1998)' research, entrepreneurial self-efficacy is defined as the level of individual confidence in effectively fulfilling entrepreneurship responsibilities and tasks. It pertains to an individual's capability and performance in the entrepreneurship domain, highlighting their personal assessment of their entrepreneurship abilities. Entrepreneurial self-efficacy reflects an individual's confidence and belief in overcoming obstacles, confronting challenges, exploring opportunities, and attaining success in the entrepreneurship journey (Liu et al., 2019). This concept aligns closely with Bandura and Wessels' (1994) self-efficacy theory, which posits that individuals' beliefs and expectations influence their actions and endeavors, thus impacting their outcomes, whether they succeed or not.

Individuals enhance their entrepreneurial self-efficacy through entrepreneurial experience and knowledge. Those with high levels of entrepreneurial self-efficacy are more inclined to make proactive entrepreneurship decisions and take action, bolstered by their belief in their ability to succeed (Yousaf et al., 2021). Furthermore, individuals with elevated entrepreneurial self-efficacy are better equipped to withstand challenges and stress, as they have confidence in their capacity to navigate various obstacles and difficulties encountered throughout the entrepreneurship journey (Anwar et al., 2021). Entrepreneurial self-efficacy stimulates individuals' innovative thinking and capacity to identify opportunities, as they have faith in their ability to recognize and capitalize on such opportunities. Studies have consistently demonstrated a positive correlation between entrepreneurial self-efficacy and enterprise success, indicating that entrepreneurs with high levels of self-efficacy are more likely to achieve significant success (Bohlayer & Gielnik, 2023).

Entrepreneurial self-efficacy is a pivotal concept in entrepreneurship research, facilitating the understanding and prediction of individual performance and decision-making within the entrepreneurship context. Nurturing and enhancing entrepreneurial self-efficacy is essential for entrepreneurs' success and overcoming challenges. This concept is operationalized by measuring respondents' confidence in their ability to perform entrepreneurship tasks successfully. Likert-scale items assess various aspects of self-efficacy, including the ability to work under pressure, generate creative ideas, identify market opportunities, and recruit employees. Each statement is rated on a 5-point scale, providing a quantitative assessment of individuals' perceived entrepreneurial capabilities.

2.8.2 Entrepreneurial Self-Efficacy of Millennium Students

Millennial students encounter multiple challenges regarding entrepreneurial self-efficacy, particularly translating theoretical knowledge into practice. Despite possessing a robust theoretical foundation through their education, they often struggle to apply this knowledge in entrepreneurial settings due to a lack of practical experience, which diminishes their confidence in strategic planning and problem-solving (Frolova et al., 2021). Additionally, they face significant obstacles to leadership and team management, especially when collaborating with team members from diverse backgrounds and skill sets. Their inexperience in effectively navigating team dynamics and resolving conflicts further undermines their self-efficacy (Gabrielova & Buchko, 2021). Furthermore, the uncertainties associated with expanding entrepreneurial projects pose considerable concerns, as the complexities of managing large enterprises, entering new markets, and securing funding lead them to doubt their ability to successfully scale their businesses (Bagheri & Zhu, 2023). Collectively, these factors present unique challenges for millennial students in cultivating entrepreneurial self-efficacy.

Self-efficacy is critical in determining whether millennials persist through business challenges, particularly in the early stages of business (Zhang et al., 2021). It serves as a vital psychological factor influencing millennial students' entrepreneurial intentions; those with higher self-efficacy are more likely to engage in entrepreneurship activities due to their confidence in overcoming potential obstacles (Yousaf et al., 2021). Examining their entrepreneurship self-efficacy offers valuable insights into their motivations and behavioral tendencies, laying the foundation for entrepreneurial success. Moreover, as a crucial force in global economic development, millennial entrepreneurial actions will directly impact future growth and social innovation (Chopra & Bhilare, 2020).

This research can inform universities, governments, and institutions in developing effective policies, such as enhancing entrepreneurship education, providing practical opportunities, and establishing incubation platforms to bolster students' self-efficacy (Domanski et al., 2020). In the context of globalization and technological change, fostering entrepreneurial self-efficacy among millennials is essential for cultivating future leaders and promoting sustainable development, as entrepreneurship drives social innovation.

2.9 Entrepreneurship Education

This section presents the key concepts and evolution of entrepreneurship education. It also discusses the challenges millennial students face in acquiring and applying entrepreneurship knowledge and skills. It also emphasizes the importance of entrepreneurship education for millennial students. It offers critical insights into how education influences entrepreneurial development and enhances entrepreneurial success.

2.9.1 The Concept and Development of Entrepreneurship Education

Entrepreneurship education is a form of education aimed at cultivating students' knowledge, skills, and ways of thinking necessary for entrepreneurship to help them better understand and participate in entrepreneurial activities (Pittaway & Cope, 2007). This form of education aims to help students or adults understand the entrepreneurial process, risk management, or knowledge and skills related to entrepreneurship. This is so that they can better prepare, manage, and successfully start new businesses or innovative projects (Ntshangase & Ezeuduji, 2023).

Entrepreneurship education first appeared in universities and business schools, usually as part of entrepreneurship majors or entrepreneurship courses (Kirby, 2004). These courses aim to provide students with entrepreneurial knowledge and skills to start their own

businesses after graduation. With the increasing demand for entrepreneurship education, education forms are also diversified. Nowadays, entrepreneurship education can be provided through various methods such as traditional classroom teaching, online courses, entrepreneurship competitions, mentor systems, incubators, etc. (Man et al., 2022; Yu, 2018). Entrepreneurship education has a significant social and economic impact (Ratten & Jones, 2021). Governments, businesses, and non-profit organizations are increasingly paying attention to entrepreneurship education and supporting related projects and initiatives.

In short, entrepreneurship education cultivates entrepreneurial spirit, stimulate individual innovative thinking, and foster entrepreneurial willingness. Entrepreneurs equipped with pertinent knowledge and skills are more apt to thrive on their business journey and mitigate associated risks. Entrepreneurship education serves as a crucial catalyst for innovation and honing entrepreneurship capabilities. It helps individuals and society succeed in entrepreneurship, thereby promoting economic and social development.

Entrepreneurship education is operationalized by assessing how respondents perceive the role of their educational institution in fostering entrepreneurial skills and knowledge. This is measured using 5-point Likert scale items that evaluate the extent to which the institution promotes entrepreneurship capabilities. It enhances relevant skills, provides applicable information for starting your own business, and supports entrepreneurial activities. Responses are collected on a measurement scale, enabling a quantitative evaluation of the effectiveness of entrepreneurship education as perceived by the participants.

2.9.2 Entrepreneurship Education of Millennium Students

With the rise of entrepreneurship education and technological advancements, more students are participating in these ventures, utilizing online platforms and startup ecosystems

for support (Schimperna et al., 2021; Zhou, 2021). Many universities now offer courses and resources to foster entrepreneurial skills, while cities provide funding and mentorship (Cheah & Ho, 2019). This trend is increasingly global, allowing students to tap into international markets (Minola et al., 2016). Student entrepreneurship plays a vital role in shaping future innovators and leaders.

However, the millennial generation still faces multiple challenges in entrepreneurship education. Firstly, existing entrepreneurship education courses usually focus on theoretical knowledge, while the lack of practical experience makes it difficult for students to effectively apply what they have learned in the actual entrepreneurship process, which in turn affects the improvement of their entrepreneurship abilities (Bauman & Lucy, 2021). Secondly, although many cities have entrepreneurship support programs, students still face difficulties obtaining entrepreneurial funding, which limits their ability to implement entrepreneurship ideas (Bernardino & Santos, 2020). Finally, many millennial entrepreneurs lack strong mentorship support and professional networks. This renders them prone to losing direction and lacking the necessary guidance and resources when making critical decisions (Patton, 2023). These factors collectively constitute the main challenges for the millennial generation in entrepreneurship education, affecting their entrepreneurial intentions and actual performance.

Entrepreneurship education is not only related to students' personal development, but also closely related to the economic growth of the country and society (Zhang et al., 2021). With the continuous changes in the global economy, cultivating talents with entrepreneurial abilities has become the key to improving national competitiveness (Listiningrum et al., 2020). Therefore, understanding the needs and challenges of millennial students in

entrepreneurship education is crucial for developing effective educational policies and curricula.

Moreover, as digital natives, millennial students have different learning habits and values from their predecessors. They tend to acquire knowledge through practical learning and interactive experiences, so traditional teaching methods may not effectively meet their needs (Hindrawati et al., 2023). Studying entrepreneurship education for millennial students can help educators innovate teaching methods to better adapt to the characteristics of this generation of students. This will improve their learning outcomes and entrepreneurial abilities. Taking into account the educational needs of millennial students in this field can promote the updating of entrepreneurship education content. This will make it more forward-looking and socially adaptable, cultivating future entrepreneurs with innovation and social responsibility. As a result, entrepreneurship education for millennial students is of paramount significance for comprehensive personal, professional, and economic development.

2.10 Gaps in Literature

Examining how entrepreneurial attitudes, individual self-efficacy, and entrepreneurial education influence entrepreneurial intention is a valuable and pertinent subject. However, like in any research field, there is always an opportunity for further investigation and exploration. While the beneficial impact of entrepreneurial education on students' intentions is widely acknowledged, variations emerge due to differences in program quality, content, and delivery methods (Anwar & Abdullah, 2021). This research delves into the contentious correlation between entrepreneurship education and entrepreneurial intention, considering the divergent effects observed across different nations. Moreover, existing research underscores the critical role of a positive entrepreneurial attitude

in influencing higher entrepreneurial intentions among college students; however, a significant gap remains in understanding the nuanced interplay between these attitudes and intentions (Alam et al., 2019; Karimi, 2020; Nguyen et al., 2019). Conflicting findings, such as Schwarz et al.'s (2009) discovery that competitiveness-supporting students may be less inclined to entrepreneurship, necessitate further research on this relationship in diverse contexts.

There are also diverse viewpoints regarding whether entrepreneurial self-efficacy influences entrepreneurial intention directly or indirectly. Studies suggest that high-level entrepreneurial intentions can result from various self-efficacy configurations (Ahin et al., 2019; Soomro & Shah, 2022; Udayanan, 2019; Xiaoping & Hua, 2019). Moreover, findings indicate that self-efficacy plays a mediating role; for instance, a study involving Vietnamese college students revealed that the influence of entrepreneurship education on entrepreneurial intention is influenced by self-efficacy (Hoang et al., 2020). This study examines not only the direct influence of self-efficacy on entrepreneurial intention but also whether self-efficacy mediates the connection between self-efficacy attitude, entrepreneurship education, and entrepreneurial intention among millennial college students.

