



Entrepreneurship Education Research Opportunities based on the Global University Entrepreneurship Students' Spirit Survey (GUESSS): A Conceptual Research Design

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Abstract

Entrepreneurship education can influence entrepreneurial intention and career choices among university students, but its effectiveness varies across contexts. Thus, further exploration to understand the interplay between entrepreneurship education and relevant interference factors is urgently needed. The objective of this paper is to highlight research avenues that leverage GUESSS data to examine factors impacting the relationship between entrepreneurship education and career transitions, family business succession, and entrepreneurial activities. The study adopts a conceptual research design that utilizes GUESSS data collected from university students worldwide. The data offers insights into students' entrepreneurial activities, career choices, and family business involvement. Findings suggest significant research potential in examining the moderating effects of individual and environmental factors on entrepreneurship education's impact. The paper concludes by proposing research models to explore these dynamics, thus contributing to the broader entrepreneurship education literature. The novelty of this study lies in its introduction of GUESSS as a comprehensive cross-country data source, enabling new research opportunities. Its potential contribution to the body of knowledge includes advancing theoretical models on the interaction between entrepreneurship education, individual traits, and environmental factors. This study also opens doors for further empirical validation and collaboration among academic researchers worldwide.

Keywords: *Entrepreneurship Education; Career Choice and Transition; Family Business Succession; GUESSS Research; Entrepreneurial Intention*

INTRODUCTION

Entrepreneurship education and experiences are acknowledged as factors that can affect individuals' intentions to start their businesses, thus sparking debates on their impacts (Graevenitz et al., 2010). However, while some studies demonstrated the potential impacts of entrepreneurship education on entrepreneurial motivation, skills, knowledge, attitudes, and intention among university students (Farhangmehr et al., 2016), other findings indicated opposite results (Sukirman, 2021; Zhang, 2023). Indeed, the effectiveness of entrepreneurship education in driving outcomes should be investigated more deeply (Sharma, 2015), and researchers may be required to consider the moderating effects of students' individual factors (Hussain & Norashidah, 2015; Liu et al. (2022) and environmental factors, such as university entrepreneurial level, national culture, teacher situations, available resources, and funding for venture creation projects (Boldureanu et al., 2020; Walter & Block, 2016).

Another important outcome of entrepreneurship education is students' career intention, either as business owners or successors to family firms. However, the relationships among these variables have not yet produced conclusive findings because of the potential interference of many aspects. For instance, family dynamics often overshadow the influence of education (Cruz & Nordqvist, 2010). Students from entrepreneurial families may exhibit stronger intentions to engage in entrepreneurship (Wilmes, 2023), as their family background provides both motivation and understanding of business operations, while the long-term orientation promotes entrepreneurial behavior (Eddleston et al., 2012). Furthermore, the context of entrepreneurship education itself plays a vital role (Shofwan et al., 2023). Overall, the interplay of family and other

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context elements underscores the complexity of fostering entrepreneurial career intentions among students.

Understanding the contextual aspects of entrepreneurship education comprehensively requires a large amount of data representing various national and cultural contexts (Leiva et al., 2023). Unfortunately, previous studies have experienced difficulties in collecting such data, leaving research gaps. To bridge these research gaps, this article introduces the Global University Entrepreneurial Students' Spirit Survey (GUESSS) as a world-scale ongoing entrepreneurship research activity to further understand the individual, environmental, and contextual impacts on entrepreneurship education outcomes. Currently, GUESSS data has been used in several articles published in leading international academic journals, such as the *Journal of Business Venturing* (JBV) and *Entrepreneurship Theory & Practice* (ETP) (see <https://www.guesssurvey.org/publications/>).

This study aims to highlight research avenues that leverage GUESSS data to exercise proposed comprehensive research models. This study invites entrepreneurship education researchers, especially Indonesian academicians, to collaborate in collecting and using GUESSS data for publication.