While considerable research has explored factors influencing entrepreneurial intention, many studies focus on a single influencing factor. For instance, multiple researchers, including Do and Dadvari (2017), Liguori et al. (2020), and Jena (2020), have focused more on entrepreneurial attitudes, while Soomro and Shah (2022), NowińSki et al. (2019), and Wardana et al. (2020) concentrated on self-efficacy or entrepreneurship education. This study integrates entrepreneurial attitude, entrepreneurship self-efficacy, and entrepreneurship education to examine their collective impact on entrepreneurial

intention. Consequently, this research extends the existing model, scrutinizing numerous factors to achieve a more holistic understanding of entrepreneurial intention determinants.

Furthermore, this study describes the research scope for Jinan City. It investigates how entrepreneurial attitudes, self-efficacy, and entrepreneurship education affect millennial college students' entrepreneurial intentions. Due to limited research in the region and the high level of support shown by the Jinan Municipal Government toward college student entrepreneurship (Jinan Public Service Employment Center, 2022), this study provides essential insights and support for stakeholders in Jinan City.

Focusing solely on entrepreneurial intention allows for a clear reflection of attitude, education, and self-efficacy. This is because intention is a key predictor of actual entrepreneurship behavior. Entrepreneurial intention directly reflects individuals' motivation to start a business. This is shaped by their attitudes towards entrepreneurship, education, and perceived self-efficacy. By centering on intention, the study can more precisely analyze how these factors contribute to the decision-making process, offering valuable insights into how attitudes, education, and self-efficacy translate into entrepreneurship aspirations.

2.11 Hypotheses Development

There are three specific hypotheses representing the proposed relationships. These are the relationships between entrepreneurship attitudes and entrepreneurial intentions, entrepreneurship self-efficacy and entrepreneurial intention, entrepreneurship education and entrepreneurial intention. Literature research reveals the complex connections between these variables. This study develops relevant hypotheses based on the research questions and objectives, combined with relevant literature.

2.11.1 Relationship Between Entrepreneurial Attitudes and Entrepreneurial Intentions

Entrepreneurial attitude encompasses an individual's emotions, beliefs, and disposition towards entrepreneurship endeavors, epitomizing one's perspectives and sentiments regarding the entrepreneurship journey, its inherent risks, opportunities, and prospects for success (Karani & Achuthan, 2019). Intention is understood to be a motivational element that impacts actions, reflecting an individual's willingness to put planned actions into practice (Liñán and Santos, 2007). Entrepreneurial intention refers to a person or group of people clearly expressing their willingness and plans to start an entrepreneurial business or engage in entrepreneurial activities (Hermozilha & Borrero, 2020). It reflects an individual's decision to transform ideas or business opportunities into practical actions (Do & Dadvari, 2017). As a result, Mahfud and colleagues (2020) argue that when the intention to execute a particular action becomes more pronounced and resolved, it aligns with a heightened probability of effectively translating that intention into concrete action. This suggests that the strength of one's intention significantly influences the likelihood of the intended action being successfully put into practice.

Studies have demonstrated a connection between entrepreneurial attitude and entrepreneurial intention. Zulfiqar et al. (2019) conducted a survey among students at a specific business school, uncovering an important connection between students' entrepreneurial attitudes and intentions. Similarly, an investigation involving 215 students enrolled in Indonesian polytechnics revealed a positive association between their entrepreneurial attitudes and intentions (Mahfud et al., 2020). Likewise, an exploration involving 509 students from various business management institutions in central India also

demonstrated that a positive entrepreneurial attitude influences entrepreneurial intentions (Jena, 2020). Empirical testing conducted by Liguori et al. (2020) on 320 undergraduate business students at a prominent university in the United States substantiated the significance of entrepreneurial attitude in mediating the nexus between entrepreneurship motivation and intention. This underscores the pivotal role of attitude as a precursor to entrepreneurial intentions.

Researchers frequently link entrepreneurial intention to the orientation of an entrepreneurial attitude, asserting that entrepreneurial behavior can be influenced by entrepreneurial intention stemming from this attitude (Alam et al., 2019; Karimi, 2020; Nguyen et al., 2019). The interplay of attitude and intention seems to play a pivotal role in shaping entrepreneurial behavior. Numerous studies conducted abroad have confirmed the correlation between entrepreneurial attitude and entrepreneurial intention (Liguori et al., 2020; Mahfud et al., 2020; Zulfiqar et al., 2019). Conflicting research findings exist. For instance, Schwarz et al. (2009) revealed that students with a positive attitude toward competitiveness are less likely to endorse entrepreneurship. Fitzsimmons and Douglas (2005) acknowledge the significance of entrepreneurial attitudes in elucidating career decisions. However, also observed disparities in the influence of individual entrepreneurial attitudes on intentions across different countries. This highlights the ongoing necessity for further exploration into the relationship between entrepreneurial attitudes and intention within diverse research contexts. Consequently, this study posits the following hypotheses:

H1: Entrepreneurial attitudes have a significant positive influence on the entrepreneurial intentions of millennial college students.

2.11.2 Relationship Between Entrepreneurial Self-Efficacy and Entrepreneurial Intentions

Entrepreneurial self-efficacy refers to an individual's belief in their personal capacity to effectively undertake and accomplish entrepreneurship tasks and challenges (Neneh, 2022). It encapsulates the confidence that an aspiring entrepreneur possesses in their ability to recognize and capitalize on opportunities, surmount obstacles, manage risks, and ultimately succeed in their entrepreneurship endeavors (Simaras et al., 2022). Entrepreneurial self-efficacy stands as a critical psychological construct because it directly influences the degree to which individuals are willing to engage in business activities, persevere in the face of setbacks, and navigate the uncertainties inherent in the entrepreneurship journey (Li et al., 2020). This concept finds its foundation in Bandura and Wessels's (1994) self-efficacy theory, which suggests that an individual's belief in their capability to execute specific actions profoundly shapes their decisions, effort, and persistence in pursuing those actions.

Elnadi and Gheith (2021) examined the impact of entrepreneurial self-efficacy on entrepreneurial intention among 259 business students at a public university in Saudi Arabia. They found that self-efficacy directly or indirectly affects entrepreneurial intent, revealed significant gender differences in this regard. Chien-Chi et al. (2020) investigated social entrepreneurship among millennial college students, discovering significant positive correlations between all aspects of entrepreneurial self-efficacy and entrepreneurial intention, with entrepreneurial self-efficacy serving as a mediator between emotional intelligence and entrepreneurial intention. Similarly, Şahin et al. (2019) demonstrated that various configurations of entrepreneurial self-efficacy can lead to high entrepreneurial intention.

These results are in line with those of other researchers, including Soomro and Shah (2022), Udayanan (2019), and Xiaoping and Hua (2019).

All the aforementioned studies demonstrate a strong association between entrepreneurial self-efficacy and entrepreneurial intention. Nonetheless, there is a paucity of research focusing on the context of the Jinan region in China. Therefore, it is imperative to further investigate whether there exists a relationship between entrepreneurial self-efficacy and entrepreneurial intention among millennial college students in the Jinan region. The results of this study therefore lead to the following research hypotheses:

H2: Entrepreneurial self-efficacy has a significant positive influence on the entrepreneurial intentions of millennial college students.

2.11.3 Relationship Between Entrepreneurship Education and Entrepreneurial Intentions

Entrepreneurship education encompasses a systematic and deliberate approach to disseminating knowledge, skills, attitudes, and mindsets pertinent to entrepreneurship (Arnaut, 2020). Its purpose is to provide individuals with the aptitudes and proficiency required for recognizing, conceiving, evaluating, and exploiting business opportunities, along with efficiently strategizing, initiating, and overseeing entrepreneurship endeavors (Ghafar, 2020). This form of education can take place across different educational tiers, ranging from elementary and high schools to tertiary institutions and specialized training initiatives (Boldureanu et al., 2020). It encompasses a wide range of subjects, including business management, risk management, and problem-solving, with the goal of fostering entrepreneurial thinking and action (Aransyah et al., 2023). Through experiential learning,

theoretical frameworks, case studies, mentorship, and practical exercises, entrepreneurship education aims to cultivate entrepreneurship mindset, enhance entrepreneurial skills, and empower individuals to succeed in the dynamic and competitive world of entrepreneurship (Wardana et al., 2020).

Hassan et al. (2021) conducted an investigation involving 323 college students and found that entrepreneurship education fosters individual entrepreneurship inclination and motivation, positively correlating to entrepreneurial intention. Similarly, Kusumojanto et al. (2020) affirmed that entrepreneurship education can enhance students' creativity. Moreover, a study focusing on Chinese college students revealed that entrepreneurship education enhances their capacity to initiate businesses in both present and future entrepreneurship pursuits, with the entrepreneurship skills acquired through such education consistently influencing entrepreneurial intentions (Lv et al., 2021). Furthermore, Uddin et al. (2022) analyzed data from 359 private college students, validating that entrepreneurship education influences entrepreneurial intention.

While entrepreneurship education positively influences entrepreneurial intent, divergent findings exist in the literature. Nowinski et al. (2019) examined the impact of entrepreneurship education across four countries - Czech Republic, Hungary, Poland, and Slovakia - On college students' entrepreneurial intentions. Their findings revealed that only Poland exhibited a direct impact. In contrast, entrepreneurship education in other countries did not directly affect college students' entrepreneurial intentions. This suggests that due to varying research contexts, entrepreneurship education may have different effects on entrepreneurial intentions in different countries. Consequently, it is crucial to further

investigate whether entrepreneurship education impacts entrepreneurial intentions of millennial college students in Jinan. This study proposes the following hypothesis:

H3: Entrepreneurship education has a significant positive influence on the entrepreneurial intentions of millennial college students.

2.11.4 The Mediating Role of Entrepreneurial Self-efficacy

A study conducted by Hoang et al. (2020) on Vietnamese university students indicated that entrepreneurship education positively influenced entrepreneurial intention, with this relationship mediated by learning orientation and self-efficacy. Similarly, Jiatong et al. (2021) gathered self-management survey data from 365 college students in Jiangsu and Zhejiang provinces of China, demonstrating that entrepreneurship education, entrepreneurial mindset, and creativity significantly and positively impact entrepreneurial intention. Furthermore, the results indicate that entrepreneurial self-efficacy partially contributes to the relationship between entrepreneurship education, entrepreneurial mindset, and entrepreneurial intention. Additionally, several studies have corroborated the mediating role of entrepreneurial self-efficacy between entrepreneurship education and entrepreneurial intention (Setiawan & Lestari, 2021; Wu et al., 2022).

Anwar et al. (2021) conducted an analysis of data collected from 663 students across three distinct Indian universities, unveiling the direct impact of entrepreneurship traits on entrepreneurial attitude and self-efficacy. Additionally, they noted a significant indirect relationship between entrepreneurial attitude and self-efficacy, and entrepreneurial intention, with these connections being mediated by these factors. Similarly, Yousaf et al. (2021) presented findings that support a continuous mediation process, showing how entrepreneurship education influences entrepreneurial intention by altering individuals'

attitudes toward initiating and expanding businesses via the enhancement of entrepreneurs' self-efficacy. Moreover, Kisubi and Korir (2021) provided initial evidence supporting the mediating roles of entrepreneurship self-efficacy and attitude in the correlation between entrepreneurship training and entrepreneurial intention. Chan and Lay's (2021) study believes that the emotional state of scientific teaching shows a substantial mediating effect between teacher self-efficacy beliefs and teaching intention.

The above research findings highlight the validation of entrepreneurial self-efficacy's mediating role, as supported by previous research. However, it is evident that there is a notable lack of comprehensive exploration of the influential factors affecting millennial college students' entrepreneurial intentions. Therefore, this study proposes the following hypotheses:

H4a: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial attitude and entrepreneurial intention of millennial college students.

H4b: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial education and entrepreneurial intention of millennial college students.

2.12 Conceptual Framework

The conceptual framework of this study constructs four hypotheses to explain the relationship between the variables and provides literature support for them. First, studies have shown that there is a significant positive relationship between entrepreneurial attitude and entrepreneurial intention; a positive entrepreneurial attitude can enhance an individual's

entrepreneurial intention (Mahfud et al., 2020; Jena, 2020; Zulfiqar et al., 2019). Second, entrepreneurship self-efficacy, defined as an individual's confidence in their own entrepreneurship ability, directly affects entrepreneurial intention. Research confirms that high self-efficacy can motivate individuals to pursue entrepreneurship goals more firmly (Neneh, 2022; Chien-Chi et al., 2020; Elnadi & Gheith, 2021).

In addition, entrepreneurship education positively impacts entrepreneurial intention by systematically imparting entrepreneurship knowledge and skills, thereby enhancing individuals' understanding and confidence in entrepreneurship (Hassan et al., 2021; Kusumojanto et al., 2020; Lv et al., 2021). More importantly, entrepreneurial self-efficacy mediates between entrepreneurial attitude, entrepreneurial education, and entrepreneurial intention. Related studies have shown that a positive entrepreneurial attitude and high-quality entrepreneurial education can further strengthen entrepreneurial intention by enhancing individuals' sense of self-efficacy (Jiatong et al., 2021; Hoang et al., 2020). The research hypotheses in this study not only reveal the direct impacts of entrepreneurial attitude, entrepreneurial self-efficacy, and entrepreneurial education on entrepreneurial intention but also emphasize the mediating role of entrepreneurial self-efficacy. This conceptual framework is illustrated in Figure 2.1.

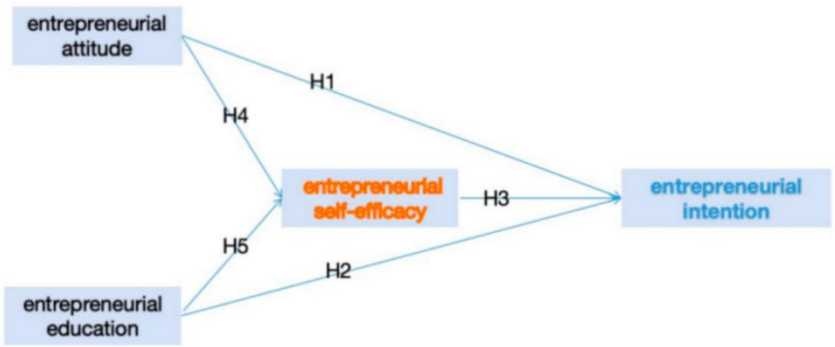

Figure 2.1: Research Conceptual Framework

2.13 Chapter Summary

This chapter presents a comprehensive review of the literature concerning entrepreneurial attitudes, entrepreneurship self-efficacy, entrepreneurship education, and entrepreneurial intentions. The review reveals the interconnectedness of these variables, with various studies demonstrating the significant influence of entrepreneurial attitudes, self-efficacy, and entrepreneurship education on entrepreneurial intention. Furthermore, grounded in the theory of planned behavior, this chapter proposes a research framework and formulates research hypotheses to investigate these relationships in increased depth.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology, focusing on quantitative research approaches, specifically utilizing cross-sectional survey designs for data collection. The survey questionnaire was distributed online to individuals who met the inclusion criteria. Additionally, this chapter discusses the assessment of the effectiveness and reliability of the research tools to ensure the accuracy of the collected data. Various sampling methods were examined, including participant selection and sample size calculations. The chapter details the sources for samples, outlining selection criteria and recruitment processes employed. Furthermore, it elucidates the data analysis methods used to test the relevance of the collected data and validate the research hypotheses. This chapter provides a comprehensive exposition of the research methodology, emphasizing the validity, reliability, and accuracy of the research findings.

3.2 Research Design

The research design serves as a blueprint for planning and executing the study in a manner that effectively addresses the research questions and tests the hypotheses (Abutabenjeh & Jaradat, 2018). For this study, a cross-sectional research design was selected, as it aligns well with research objectives that aim to examine relationships between variables at a single point in time. This design is advantageous due to its cost-effectiveness and time efficiency, as it minimizes the need for repeated data collection over extended periods (Favieri et al., 2019). Furthermore, the cross-sectional approach facilitates comparisons

among different groups, making it particularly suitable for this research context, where understanding group differences is of interest (Wagg et al., 2021). Thus, the choice of a cross-sectional quantitative design is justified by the study's emphasis on efficiency, objectivity, and the ability to explore relationships between variables within a defined timeframe.

Quantitative research was chosen as the primary method because the study aims to test hypotheses and identify relationships between variables through numerical data. This approach offers objectivity, allowing statistical analysis to derive meaningful insights and make generalizations (Bloomfield & Fisher, 2019). Given the research goals and the need for precise, measurable results, quantitative research provides a structured and efficient means of data collection. This enables larger sample sizes and diverse statistical tools. The decision to employ this method ensures that the research can produce reliable and replicable findings, contributing to evidence-based conclusions (Mohajan, 2020). Based on the research objectives and rationale for this study, quantitative research is deemed the best methodological choice.

3.3 Research Methodology

Research methodology encompasses the procedures and techniques used for gathering, evaluating, and interpreting data to address research questions or test hypotheses (Lê & Schmid, 2022). The selection of appropriate methods is crucial, as it enhances the accuracy, credibility, and overall quality of research. This section outlines the specific methods employed in this study. These include data collection techniques, data analysis procedures, sampling strategies, and considerations regarding sample size.

3.3.1 Data Collection Method

Online data collection was selected for its broad reach, flexibility, and efficiency, which significantly enhance response rates and reduce errors through automated validation (Granello & Wheaton, 2004; Androutsopoulos, 2017). This method aligns with the study's objectives by providing accurate and timely data, while also ensuring a more diverse representation of participants. Moreover, it minimizes logistical challenges, making the data collection process more manageable and cost-effective for the researcher.

This study utilized Wenjuanxing as the online data collection platform. Wenjuanxing is a prominent survey platform in China designed to assist researchers and institutions in creating, distributing, and collecting survey data. The platform offers robust questionnaire design and editing functions, enabling users to create various survey formats, including fill-in-the-blank, multiple-choice, and scaled questions. Users can customize questionnaire content according to their research objectives and needs, using templates or self-designed questions.

Wenjuanxing also provides multiple distribution methods, allowing researchers to share questionnaires with respondents through links, QR codes, social media, email, and more. Respondents can complete the questionnaire online or via mobile devices, with data automatically submitted to the platform's server. Additionally, Wenjuanxing offers extensive data analysis and reporting functionalities, allowing users to visualize and analyze collected data in charts, tables, and other formats. Users can also export the data for further analysis or inclusion in research reports. As a widely used and established data collection platform in China, Wenjuanxing effectively meets researchers' needs.

3.3.2 Sampling Strategies

In recent years, Jinan City has made significant efforts to support young college students' entrepreneurship. In 2019, the city issued the "Jinan University Graduate Employment and Entrepreneurship Policy", which provides young entrepreneurs with subsidies and various forms of technical support (Zhong et al., 2021). Additionally, Jinan actively encourages college students to return to their hometowns to start businesses, promoting rural economic development (Peng et al., 2022; Wu et al., 2024). These targeted initiatives create a favorable environment for fostering entrepreneurial ambitions among millennial students, making Jinan an ideal setting for studying their entrepreneurial intentions. By examining students within this policy-driven context, the study can provide valuable insights into how different factors influence young, aspiring entrepreneurs' aspirations.

This study focuses on millennial students from Jinan, Shandong Province, as the sample selection object. College students, typically representing the future of the younger generation, often possess innovative thinking, adventurous spirit, and entrepreneurship potential. Examining their entrepreneurial intentions provides valuable insights into emerging trends among future entrepreneurs. Furthermore, understanding college students' entrepreneurial intentions can help predict and address employment challenges. Therefore, selecting college students as subjects for this study is justified, as they constitute a significant group of entrepreneurship talent, and researching them can foster greater understanding and development in the field of entrepreneurship.

This study employed purposive sampling to investigate entrepreneurial intentions of millennial students from three universities in Jinan. It targeted individuals born between 1981 and 1996. Eligible participants include undergraduate, master's, and doctoral students who are currently enrolled or have recently graduated. This is provided they have expressed an interest in entrepreneurship or engaged in related activities. This targeted approach facilitates an in-depth understanding of entrepreneurial intentions and influencing factors specific to this demographic.

To identify suitable participants, information was gathered from entrepreneurship centers and student organizations within each university, focusing on those involved in entrepreneurial activities. After compiling a list of potential participants, eligible individuals were directly contacted and invited to participate in the study. Data was collected via questionnaires. The selection process was meticulously documented, with the rationale for purposive sampling and its potential limitations discussed in the data analysis and results report. This ensured the validity and reliability of the research conclusions.