LITERATURE REVIEW

Entrepreneurship education is widely recognized for its positive impact on entrepreneurial motivation, skills, knowledge, and attitudes among university students (Hasan et al., 2017). However, there are conflicting findings in the literature regarding the effectiveness of entrepreneurship education. While some studies have shown that entrepreneurship education enhances entrepreneurial intentions and employability, leading to better outcomes at individual, organizational, and societal levels (Laine et al., 2019), others have highlighted the insignificant impacts on students' entrepreneurial ability and even suggested a negative effect on entrepreneurship motivation (Sukirman, 2021). This discrepancy underscores the need for further research to understand entrepreneurship education's effectiveness comprehensively. Individual factors, such as traits and family background, significantly influence the outcomes of entrepreneurship education initiatives (Hasan et al., 2017; Veljkovic et al., 2019). However, there is a research gap in empirical studies regarding the effects of individual factors on entrepreneurship education outcomes (Dominik & Banerji, 2019). Additionally, environmental factors like the university entrepreneurial level (Effendi et al., 2023; Jing, 2022), national culture (Fleck et al., 2020), teacher situations (Cualheta & Abbad, 2021), available resources, and funding (Bridge, 2017; Choi et al., 2017), can also impact the outcomes of entrepreneurship education.

The relationship between entrepreneurship education, entrepreneurial intentions, and behavior is complex and influenced by varying factors. Understanding this relationship is crucial, and some studies have suggested that business education is an effective driver of entrepreneurial intentions (Bae et al., 2014). Entrepreneurship education can impact individuals' entrepreneurial intentions and outcomes, with individual and environmental factors playing crucial roles in shaping the outcomes. Future research should focus on exploring the moderating effects of these factors to enhance our understanding of the effectiveness of entrepreneurship education.

The expected impact of entrepreneurship education is to help students choose an entrepreneurial career (Agastya, 2022) by shaping students' mindset to perceive entrepreneurship as a viable career path (Anastasia & Hardiyanto, 2022; Ratković et al., 2022). This can happen because entrepreneurship education raises students' awareness of business initiatives, promotes independence, and introduces self-employment as a viable career choice (Shah et al., 2020). However, despite the positive relationship between entrepreneurship education and entrepreneurial career intention, the long-term factors influencing graduates' decision to become

business owners remain unobserved. More research is required to explore the mediating and moderating factors that affect the impacts of entrepreneurship education.

Research has revealed the impact of entrepreneurship exposure within family businesses on entrepreneurial intentions (Neneh, 2014; Ratnaningrum et al., 2023). Early exposure to family business experiences and ideas can shape university students' and graduates' perceptions of identifying entrepreneurship as a career path (Tarling et al., 2016). In particular, the fit between the successor's career interests and the opportunities available in the family firm plays a crucial role in determining their commitment to the business (Sharma and Irving, 2005). The combination of entrepreneurship education and parental factors may influence successors' decisions to become involved in their family firms' leadership and management.

Global University Entrepreneurship Students' Spirit Survey (GUESSS)

GUESSS research focuses on students' career choice intentions and entrepreneurial activities, specifically the factors influencing entrepreneurial intention and student activities in pioneering and running a business (nascent and active entrepreneurship). GUESSS also examines student involvement in the succession process in family companies. These influential factors (*antecedents*) are examined at the individual level (such as attitude), university level (such as entrepreneurial education activities and entrepreneurial atmosphere), family level (such as parental support and quality of relationships within the family), and country (such as culture). For these purposes, GUESSS conducts periodic online surveys of university undergraduates and graduate students. The surveys are managed centrally using validated and up-to-date measurement instruments. The data obtained can be used in cross-country comparative studies. In addition, the GUESSS presents special variables in each survey period according to the theme being raised. Each country can propose certain variables according to the country concerned (Sieger et al., 2019). Tables 1 and 2 present the variables surveyed by GUESSS.