The subjects of this study, millennial college students, are expected to have graduation years ranging from 2003 to 2026, depending on their educational paths. Due to the lack of comprehensive student population data published on official university websites, purposive sampling was deemed necessary to maintain the relevance and effectiveness of the sample. Although the Jinan government does not release annual graduate statistics, it reported 59,045 ordinary and vocational graduates in 2023. This suggests an estimate of over one million graduates from 2003 to 2023.

Table 3.1: Population and Sampling

Description	Quantity	Remarks
Millennial students	Over 1 million	Jinan City
Sampling	384	Based on to Krejcie & Morgan's (1970)
Target distribution of questionnaires	450	Finally received 405 valid questionnaires

Table 3.2: Krejcie and Morgan Table (1970)

N	s	N	s	N	s	N	s	N	s
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Site; S is Sample Size

To ensure sample representativeness, data was collected from 50 students across each of the nine selected universities. This resulted in a total sample size of 450 participants. This approach is designed to provide sufficient data for a comprehensive analysis of entrepreneurial intentions of millennial college students. This will yield valuable insights for future policy recommendations and practices. The study follows Krejcie and Morgan's (1970) guidelines, which recommend a sample size of 384 for populations exceeding one million.

To accommodate potential incomplete responses or invalid data, 450 questionnaires were distributed.

3.4 Research Survey Questionnaire

The survey consists of five distinct sections, each targeting specific aspects relevant to the research. Section 1 collects essential personal information from respondents, including gender, age, job position, and educational background. In Section 2, entrepreneurial attitudes are measured using five questions adapted from Liñán and Chen (2009). Section 3 assesses entrepreneurship self-efficacy with six questions sourced from Tsai et al. (2014) and Liñán (2008). In Section 4, entrepreneurship education is evaluated through four measurement questions derived from Denanyoh et al. (2015). Finally, Section 5 measures entrepreneurial intention, incorporating five questions from Liñán and Chen (2009). The survey employs a 5-point Likert scale. A detailed presentation of the survey items is provided in the table below:

Table 3.3: Research Survey Questionnaire

Section	Items	Source
1	***Personal Information*** 1.What is your gender? 2.What is your age group? 3.What is your professional category? 4.Do you have any entrepreneurial experience?	Researcher

Table 3.3 continued

2	***Entrepreneurial Attitude*** EA1 Being an entrepreneur implies more advantages than disadvantages to me. EA2 A career as entrepreneur is attractive for me. EA3 If I had the opportunity and resources, I'd like to start a firm. EA4 Being an entrepreneur would entail great satisfactions for me. EA5 Among various options, I would rather be an entrepreneur.	Liñán and Chen (2009)
3	***Entrepreneurial Self-Efficacy*** ESE1 I can work productively under continuous stress, pressure, and conflict. ESE2 I can originate new ideas and products. ESE3 I can develop and maintain favorable relationships with potential investors. ESE4 I can see new market opportunities for new products and services. ESE5 I can recruit and train key employees. ESE6 I can develop a working environment that encourages people to try out something new.	Tsai et al. (2014) and Liñán (2008)
4	***Entrepreneurship Education*** EE1 The college promotes the students' capability required for entrepreneurship. EE2 The college enhances students' skills related to entrepreneurship. EE3 The college gives students with applicable information and assist students on how to initiate a venture. EE4 I believe that entrepreneurship matters can be initiated through education.	Denanyoh et al. (2015)

Table 3.3 continued

5	***Entrepreneurship Intention*** EI1 My professional goal is becoming an entrepreneur. EI2 I will make every effort to start and run my own firm. EI3 I am determined to create a firm in the future. EI4 I have very seriously thought of starting a firm. EI5 I have got the firm intention to start a firm someday.	Liñán and Chen (2009)

3.5 Pilot Testing

Pilot testing is a preliminary stage in research aimed at evaluating and improving the feasibility and effectiveness of research tools, methods, procedures, or projects. Pilot testing is used to identify necessary adjustments and improvements before formal implementation (Husni et al., 2007). This process typically involves small-scale testing to verify the feasibility of research designs, tools, or processes, identify potential issues, and make corrections based on the test results. By doing so, pilot testing helps ensure the smooth progress and effectiveness of the research or project (Radhakrishna, 2011). Moreover, it can significantly reduce potential issues during the formal implementation phase, ultimately enhancing the quality of the research or project.

In this study, although questionnaires were adapted from various researchers, it was essential to conduct a pilot test to validate the questionnaire's appropriateness for the specific context of the study, given the differences in survey countries and target populations. Since the survey focused on China participants, the questionnaire was distributed in Chinese. To minimize translation errors, the Chinese translation was reviewed by professional English

instructors. Once the translation accuracy was confirmed, a pilot test was conducted with 30 respondents invited to complete the questionnaire. The results of the pilot study are presented in Table 3.4.

Table 3.4: Reliability and Validity

Item	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
EA	0.918	0.918	0.939	0.753
ESE	0.928	0.929	0.944	0.737
EE	0.901	0.901	0.931	0.771
EI	0.928	0.929	0.944	0.737

Note：EA=entrepreneurial attitude, ESE=entrepreneurial self-efficacy, EE=Entrepreneurship education, EI=entrepreneurial intention

According to Table 3.4, the Cronbach's alpha values (Dalyanto, 2021) for entrepreneurial attitude, entrepreneurial self-efficacy, self-employment education, and entrepreneurship intention are 0.918, 0.928, 0.901, and 0.928, respectively. As indicated in Table 3.5, which outlines the general standards for interpreting Cronbach's alpha values, all measured variables in this survey exceed the threshold of 0.8. This demonstrates excellent reliability for the questionnaire, confirming that the instrument produces consistent and trustworthy results.

Additionally, the average variance extracted (AVE) for each construct exceeded the acceptable threshold of 0.5, with entrepreneurial attitude, entrepreneurial self-efficacy, entrepreneurship education, and entrepreneurship intention recording AVE values of 0.753, 0.737, 0.771, and 0.737, respectively. These results indicate strong convergence validity among the constructs. Consequently, these findings establish a robust measurement model,

validating the constructs as accurate representations of the theoretical concepts under investigation.

Table 3.5: Cronbach's Alpha Reliability Level

Cronbach's Alpha Value	Reliability Level
0.0 - 0.20	Less Reliable
>0.20 - 0.40	Somewhat Reliable
>0.40 - 0.60	Reliable enough
>0.60 - 0.80	Reliable
>0.80 - 1.00	Very Reliable

3.6 Underpinning Theories

This section outlines the theoretical frameworks that underpin this study, providing insights into the factors influencing entrepreneurial intentions among millennial students. By integrating these theories, the research aims to elucidate the key variables at play in shaping entrepreneurial behavior. The following subsections will examine the Theory of Planned Behavior and Social Cognitive Theory. Both are crucial for understanding the interplay between entrepreneurship attitudes, self-efficacy, and education impact.

3.6.1 Theory of Planned Behavior

The Theory of Planned Behavior (TPB) is a theoretical model in social psychology that explains individual behavioral intentions and subsequent behaviors (Ajzen, 1991), as illustrated in Figure 3.1. Proposed by Ajzen (1991), the TPB builds upon and extends previous theories of rational behavior and planning. According to this theory, a person's

behavioral intention is a significant predictor of their subsequent behavior. Behavioral intention reflects the degree to which an individual anticipates and plans to engage in a specific behavior. This can encompass a range of conscious actions, such as purchasing a product, adopting a healthy habit, or aspiring to pursue entrepreneurship (Cunningham & Kwon, 2003).

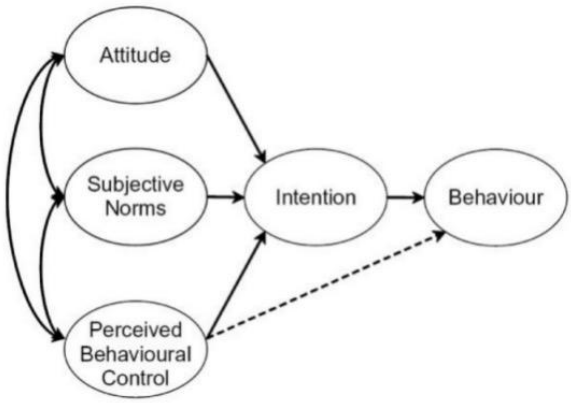

Figure 3.1: Theory of Planned Behavior

TPB posits that individuals' behavioral intentions are influenced by three key factors: attitudes, subjective norms, and perceived behavioral control (Sheppard et al., 1988). Attitude refers to an individual's evaluation of a particular behavior as either favorable or unfavorable, which is shaped by their perceptions of the potential outcomes associated with performing that behavior (Manstead, 1996). In the context of entrepreneurial intention, entrepreneurial attitude represents an individual's assessment of entrepreneurship behavior, encompassing considerations such as potential successes, challenges, risks, and other relevant factors (Lu et al., 2021). Within TPB, attitude serves as a core determinant of behavioral intention, and entrepreneurial attitude is a critical factor influencing entrepreneurial intention. TPB provides a strong theoretical foundation for understanding how entrepreneurial attitudes impact students' entrepreneurial intentions.

This study also examines the relationship between entrepreneurship self-efficacy and entrepreneurial intention. In the context of TPB, self-efficacy closely aligns with "perceived behavioral control," which refers to an individual's perception of their capability to successfully engage in a specific behavior. The strength of perceived behavioral control directly influences entrepreneurial intention, providing a theoretical foundation for understanding how self-efficacy affects entrepreneurial intentions.

Additionally, this study explores the relationship between entrepreneurship education and entrepreneurial intention. TPB says education can influence entrepreneurial intentions by shaping students' attitudes, subjective norms, and perceived behavioral control (Wijayati et al., 2021). Entrepreneurship education not only enhances students' entrepreneurship skills but also increases their confidence in entrepreneurial success, thereby affecting their entrepreneurial intentions (Jena, 2020).

Entrepreneurial self-efficacy can affect perceived behavioral control, as higher self-efficacy may increase individuals' confidence in their ability to control entrepreneurial behavior (Doanh & Bernat, 2019). TPB posits that perceived behavioral control can directly influence an individual's intention. It may also serve as a mediator between factors such as attitude and intention. Therefore, examining the mediating role of self-efficacy in this study aligns with the TPB framework, highlighting its critical role.

In conclusion, the Theory of Planned Behavior, through its emphasis on factors such as attitude and perceived behavioral control, provides a robust theoretical basis for this study. It helps to explain how millennial college students' entrepreneurial attitudes, entrepreneurial education, and self-efficacy influence their entrepreneurship intentions.

3.6.2 Social Cognitive Theory

Social cognitive theory (SCT) underscores the process by which individuals acquire knowledge and skills through observing, imitating, and evaluating the behaviors, thoughts, and emotions of others. They then apply these observations to their own behavior and decision-making processes (Schunk, 2012). Social cognitive theory focuses on the interaction between cognitive processes, emotional factors, self-regulation, and environmental factors to explain and predict behavior (Bandura, 2002). Refer Figure 3.2.

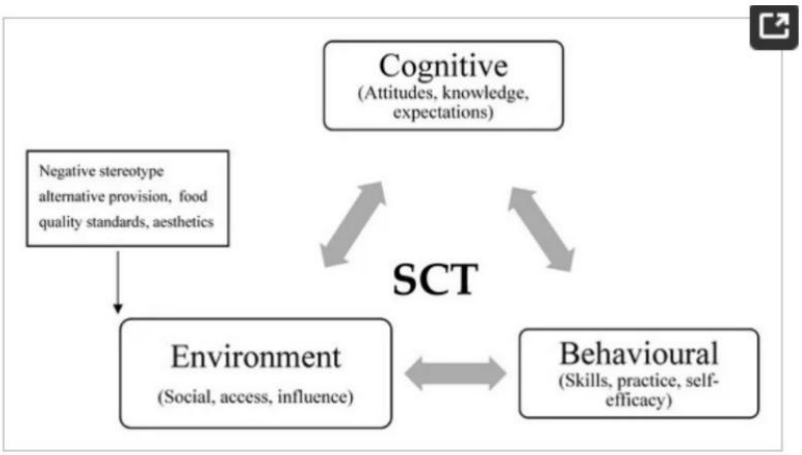

Figure 3.2: Social Cognitive Theory

In exploring the entrepreneurial intentions of millennial college students, social cognitive theory offers valuable insights. It sheds light on the intricate interplay between individual behavior and various factors such as cognition, emotion, and interpersonal learning. Social cognitive theory says observation and imitation are one of the main mechanisms of learning (Cai & Shi, 2022). Millennial college students often shape their entrepreneurial attitudes by observing others' entrepreneurial experiences and attitudes. If millennial college students observe positive entrepreneurship role models, they are likely to develop a more positive entrepreneurial attitude and exhibit stronger entrepreneurial

intentions. This perspective aligns with research objectives concerning entrepreneurial attitudes and intentions.

In addition, social cognitive theory introduces the idea of self-efficacy, which refers to an individual's confidence in his or her ability to perform tasks effectively (Harrison et al., 1997). This study also explores the influence of millennial college students' entrepreneurial self-efficacy on their entrepreneurial intentions. Those with strong self-efficacy may show increasing confidence in pursuing entrepreneurship goals and an increased willingness to overcome obstacles, aligning with social cognitive theory's self-regulation concept.

SCT also focuses on environmental factors, including education. This study investigates the impact of entrepreneurship education on millennial college students' entrepreneurial intentions. Social cognitive theory suggests that the educational environment can provide entrepreneurial expertise and abilities, while also influencing students' attitudes and intentions by cultivating positive entrepreneurship role models (Boldureanu et al., 2020).

In summary, social cognitive theory offers a robust theoretical framework for research. This facilitates an understanding of how various factors, including entrepreneurship attitude, entrepreneurial self-efficacy, and entrepreneurship education, influence entrepreneurial intentions of millennial college students. Through the integration of theoretical insights and empirical investigation, this study aims to achieve a more comprehensive understanding of this significant domain. By doing so, it can offer valuable guidance and formulate effective educational strategies to nurture future entrepreneurs.

3.7 Data Analysis Methods

Data analysis methods refer to a series of technologies, tools, and processes used to process, interpret, and extract information about a dataset (Thomson & Emery, 2014). These methods transform raw data into meaningful insights, patterns, and conclusions to support decision-making, discover correlation relationships, or validate hypotheses. This study applied Smart PLS 4.0 to analyze quantitative data through a structured process. It focused on assessing model fit, testing hypotheses, and examining mediation effects.

Initially, a confirmatory factor analysis (CFA) was conducted to evaluate the measurement model's reliability and validity. This included calculating factor loadings, composite reliability (CR), and average variance extracted (AVE) to confirm that each construct met acceptable thresholds, with loadings above 0.7, CR values above 0.7, and AVE values above 0.5, ensuring convergent validity.

Following measurement model validation, the structural model was analyzed to test the hypothesized relationships between entrepreneurial attitude, entrepreneurial self-efficacy, entrepreneurship education, and entrepreneurship intention. Direct effects were assessed through path coefficients, T-values, and P-values.

Finally, indirect effects were evaluated to determine the mediating role of entrepreneurial self-efficacy in the relationships between entrepreneurial attitude, entrepreneurship education, and entrepreneurship intention. Using bootstrapping (5,000 resamples), indirect path coefficients and T-values were calculated to test hypotheses H4a and H4b.

Overall, the methodological framework employed in this research using Smart PLS enabled a rigorous examination of relationships between constructs. The findings supported the theoretical foundations of the study and provided practical implications for enhancing entrepreneurial intentions through targeted educational interventions. This analysis highlighted the significant role of self-efficacy as a mediating factor, demonstrating how data analysis contributed to a deeper understanding of entrepreneurial intentions factors.

3.8 Chapter Summary

Chapter three describes the research methodology in this study. It presents the research design and methodology, encompassing data collection and analysis techniques, sampling strategies, the construction of the research survey questionnaire, and the importance of pilot testing. Serving as the cornerstone of the research endeavor, this chapter provides a holistic understanding of how data is gathered, analyzed, and verified. This is to uphold the study's credibility and rigor.

CHAPTER 4

DATA ANALYSIS

4.1 Introduction

Chapter 4 provides a comprehensive analysis of this study's findings and results. It examines population characteristics and explores the distribution patterns of basic information. Additionally, the chapter assesses the questionnaire's reliability and validity to ensure its consistency and robustness. This chapter focuses on the testing of the hypotheses proposed in this study. Finally, the chapter discusses the implications of the findings in relation to previous research and data analysis.

4.2 Data Collection and Response Rate

This study selected three private universities in the Jinan area and distributed relevant survey questionnaires. The data collection period was from November 29th to December 10th, 13 days. 450 copies were distributed. The final collected data consisted of 435 responses, with a response rate of 96.7%. Among them, 30 survey questionnaires were deemed invalid due to errors, omissions, or repeated submissions. There were 405 valid questionnaires collected in the final collection.

To achieve a high response rate, several strategies were implemented. Firstly, the survey was distributed through established channels within the selected universities, ensuring it reached the target audience directly and promptly. Additionally, reminders were sent periodically during the 13-day collection period to encourage timely responses. The survey was designed to be concise and user-friendly, minimizing the respondent burden and reducing incomplete submissions. By ensuring accessibility, providing support for any

questions, and emphasizing the value of participant input for academic research, this study successfully maintained a high response rate.

Table 4.1: Data Collection

Item	Number of people
Sample Size	384
Target Potential Respondents	450
Questionnaires collected	435
Response Rate	96.7%
Valid Questionnaires	405

4.3 Demographic Profile of the Respondents

This section summarizes the demographic information of the participants. The demographic profile of the respondents indicates a balanced gender distribution, a predominance of younger adults, a diverse range of professional backgrounds with significant representation from the technology and health sectors, and a considerable proportion of respondents with entrepreneurial experience. This information may serve as a foundation for understanding how these socioeconomic factors might influence entrepreneurial intentions and behaviors among the respondents in the study. The specific data distribution is shown in Table 4.2.

Table 4.2: Demographic Profile of the Respondents (n = 405)

Category	Option	Number	Proportion
Gender	Male	208	51.36%
	Female	197	48.64%
Age	27-30 years old	139	34.32%
	31-35 years old	162	40%
	36-40 years old	62	15.31%
	41-42 years old	42	10.37%
Professional	Business/Management	86	21.23%
	Science/Engineering/Technology	117	28.89%
	Arts/Humanities	86	21.23%
	Health/Medicine	88	21.73%
	Social Sciences	28	6.91%
Entrepreneurial experience	Yes, I have started my own business	103	25.43%
	Yes, I have been involved in a startup	145	35.8%
	No, but I have considered starting my own business	75	18.52%

The findings in Figure 4.1 show that males account for 51.36% and females account for 48.64%. No one chose not to disclose their gender. Overall, the gender distribution is relatively balanced.

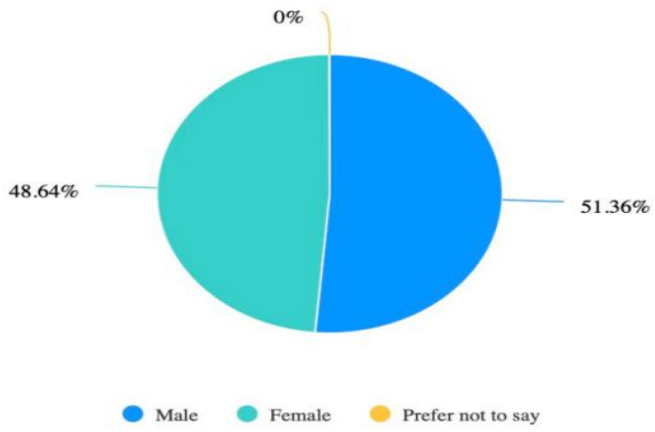

Figure 4.1: Gender of Participates

The data provided in Figure 4.2 reveal the age distribution of respondents, mainly concentrated in younger groups. Specifically, the majority of respondents are aged 26 to 30, accounting for 40% of the total, followed by the group in their 23 to 25, accounting for 34.32%. In contrast, respondents aged 31 to 35 account for 15.31%, while those who are 36 to 42 account for 10.37%. This indicates that the main target of the survey is the younger generation, and as age increases, the number of respondents gradually decreases.