Table 1. Main Variables

Variable Name	Reference	Type
Type of Entrepreneurship Education Program		Nominal
University environment in supporting entrepreneurship Learning Programs	Franke & Lüthje, 2004; Geissler, 2013; Souitaris et al., 2007	Interval
Entrepreneurial Attitude	Souitaris et al. 2007	Interval
Entrepreneurial Self-efficacy	Linan and Chen, 2009.	Interval
Entrepreneurial Subjective norms	Zhao et al., 2005; Chen, 1998; George & Zhou, 2001; Denoble, 1999	Interval
Locus of Control	Linan and Chen (2009)	Interval
Entrepreneurial Affective commitment	Levenson 1973	Interval
Business behavior: Exploration/exploitation	Dawson et al. 2013	Interval
Business Environmental dynamism	He and Wong, 2004	Interval
Succession Attitude	Achrol and Stern, 1988	Interval
Succession Intention	Linan and Chen, 2009.	Interval
Succession Subjective norms	Linan and Chen, 2009.	Interval
Self-efficacy in the Family Business Context	Linan and Chen (2009)	Interval
Family Career-related modeling	Turner et al., 2003	Interval
Family Emotional support	Turner et al., 2003	Interval

Variable Name	Reference	Type
Family Instrumental assistance	Turner et al., 2003	Interval
Family Verbal encouragement	Turner et al., 2003	Interval
Vigor (Subjective vitality)	Bostic et al., 2000	Interval
Self-esteem	Rosenberg, 1979	Interval
Career Choice Intentions: employee, founder, successor		Nominal
Entrepreneurial Intention	Linan and Chen, 2009.	Interval
The level of implementation intentions of doing business	Ziegelmann et al., 2007; Van Gelderen et al., 2017	Interval
Business gestation activities	GEM/PSED	Nominal
Job satisfaction	Sieger et al., 2023, see Van Dyne and Pierce (2004). Mayhew et al. (2007). Zhou et al. (2008)	Interval
Affective commitment in Family Business context	Dawson et al. 2013	Interval
Normative commitment in Family Business context	Dawson et al. 2013	Interval
Status of Start-up Employment		Binary
Family Business performance	Dess and Robertson, 1984; Eddleston et al., 2008	Interval

Table 2. Students' Contextual Backgrounds

Variable Name	Reference	Type
Study Fields	Destatis, 2015	Nominal
Family Background: self-employed, business owner		Nominal
Personal information: Age, Sex, Nationality, Religion		Nominal
Active Entrepreneur Characteristics		Nominal, Ordinal, and Interval
Parents' Business: General Information		Binary, Ordinal, and Interval
Cultural context: Power Distance	GLOBE (House et al., 2004)	Interval
Industrial Sector	NACE	Nominal

GUESSS activities began in 2003 at the University of St. Gallen (Switzerland). At that time, only two universities participated in producing 5,000 sample data. GUESSS then conducts survey activities every 2-3 years, with more university partners from various countries participating. A country leader is appointed to coordinate all university partners in each country. Survey invitations are sent to country leaders forwarded to representatives of university partners, who then distribute them to their students (www.guesssurvey.org/keyfacts/). In 2021, GUESSS generated 267,000 sample data from thousands of university partners in 58 countries (Sieger et al., 2023; www.guesssurvey.org/datacollections/).

Led by Prasetiya Mulya University and supported by the Association of Indonesian Entrepreneurship Educators, Indonesia joined GUESSS in 2018. This collaboration was followed by five partner universities, which produced 1,279 samples. This participation continued in the 2021 and 2023 survey periods, with 16 and 8 participating universities collectively producing 2,544 and 1,665 sample data. Most respondents were undergraduate students (82%), with almost 75% of them studying business, management, and economics programs. The proportion of female students constitutes nearly 60% of the overall sample, whereas the age demographic falls within the range

of 19 to 23 years, accounting for approximately 75%. Notably, over 55% of the participants originated from families possessing entrepreneurial experiences, specifically those who operated businesses or were engaged in self-employment. This demographic analysis is essential for comprehending the various motivations and obstacles that students encounter when undertaking entrepreneurial endeavors (Suhartanto, 2018, 2021, 2023a).

RESEARCH METHOD

This study adopts a conceptual research design to propose research topics and models based on the GUESSS data for the following reasons. First, conceptual models serve as valuable instruments for structuring and formalizing subjective understandings within a specific domain, thereby enhancing researchers' clarity and communication. Conceptual modeling helps bridge the gap between theoretical constructs and practical applications by providing a structured approach to understanding how different elements interact (Gray & Sockolow, 2016; Tondeur et al., 2021). Second, a conceptual research design facilitates the identification and operationalization of key constructs, which are essential for empirical validation (Andini et al., 2019). Third, a conceptual research design allows for continuous refinement of models based on new findings. This iterative process improves the robustness and relevancy of the research model in the face of evolving knowledge and societal needs (Zhang et al., 2023). Finally, conceptual research design may improve interdisciplinary collaboration by providing a common framework for various stakeholders to better understand and engage with (Hartmann & Grahl, 2011).

FINDINGS AND DISCUSSION

Impact of Entrepreneurship Education

Previous research has revealed a positive relationship between entrepreneurship education, entrepreneurial attitudes, self-efficacy, subjective norms, intention, and entrepreneurial activities (Dinc & Budic, 2016; Izquierdo & Buelens, 2011; Liu et al., 2019). According to the GUESSS Indonesian reports, which involved three survey periods, only students' entrepreneurial self-efficacy has a significant positive relationship with entrepreneurial intentions ($\beta=0.215$ to 0.322 , $p<.001$). Self-efficacy is a belief in one's ability to act effectively in particular contexts (Bandura, 1986). Students exhibiting higher entrepreneurial self-efficacy tend to view themselves as competent in undertaking entrepreneurial endeavors, thereby enhancing their entrepreneurial intentions (Liu et al., 2019). This underscores the importance of self-confidence in entrepreneurial success. Further investigations using GUESSS global data involving variables related to students' contextual backgrounds (see Table 1) can provide a deeper understanding. Future research may need to analyze the moderating effect of students' fields of study and parents' backgrounds, gender, culture, and religion.

The relationship between entrepreneurship education and entrepreneurial intention may be related to the study field. For instance, engineering and agriculture have promising entrepreneurial intentions when supported by robust entrepreneurship education programs (Kim & Park, 2019; Orabi et al., 2022). Future research should continue to explore these dynamics, particularly in diverse educational contexts, to better understand how different fields can cultivate entrepreneurial intentions among students. Furthermore, students with entrepreneurial family role models exhibit a higher propensity for entrepreneurship than those without. Ongoing engagement with family enterprises enhances entrepreneurial skills and fosters students' confidence in taking leadership positions in entrepreneurial settings (Kwong et al., 2012). This evidence may lead to the potential moderating effect of entrepreneurial backgrounds in families.

Studies have shown that females often exhibit lower entrepreneurial intentions than males, which can be attributed to various factors, including societal expectations and self-efficacy beliefs

(Dey, 2023; Maheshwari et al., 2022), as explained by social role theory (Shinnar et al., 2017). Furthermore, cultural values and norms can either facilitate or hinder the entrepreneurial spirit among students. In collectivist cultures, where community and social harmony are prioritized, students may experience social pressures that deter them from pursuing entrepreneurial ventures (Piperopoulos, 2012). Entrepreneurship education can sometimes be stifled by existing cultural structures that do not support individual pursuits (Hidayatulloh & Ashoumi, 2022). In contrast, cultures that celebrate individualism and innovation tend to foster a more supportive environment for entrepreneurship, thereby enhancing the effectiveness of entrepreneurship education in promoting entrepreneurial intention (Malebana, 2014). Moreover, the content and delivery of entrepreneurship education are also shaped by cultural factors, such as the curriculum, which must align with the cultural context (Iwu et al., 2021).