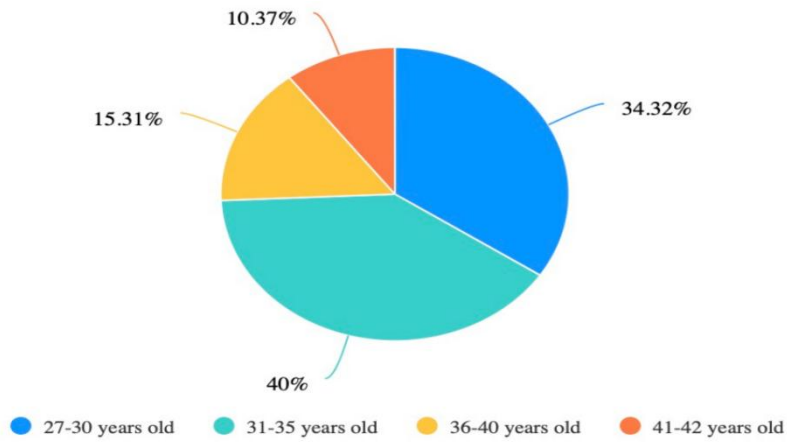

Figure 4.2: Age of Respondents

The participants in this questionnaire come from different majors. Figure 4.3 shows that the highest proportion of respondents is in the fields of science/engineering/technology, accounting for 28.89%, followed by business/management, art/humanities, and

health/medicine, which account for 21.23%, 21.23%, and 21.73% respectively. The proportion of respondents in social sciences and other majors is relatively low.

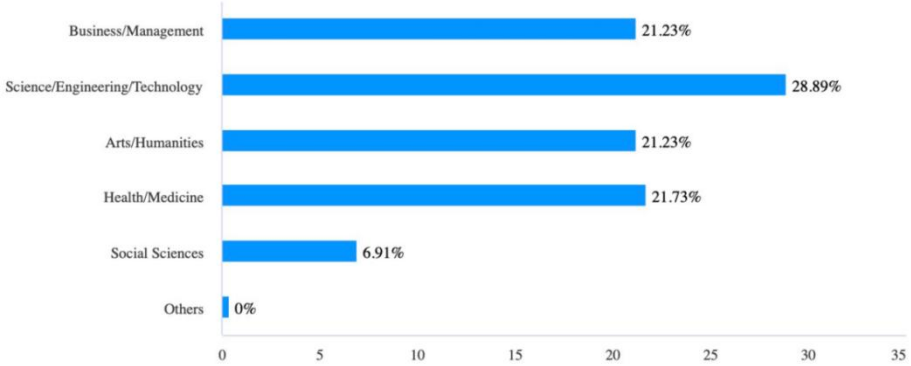

Figure 4.3: Professional Fields of Respondents

The data in Figure 4.4 indicate that respondents exhibit diversity in entrepreneurial experiences and attitudes. A relatively high proportion of respondents have participated in startups (35.8%) or started their own business (25.43%), while 18.52% of respondents have considered launching a business. Another 16.3% of respondents stated that they had neither started a business nor considered entrepreneurship. A small percentage of respondents chose not to disclose their entrepreneurial experience or attitude. Overall, the survey results reflect the widespread distribution of entrepreneurship intentions and experiences. This provides useful information for further understanding entrepreneurial motivations and behaviors.

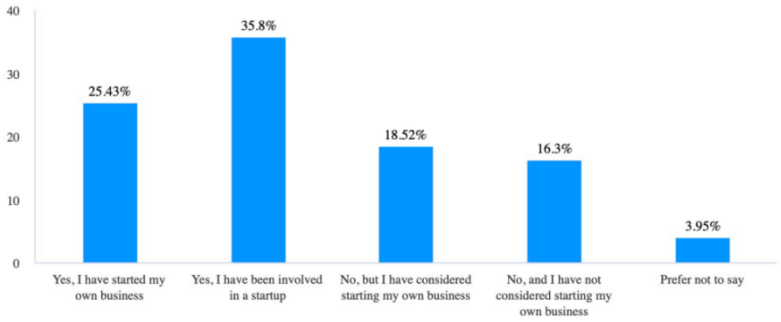

Figure 4.4: Entrepreneurial Experience of Respondents

4.4 Analysis of the Hypotheses

This section conducts hypothesis testing between variables. In the following sections, first, the direct effects between the variables are analyzed, and then the indirect effects are explored. By testing these hypotheses, the study can identify which factors have a significant impact on entrepreneurial intentions. This provides a theoretical basis for future educational interventions and policy formulation.

4.4.1 Analysis of Direct Effect

Table 4.3 shows the direct effects between the variables. This study demonstrates that entrepreneurial attitude (EA) has a significant positive effect on entrepreneurial intention (EI), with a path coefficient of 0.338, T-value of 7.763, and P-value of 0, indicating statistical significance. Hypothesis H1 is supported. This finding suggests that a positive attitude toward entrepreneurship substantially influences entrepreneurial intention. This highlights the importance of fostering entrepreneurial attitudes in cultivating students' entrepreneurial intentions.

Data analysis further reveals that entrepreneurship education (EE) significantly impacts entrepreneurial intention, with a path coefficient of 0.212, a T-value of 4.75, and a *p*-value of 0, thus supporting hypothesis H2. This result indicates that exposure to entrepreneurship education can enhance individuals' entrepreneurial intentions. However, it is significant to note that EE's effect size is lower than other variables. This suggests that while it plays a valuable role, it may not be the primary driver of entrepreneurial intention.

Finally, the results indicate that entrepreneurial self-efficacy (ESE) exerts a strong and significant positive effect on entrepreneurial intention, with a path coefficient of 0.423, a T-value of 9.567, and a P-value of 0, all reaching significance thresholds. Hypothesis H3 is supported. This finding underscores that higher entrepreneurial self-efficacy substantially enhances entrepreneurial intention, making it the most influential variable in predicting entrepreneurial intention among participants. As such, fostering self-efficacy may be essential for developing effective entrepreneurship programs aimed at increasing entrepreneurship activity.

Table 4.3: Direct Effects of Variables

Hypotheses	Direct effect	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
H1	EA -> EI	0.338	0.044	7.763	0	Supported
H2	EE -> EI	0.212	0.045	4.75	0	Supported
H3	ESE -> EI	0.423	0.044	9.567	0	Supported

4.4.2 Analysis of Indirect Effect

Table 4.4 shows the indirect effects between the variables. Hypothesis H4a (EA -> ESE -> EI): The indirect effect of entrepreneurial attitude on entrepreneurial intention through entrepreneurial self-efficacy is 0.224, with a sample mean (M) of 0.224 and a standard deviation (STDEV) of 0.03. The T-value for this path is 7.367, and the P-value is 0, both indicating statistical significance. Therefore, hypothesis H4a is supported. This result suggests that entrepreneurial self-efficacy significantly mediates the relationship between

entrepreneurial attitude and entrepreneurial intention, implying that enhancing self-efficacy can amplify the influence of a positive entrepreneurial attitude on intention.

Hypothesis H4b (EE -> ESE -> EI): The indirect effect of entrepreneurship education on entrepreneurial intention through entrepreneurial self-efficacy (ESE) is 0.183, with a sample mean (M) of 0.183, a standard deviation (STDEV) of 0.025, a T-value of 7.49, and a P-value of 0. This statistical evidence supports hypothesis H4b, showing that entrepreneurial self-efficacy also significantly mediates the relationship between entrepreneurship education and entrepreneurial intention.

Table 4.4: Indirect Effects of Variables

Hypotheses	Indirect effect	Sample mean (M)	Standard deviation (STDEV)	t-test values	p Values	Decision
H4a	EA -> ESE -> EI	0.224	0.03	7.367	0	Supported
H4b	EE -> ESE -> EI	0.183	0.025	7.49	0	Supported

4.4.3 Total Effect Analysis

The structural equation model (SEM) depicted in the Figure 4.5 elucidates the relationships among entrepreneurial attitude, entrepreneurial education, entrepreneurial self-efficacy, and entrepreneurial intention. The analysis reveals that both EA and EE exert significant positive influences on ESE, with path coefficients of 0.530 and 0.434, respectively. Furthermore, ESE has a substantial positive impact on EI, as evidenced by a path coefficient of 0.423. Additionally, EA and EE directly contribute to EI, with path coefficients of 0.338 and 0.212, respectively. The model explains a substantial portion of the

variance in EI, with an R-squared value of 0.899, indicating a strong explanatory power of the model. These findings underscore the pivotal role of EA, EE, and ESE in shaping EI, highlighting their importance in fostering entrepreneurial intentions.

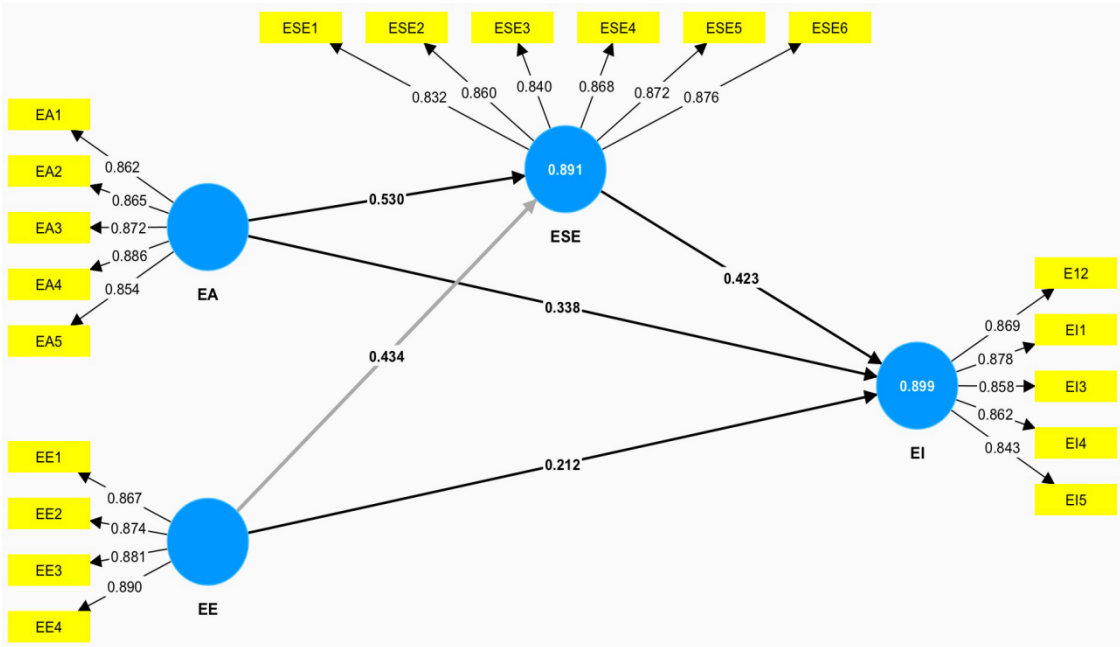

Figure 4.5: Graphical Interaction Effect Model

Following the comprehensive analysis of the structural equation model, the results revealed significant positive influences of entrepreneurial attitude, entrepreneurial education, and entrepreneurial self-efficacy on entrepreneurial intention of millennial college students. This analysis confirms that the hypotheses proposed in this study have been thoroughly supported, as summarized in Table 4.5. Consequently, this study can confidently conclude that entrepreneurial attitude, entrepreneurial self-efficacy, and entrepreneurial education have a positive impact on the entrepreneurial intention of millennial college students.