Finally, religion can increase the complexity of the interplay between entrepreneurship education, entrepreneurial intention, and activities. Religion often serves as a foundational element that shapes individuals' values, motivations, and behaviors, particularly in the context of entrepreneurship. This relationship is further influenced by educational frameworks that impart entrepreneurial skills and knowledge. For instance, Bolaji and Samson (2022) found that both Islam and Christianity create conducive environments for entrepreneurial decision-making. In addition to shaping intentions, religious beliefs also impact the actual entrepreneurial activities undertaken by individuals (Rietveld & Burg, 2014), such as religious motivations driving social entrepreneurship in Nigeria (Westhuizen & Adhlakun, 2021).

Based on the discussion above, Figure 1 presents a comprehensive research model of entrepreneurship education research that can be exercised using GUESSS data. This research model proposes the potential mediating impacts of entrepreneurial attitude and self-efficacy on the relationship between entrepreneurship education and entrepreneurial with the potential moderating effects of the field of study, parent's work background, gender, culture, and religion. Some theories that potentially fit the study of entrepreneurship education impacts are the Entrepreneurial Action model (McMullen & Shepherd, 2006), the Entrepreneurial Event model (Shapero & Kent, 1984), and the Social Cognitive Theory (Bandura, 1986).

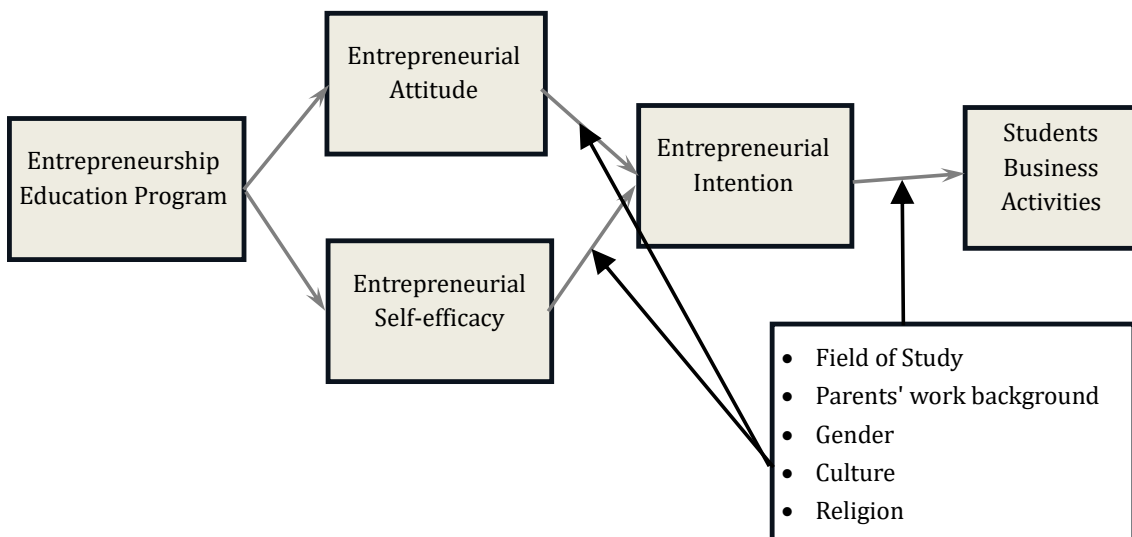


Figure 1. The Impact of Entrepreneurship Education

Student Career Choice and Transition

Another interesting topic that can be elaborated from the GUESSS survey is students' career choices. In all three GUESSS Indonesia reports, a notable proportion of students indicated a desire to pursue entrepreneurship immediately after graduation, i.e., 26.19% in 2018, 38.90% in 2021, and 44.26% in 2023. Further, students' intention toward business ownership rises significantly five years following graduation, i.e., 64.27% in 2018, 60.22% in 2021, and 62.22% in 2023. Conversely, the aspiration to engage in established firms diminishes over time (Suhartanto, 2018, 2021, 2023a). These data substantiate the prevailing trend of "first employee, then entrepreneur" (Sieger et al., 2019).