Moreover, the findings underscore the crucial role of entrepreneurial self-efficacy as a mediator in the relationships between entrepreneurial attitude, entrepreneurship education, and entrepreneurial intention. This mediation suggests that entrepreneurial self-efficacy not only enhances the direct effects of entrepreneurial attitude and education on intention but also emphasizes its significance in fostering a conducive environment for entrepreneurship pursuits among this demographic. By recognizing the interconnectedness of these factors, this study contributes valuable insights into how educational institutions and policymakers can better support millennial college students in developing their entrepreneurial intentions and capabilities.

Table 4.5: Hypothesis Summary

Hypotheses	Result
H1: Entrepreneurial attitudes have a significant positive influence on the entrepreneurial intentions of millennial college students.	Supported
H2: Entrepreneurial self-efficacy has a significant positive influence on the entrepreneurial intentions of millennial college students.	Supported
H3: Entrepreneurship education has a significant positive influence on the entrepreneurial intentions of millennial college students.	Supported
H4a: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial education and entrepreneurial intention of millennial college students.	Supported
H4b: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial attitude and entrepreneurial intention of millennial college students.	Supported

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Research Overview

This study aims to explore the relationship between entrepreneurship attitudes, entrepreneurship self-efficacy, entrepreneurship education, and entrepreneurial intentions of millennial college students in Jinan City. Previous research inconsistently concludes whether attitudes, self-efficacy, and education impact entrepreneurial intentions. In addition, there is still controversy over whether self-efficacy mediates attitudes, education, and intentions. Therefore, further research into millennial college students' entrepreneurial intentions is crucial. This is not only because this group represents emerging forces in society, but understanding their entrepreneurial intentions also helps to discover upcoming business trends and opportunities. Therefore, in-depth research on the reasons that influence their entrepreneurial intentions can help society better understand and adapt to the needs of this generation and provide useful insights for sustainable development.

5.2 Discussion on Research Findings

The discussion section delves into the key research findings, aligning them with the study's objectives. This provides a comprehensive understanding of how entrepreneurial attitudes, self-efficacy, and education influence millennial college students' entrepreneurial intentions. Each subsection examines these relationships in detail, integrating existing research to contextualize the results and explore potential theoretical and practical implications. The following subsections offer in-depth insights into each research objective.

5.2.1 Research Objective 1: To examine the relationship between entrepreneurial attitude and entrepreneurial intentions of millennial college students in Jinan city

The findings of this study reveal that entrepreneurial attitudes significantly influence the entrepreneurial intentions of millennial college students. Contradictory research conclusions continue to exist. Schwarz et al. (2009) found that students who hold a constructive attitude towards competitiveness are less likely to support entrepreneurship. Fitzsimmons and Douglas (2005) have noted that individual entrepreneurial attitudes have varying impacts on students' intentions in different countries. Nevertheless, research conducted in numerous countries has also indicated a positive correlation between entrepreneurial attitudes and entrepreneurial intentions. For example, multiple studies among Indian students have found a positive correlation between entrepreneurial attitudes and entrepreneurial intentions (Jena, 2020; Mahfud et al., 2020). Studies conducted among Chinese, Pakistani, and United States students also confirmed an important relationship between entrepreneurial attitudes and entrepreneurial intentions (Zulfiqar et al., 2019; Liguori et al., 2020).

Researchers often link entrepreneurial intention with entrepreneurial attitude, positing that entrepreneurial intention can be influenced by entrepreneurial attitude, thereby shaping entrepreneurial behavior (Alam et al., 2019; Karimi, 2020; Nguyen et al., 2019). The interaction between entrepreneurial attitudes and intentions appears pivotal in determining the trajectory of entrepreneurial behavior. Numerous studies conducted internationally have affirmed the association between entrepreneurial attitudes and entrepreneurial intentions (Liguori et al., 2020; Mahfud et al., 2020; Zulfiqar et al., 2019).

This study, through data analysis, also confirms that entrepreneurial attitudes indeed exert a positive impact on millennial college students' entrepreneurial intentions.

5.2.2 Research Objective 2: To investigate the relationship between entrepreneurial self-efficacy and entrepreneurial intentions of millennial college students in Jinan city

The outcomes of this study reveal that entrepreneurial self-efficacy significantly influences the entrepreneurial intention of millennial college students. This study also confirms previous researchers' conclusions. For example, Chien Chi et al. (2020) studied social entrepreneurs among millennial college students, and empirical tests showed that various aspects of entrepreneurial self-efficacy were significantly positively correlated with entrepreneurial intention. Elnadi and Gheith's (2021) data analysis of business students in Saudi Arabia supports and confirms the positive impact of entrepreneurial self-efficacy on entrepreneurial intention. Many other researchers have also reached consistent conclusions (Soomro & Shah, 2022; Udayanan, 2019; Xiaoping & Hua, 2019).

These research findings emphasize the crucial role of entrepreneurial self-efficacy in stimulating entrepreneurial intentions of millennial college students, providing theoretical support but also beneficial insights for practical and educational fields. Meanwhile, studying the relationship between entrepreneurial self-efficacy and entrepreneurial intention provides ideas for more refined intervention and educational strategies.

5.2.3 Research Objective 3: To examine the relationship between entrepreneurship education and entrepreneurial intentions of millennial college students in Jinan city

The findings of this study indicate that entrepreneurship education positively impacts the entrepreneurial intentions of millennial college students. Despite the arguments by

Nowinski et al. (2019) suggest potential variations in entrepreneurship education effectiveness across diverse cultural and educational contexts. The results of this study align with numerous prior research findings. For instance, Hassan et al. (2021) and Kusumojanto et al. (2020) discovered that entrepreneurship education fosters individual entrepreneurship orientation and motivation, correlating positively to entrepreneurial intention. Similarly, research involving Chinese university students underscores that entrepreneurship education enhances the capacity to initiate and sustain businesses in current and future entrepreneurship endeavors, with the acquired entrepreneurial skills continuing to influence entrepreneurial intentions (Lv et al., 2021; Uddin et al., 2022).

Drawing from comprehensive research findings and pertinent information, it is evident that entrepreneurship education exerts a positive influence on millennial college students' entrepreneurial intentions. Overall, entrepreneurship education demonstrates a favorable effect on the entrepreneurial intentions of this demographic. However, further investigation is warranted to explore the moderating effects of diverse countries and cultures on this influence. This will foster a more comprehensive understanding of entrepreneurship education's universality.

5.2.4 Research Objective 4: To investigate whether entrepreneurial self-efficacy plays a mediating role in entrepreneurial attitude, entrepreneurial education, and entrepreneurial intentions

The study's results indicate that entrepreneurial self-efficacy plays a partial mediating role in the formation of entrepreneurship attitudes, entrepreneurial education, and entrepreneurial intention. These findings align with previous research, which also supports entrepreneurial self-efficacy's mediating role in shaping entrepreneurial intentions. For

instance, Hoang et al. (2020) observed a similar pattern among Vietnamese university students, where self-efficacy served as an intermediary variable between entrepreneurial education and entrepreneurial intention. Similarly, Anwar et al. (2021) reached consistent conclusions in their investigation of students in the Indian region. This suggests that entrepreneurial self-efficacy may serve as a common determining factor among college students from various cultures and regions.

The study's results indicate that entrepreneurial self-efficacy plays a partial mediating role in entrepreneurial education and entrepreneurial intention formation. These findings are consistent with previous research, which also supports entrepreneurial self-efficacy's mediating role in shaping entrepreneurial intentions. For instance, Hoang et al.'s (2020) study of Vietnamese university students similarly demonstrated self-efficacy as an important variable between entrepreneurial education and entrepreneurial intention. Similarly, Anwar et al. (2021) reached a consistent conclusion in their study of Indian students. This suggests that entrepreneurial self-efficacy may serve as a common determining factor among college students from diverse cultures and regions.

5.3 Contribution of the Study

This section outlines the study's contributions. Theoretically, it deepens understanding of how entrepreneurial attitudes, self-efficacy, and education shape entrepreneurship intentions among millennial college students. Practically, it offers actionable insights for institutions and governments to support students by providing mentorship, resources, and fostering a positive entrepreneurial culture. This will help them turn their intentions into action.

5.3.1 Theoretical Contribution

This study effectively achieved its research objectives by conducting comprehensive investigations into entrepreneurial attitude, entrepreneurial self-efficacy, entrepreneurship education, and entrepreneurial intention among millennial college students in Jinan City. Firstly, the research findings have confirmed the theoretical association between entrepreneurial attitude and entrepreneurial intention within this specific region and age demographic. This substantiates entrepreneurship psychology empirically. Secondly, through corroborating the correlation between entrepreneurial self-efficacy and entrepreneurial intention, the study has garnered profound insights into the significant influence of individual confidence and capabilities on entrepreneurship motivation, thereby contributing to the understanding of psychological factors affecting entrepreneurs. Furthermore, by validating the relationship between entrepreneurship education and entrepreneurial intention, the study has presented empirical evidence supporting the role of entrepreneurship education in stimulating entrepreneurial intention.

Foremost, this study pinpointed entrepreneurship self-efficacy as the foremost influential factor shaping entrepreneurial intention of millennial college students, offering profound insights into the pivotal determinants of entrepreneurial intention formation. The outcomes of this study corroborate previous research conducted by Elnadi and Gheith (2021), Xiaoping and Hua (2019), and Chien Chi et al. (2020). These findings furnish a robust basis for crafting tailored interventions and educational initiatives aimed at empowering millennial college students to embrace entrepreneurship with conviction and direction.

Finally, by verifying the mediating role of entrepreneurial self-efficacy between entrepreneurial attitude, entrepreneurship education, and entrepreneurship intention, the study provides a theoretical breakthrough for revealing the mechanisms involved in entrepreneurship decision-making. Overall, this study provides a strong theoretical foundation for entrepreneurship psychology and entrepreneurship education through in-depth empirical research, filling the gap in related research fields.