The graduates take "employment to entrepreneur" career route because they want to acquire essential experience, financial capital, and self-assurance before pursuing entrepreneurial opportunities to reduce the business launching risks (Markman et al., 2005). Similarly, graduates with family business backgrounds take an employment career or becoming a business owner before engaging in the succession process may be due to the desire for skill acquisition (Zellweger et al., 2011), the stability offered by external job markets (Tong & Gao, 2022), the complex emotional landscape of family business dynamics (Okay-Somerville & Scholarios, 2015), and the desire for personal independence (Tarling et al., 2016). This strategic approach allows employees to prepare adequately for future leadership roles while also allowing for personal and professional growth. On the other hand, the decision of family business successors to leave their family enterprises and start their own businesses is influenced by a complex interplay of inadequate succession planning (Kiwia et al., 2019), strained family dynamics (Hytti et al., 2016), and personal aspirations for independence and innovation (Zellweger et al., 2011). In conclusion, the level of individual risk-taking, desire for personal independence, and emotional dynamics within family can be key antecedents that affect students' intentions of career transition.

The relationship between self-esteem, locus of control, entrepreneurship education, experiences, either in own-business or family business, risk-taking, and desire for personal independence is a multifaceted topic that integrates psychological traits with educational frameworks and entrepreneurial intentions. High self-esteem is associated with a greater willingness to take risks, pursue challenging goals (Romanowska-Tołoczko & Piwowarczyk, 2015), and lead to greater confidence in making independent decisions (Sharma, 2013). Similarly, internal locus of control, as individuals believe in influencing outcomes through their actions, may correlate with a greater desire for independence (Dasi et al., 2019), even in uncertainty and risky circumstances (Ndofirepi, 2020). Furthermore, experiential learning approaches in entrepreneurship education have been shown to foster a greater understanding of risk and uncertainty, allowing students to perceive risks as manageable (Arpiainen & Kurczewska, 2017). Moreover, business experiences allow individuals to apply their skills and knowledge in confronting real-world challenges, thereby reinforcing the desire for personal independence and enhancing self-confidence and ability to navigate risks (Al-Nashmi, 2017). Considering these relationships, the potential impacts of students' self-esteem, locus of control, entrepreneurship education participation, experiences in doing their own business, and helping their family business on their career transition are worth testing. These potential antecedent data are available in the GUESSS database.

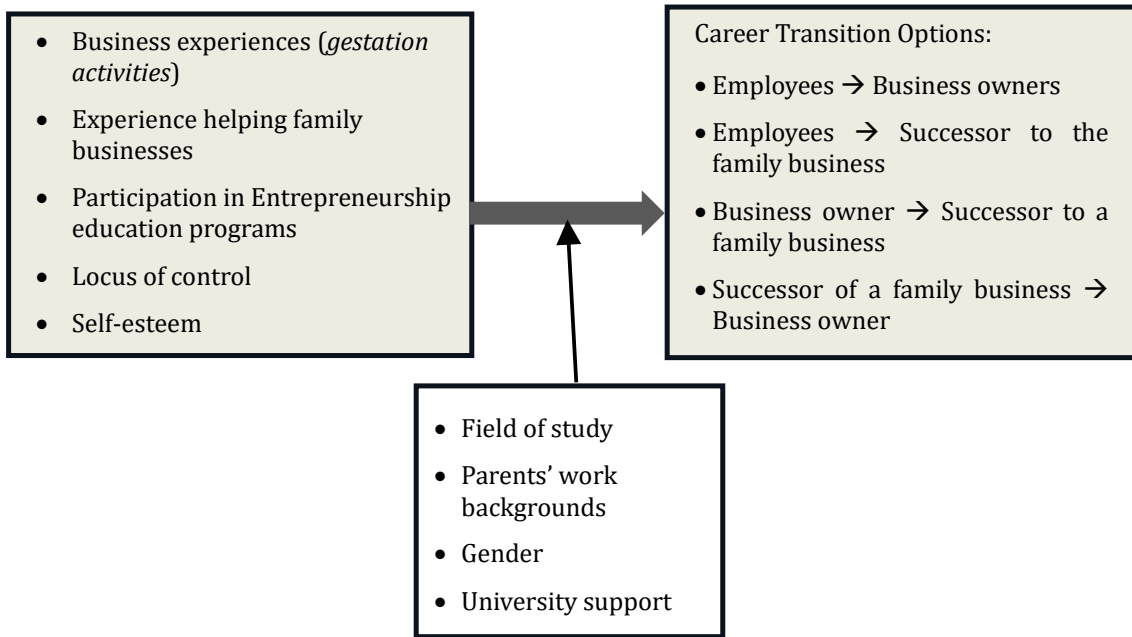


Figure 2. Research Model of Student Career Transition

Figure 2 illustrates a comprehensive research model of students' career transition. This research model proposes the potential impacts of self-esteem, locus of control, experiences in doing business, and helping family business on students' career transition intention with the potential moderating effects of the field of study, parent's work background, gender, and university support. One alternative theory that potentially fits the study of students' career choice intention and transition is the Social Cognitive Career Theory (SCCT) (Lent et al., 1994).

Family Business Succession

Given the low level of family business sustainability (Cabrera-Suarez, 2005), the topic of succession in family businesses is receiving more attention (Sharma, 2004; Tang & Hussin, 2020). Only one-third of successful family businesses are passed to the second generation, and only 10% are passed to the third generation (Beckhard & Dyer Jr, 1983; Deloitte, 2016). GUESSS 2018 data shows that only 5.53% of 30,835 respondents with a family business background are willing to become the successor of their family business after graduating from college. After five years of graduation, only 6.23% of respondents are willing to continue their family business. Most respondents (77.33%) want to work after graduating from college, and some (38.65%) want to run their own business five years after graduating from college (Suhartanto, 2021). This information provides insight into the importance of understanding the factors that could increase the intention of the next generation to continue the family business.

Previous research has revealed the influence of contextual, governance, financial, individual, and interpersonal factors on the succession of family businesses (De Massis et al., 2008). These individuals involve parental support for next-generation members (Sharma et al., 2003), next-generation members' attitude toward the importance of family business (De Massis et al., 2016), next-generation members' characteristics (such as locus of control, self-efficacy, motive for freedom and innovation) (Zellweger et al., 2011), next-generation members' expectations toward family business performance (Zellweger et al., 2016), and the quality of parents – next-generation members interaction (Lansberg & Astrachan, 1994). In addition, social contexts, such as norms, culture, religion, and law, also play a significant role (Le Breton-Miller et al., 2004). GUESSS data

can be used to test the relationship between parental support and next-generation self-efficacy and commitment toward family business, leading to succession intention.

Educational support from parents can significantly influence the next generation's confidence in managing a family business (Garcia et al., 2019), while emotional support from parents fosters a secure environment that encourages successors to pursue their entrepreneurial aspirations, thereby enhancing their commitment to the family business (Suhartanto, 2024). Career-related modeling is another critical aspect of parental support that shapes successors' attitudes toward family businesses. When parents actively demonstrate entrepreneurial behaviors and share their experiences, they provide a framework for successors to emulate, which can lead to increased self-efficacy and a positive attitude toward business continuity (Suhartanto, 2023b). This career-related modeling effect is potent when combined with verbal encouragement because it reinforces successors' belief about their ability to navigate the challenges of running a family business (Zellweger et al., 2011). The interplay among parental support factors creates a robust foundation for successors to develop strong commitment, self-efficacy, and attitude, which lead to family business intention (De Massis et al., 2016; Garcia et al., 2019; Suhartanto, 2023b, 2024). Finally, previous research has indicated a positive relationship between family business subjective norms and career choice intention. Individuals with strong familial ties to business are more likely to develop entrepreneurial intentions because of positive reinforcement from family members (Zaman et al., 2020). The subjective norms derived from family members are critical in shaping these intentions because they both encourage and model entrepreneurial behavior (Zellweger et al., 2011).