Moreover, the research results can inspire further research into the theory of planned behavior. This research will focus on how college students' entrepreneurial intentions can be transformed into actual plans and execution. Theoretical in-depth research can concentrate on cognitive and emotional factors of individuals when formulating entrepreneurial plans, as well as how these plans affect actual entrepreneurship behavior. The research findings also focus on planned behavior theory dynamics. Research can further deepen the theoretical exploration of the dynamic changes in entrepreneurial plans. It can also explore the impact of factors, and the feedback relationship between these changes and entrepreneurial intentions.

Combining social and cognitive theory, in-depth theoretical research can examine the impact of entrepreneurship support on the formulation and implementation of entrepreneurship plans for college students. The research findings suggest a need for a deeper understanding of social cognition. This is particularly relevant to how social cognition about entrepreneurial attitudes and self-efficacy is formed and influenced. Theoretical research can delve deeper into the mechanisms by which interpersonal environments and interpersonal interaction shape individual social cognition. Combining social cognitive theory, broader implications include a more in-depth study of entrepreneurial attitudes and willingness

formation. This study provides insights into the importance of social identity in entrepreneurial processes. Theoretical research can further explore how social identity forms and changes during the entrepreneurial process. In addition, it can explore how it affects individual social cognition and entrepreneurship willingness.

Overall, the research findings provide more specific and empirical content for planned behavior theory and social cognitive theory. In addition, they provide novel perspectives and questions for future theoretical exploration.

5.3.2 Practical Implication

Institutions can guide college students in transforming their entrepreneurial intentions into executable plans by offering specific entrepreneurship training. This will help them better prepare for the challenges of the entrepreneurship stage. Practical insights suggest that establishing a mentor system is crucial for supporting entrepreneurial development and implementation. Mentors can provide guidance in planning, resource integration, and problem-solving, enhancing students' practical execution abilities.

Based on the theory of planned behavior, practical research emphasizes the importance of integrating entrepreneurial resources. The government and enterprises can assist college students in effectively executing their entrepreneurial plans and reducing the actual costs of entrepreneurship. This is done by providing financial support, sharing office space, and offering other resources.

The significance of practical research extends to building a healthy social network. Governments and schools can promote communication among students, foster positive community awareness, and support entrepreneurship through initiatives such as

entrepreneurship clubs and salons. The sociological cognitive theory highlights the importance of shaping a constructive social identity. Sharing entrepreneurial culture and the success stories of entrepreneurs can help college students develop a positive social identity and encourage them to pursue their entrepreneurship dreams. This study reveals the necessity of establishing a comprehensive social support system. This support system can include a mentor program and entrepreneurship exchange platforms. This provides comprehensive assistance to college students and helping them overcome various challenges in the entrepreneurial process.

Overall, these practical research findings offer actionable and feasible suggestions for relevant stakeholders. They promote the transformation of entrepreneurial intentions into concrete actions and provide robust support for college student entrepreneurship.

5.4 Limitations and Recommendation for Future Research

This study may have sample limitations, focusing on millennial college students in the Jinan area. This may affect the universality of research results. Therefore, the study results may not apply to other regions with significant differences in education or economic conditions compared to Jinan. In order to improve the external effectiveness of research, future studies can adopt more sample, cross-regional, and cross-cultural research designs. Expand the research scope to cover a wider group of college students, to ensure research results are more universal and representative.

This study used a questionnaire survey for data collection. This may be influenced by the subjective intentions and social expectations of the respondents, and there is a possibility of answer bias. In order to improve the credibility and objectivity of data, future research can adopt various data collection methods, such as in-depth interviews,

observations, etc., to obtain more comprehensive and multidimensional data, to better understand the formation mechanism of college students' entrepreneurial intentions.

While this study examines the interplay between entrepreneurial attitude, entrepreneurship self-efficacy, and entrepreneurship intention, its cross-sectional nature presents challenges in identifying potential shifts in the links among these factors over time. In future research, it may be worth exploring the use of a long-term research design to monitor fluctuations in students' entrepreneurial attitudes, self-efficacy and intentions over a longer period. Such an approach would offer a more nuanced understanding of the dynamic causal relationships between these factors. This would elucidate how they influence each other across different temporal stages.

5.5 Conclusion

Encouraging an entrepreneurial spirit among millennial college students is increasingly imperative, given their innovative potential and interest in entrepreneurship as a career path. In Jinan, where many students view entrepreneurship as a viable option, supportive government measures such as tax exemptions and subsidies provide additional motivation. This study analyzed 405 participants, with a balanced gender ratio, high educational attainment, and ages ranging from 23 to 30. The findings demonstrated a notable interest in entrepreneurship, with more than half having prior entrepreneurship experience, while others expressed intent despite limited experience. The results confirm that entrepreneurial attitudes, self-efficacy, and education positively impact entrepreneurship intentions, with self-efficacy partially mediating the effects of attitudes and education on intention. These findings suggest that entrepreneurship training should emphasize not only education and attitude development but also confidence-building and practical experience to

strengthen self-efficacy. Aligning educational strategies and policies to address these factors can further inspire entrepreneurial aspirations among millennial college students and contribute meaningfully to socio-economic advancement.

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APPENDICES

Questionnaire

Dear participants

Thank you for participating in our research, which aims to gain a deeper understanding of entrepreneurial attitudes, the impact of entrepreneurial education on the entrepreneurial willingness of millennial college students, and the mediating role of entrepreneurial self-efficacy. Your answer will be strictly confidential and used only for research purposes. Please rest assured that we will not disclose your personal information. Please ensure that you have sufficient time to complete the entire survey questionnaire to ensure that your answers are comprehensive. Please answer the questions in the survey questionnaire one by one according to the instructions. Your feedback is of great value to our research.

Thank you for your participation.

尊敬的参与者：

感谢您参与我们的研究，该研究旨在深入了解创业态度、创业教育对千禧一代大学生创业意愿的影响，以及创业自我效能在其中的中介作用。您的回答将被严格保密，仅用于研究目的。请放心，我们将不会披露您的个人信息。请您确保在有足够时间的情况下完成整个调查问卷，以确保您的回答是全面的。请您按照指示逐一回答调查问卷中的问题。您的意见对我们的研究具有重要价值。

谢谢您的参与。

1. **What is your gender? 您的性别是？**

○Male/男性

○Femal/女性

○Prefer not to say/保密

2. What is your age group? 您的年龄范围在？

○27-30 years old/岁

○31-35 years old/岁

○36-40 years old/岁

○41-42 years old/岁

3. What is your professional category? 您的专业属于以下哪一类？

○Business/Management 商业/管理

○Science/Engineering/Technology 科学/工程/技术

○Arts/Humanities 艺术/人文

○Health/Medicine 健康/医学

○Social Sciences 社会科学

○Others 其他

4. Do you have any entrepreneurial experience? 您有创月的经验吗？

○Yes, I have started my own business/是的，我曾创办过自己的事业

○Yes, I have been involved in a startup/是的，我曾参与过创业的活动

○No, but I have considered starting my own business/没有，但我曾考虑过创业

○No, and I have not considered starting my own business/ 没有，我未曾考虑过创业

○Prefer not to say/不愿透露

Entrepreneurial Attitude 创业态度

5.EA1 Being an entrepreneur implies more advantages than disadvantages to me.

对我来说，成为一名创业者带来的优势多于劣势。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

6.EA2 A career as entrepreneur is attractive for me.

对我来说，创业者的职业生涯很有吸引力。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

7.EA3 If I had the opportunity and resources, I'd like to start a firm.

如果我有机会和资源，我想创办一家公司。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

8.EA4 Being an entrepreneur would entail great satisfactions for me.

成为一名创业者将会让我感到非常满足。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

9.EA5 Among various options, I would rather be an entrepreneur.

在各种选择中，我更愿意成为一名创业者。

strongly disagree	○1	○2	○3	○4	○5	strongly agree

非常不同意 非常同意

Entrepreneurial Self-Efficacy 创业的自我效能

10.ESE1 I can work productively under continuous stress, pressure, and conflict.

我可以在持续的压力、压力和冲突下高效地工作。

strongly disagree	○1	○2	○3	○4	○5	strongly agree
非常不同意						非常同意

11.ESE2 I can originate new ideas and products.

我可以提出新的想法和产品。

strongly disagree	○1	○2	○3	○4	○5	strongly agree
非常不同意						非常同意

12.ESE3 I can develop and maintain favorable relationships with potential investors.

我可以与潜在投资者发展并保持良好的关系。

strongly disagree	○1	○2	○3	○4	○5	strongly agree
非常不同意						非常同意

13.ESE4 I can see new market opportunities for new products and services.

我能够发现新产品和服务的市场机会。

strongly disagree	○1	○2	○3	○4	○5	strongly agree
非常不同意						非常同意

14.ESE5 I can recruit and train key employees.

我能够招聘并培训关键员工。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

15.ESE6 I can develop a working environment that encourages people to try out something new.

我能够营造一个鼓励人们尝试新事物的工作环境。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

Entrepreneurship Education

16.EE1 The college promotes the students' capability required for entrepreneurship.

学校促进学生具备创业所需的能力。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

17.EE2 The college enhances students' skills related to entrepreneurship.

学校提升学生与创业相关的技能。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

18.EE3 The college gives students with applicable information and assist students on how to initiate a venture.

学校为学生提供相关信息，并帮助他们了解如何启动一项创业项目。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

19.EE4 I believe that entrepreneurship matters can be initiated through education.

我相信创业相关事项可以通过教育来推动。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

Entrepreneurship Intention

20.EI1 My professional goal is becoming an entrepreneur.

我的职业目标是成为一名创业者。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

21.EI2 I will make every effort to start and run my own firm.

我将尽一切努力创办并经营自己的公司。

strongly disagree 非常不同意	○1	○2	○3	○4	○5	strongly agree 非常同意

22.EI3 I am determined to create a firm in the future.

我决定将来创立一家公司。

strongly disagree	○1	○2	○3	○4	○5	strongly agree
非常不同意						非常同意

23.EI4 I have very seriously thought of starting a firm.

我曾非常认真地考虑过创立一家公司。

strongly disagree	○1	○2	○3	○4	○5	strongly agree
非常不同意						非常同意

24.EI5 I have got the firm intention to start a firm someday.

我坚信自己在未来会创办一家公司。

strongly disagree	○1	○2	○3	○4	○5	strongly agree
非常不同意						非常同意