Figure 3 illustrates a comprehensive research model of students' succession intention. This research model proposes the mediating impacts of attitude, self-efficacy, commitment, and subjective norms toward family business on the relationship between parental support factors and succession intentions.

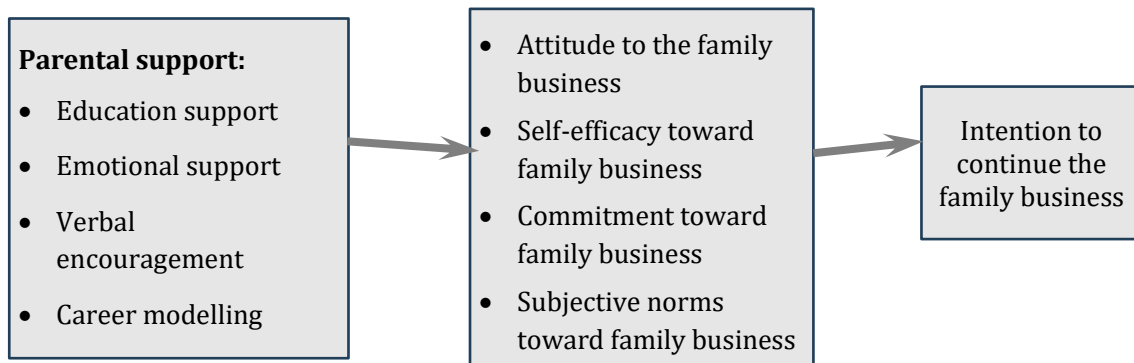


Figure 3. Research Model of Students' Succession Intention

CONCLUSIONS

The purpose of this study is to highlight research avenues that leverage GUESSS data and propose comprehensive research models that can be exercised using the GUESSS data, especially exploring the impact of entrepreneurship education on students' entrepreneurial intentions, activities, career choices, and succession intentions. The findings make significant theoretical contributions to the field of entrepreneurship education. First, the study highlights the complex interplay between individual factors such as self-efficacy and family background and environmental influences, such as university support and cultural norms. These findings reinforce the need for a multidimensional approach when evaluating the effectiveness of entrepreneurship

education. Moreover, the study supports the notion that entrepreneurship education is not a one-size-fits-all solution; its outcomes are moderated by varying factors, such as the field of study, gender, familial entrepreneurial background, and culture.

The proposed research model further illustrates how entrepreneurship education and family business exposure can interact to foster entrepreneurial careers. These insights provide valuable implications for designing entrepreneurship curricula and suggest that educators should consider students' personal and familial contexts to enhance their entrepreneurial outcomes. Overall, this study advances the entrepreneurship field by enhancing our understanding of the multifaceted dynamics of entrepreneurship education and its implications for students' career trajectories and family business succession.

LIMITATION & FURTHER RESEARCH

Despite the conceptual paper's contribution to theoretical development, this study is aware of the common limitations of the conceptual paper, i.e., the absence of empirical application and real-world testing. Without empirical validation, the practical relevance and effectiveness of conceptual frameworks remain uncertain (Bressanelli et al., 2018). Accordingly, future studies should exercise the research models proposed in this study using the GUESSS data. Future research should explore the moderating effects of individual, familial, and environmental factors on entrepreneurship education outcomes. Researchers should also examine how these factors vary across diverse cultural and national contexts by using the GUESSS data for cross-country comparisons. Additionally, further research could explore the long-term impact of entrepreneurship education on graduates' career trajectories, particularly how education influences graduates' decisions to become business owners or engage in family business succession. The role of self-efficacy and family support in entrepreneurial decision-making, especially in the context of family business succession, warrants further investigation.

Finally, future studies should assess the effectiveness of experiential learning approaches in entrepreneurship education and how these methods influence students' risk perception and business activities. These directions would contribute to a more nuanced understanding of how entrepreneurship education can be tailored to different student populations to achieve optimal outcomes.

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