

Exploring Entrepreneurial Intention On Knowledge, Entrepreneurship Family Culture, Migration Policies And Marketing Innovations: Mediating By Entrepreneurial Attitude

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Abstract

The research explores entrepreneurial knowledge, family culture, marketing innovations, and attitudes affecting the entrepreneurial intention of undergraduate students in China. It is built based on the research gap of the previous studies, which had not constructed such a conceptual framework explaining the Influencing Factors of Undergraduate Students' Entrepreneurial Intentions with attitudes as the mediator. The research uses the Mixed-Methods Sequential Explanatory Design, including Partial Least Squares Structural Equation Modeling (PLS-SEM) and thematic analysis. The quantitative research raises evidence to support the seven proposed hypotheses, indicating that entrepreneurial knowledge, family culture, and marketing innovations are important factors affecting the entrepreneurial intention of undergraduate students in China, mediating by the entrepreneurial attitudes of the students. The qualitative research confirmed findings from the quantitative research with word cloud. Among the various factors influencing the entrepreneurial intention of undergraduate students in China, the most mentioned factor in the interviews is "family". Findings suggest useful recommendations with academic, policy, and practical contributions. Schools are recommended to offer entrepreneurial knowledge and have various marketing innovations promoting positive attitudes and the entrepreneurial intention of Undergraduate Students in China. Policymakers are recommended to have interactions with schools and families with various marketing innovations promoting positive attitudes and the entrepreneurial intention of Undergraduate Students in China. However, there are limitations in that the research had not considered differences among different groups of students, indicating that future studies could refer to more analytical methods to explore differences in the students'

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entrepreneurial intention and various factors related to their differences.

Keywords: *Entrepreneurial Intention, Entrepreneurial Attitude, Entrepreneurial Knowledge, Family Culture on Entrepreneurship, Marketing Innovation*

1. Introduction

Improving the entrepreneurial intention of undergraduate students in China is one important goal that policymakers and educators need to address to improve the employability of students while supporting the development of businesses. However, there are various factors influencing individuals' entrepreneurial intention, indicating the importance of exploring knowledge, family culture, marketing innovations, and attitudes affecting the entrepreneurial intention of undergraduate students in China.

1.1 Background of the study

Entrepreneurship knowledge is important for Undergraduate Students in management to prepare for their career development after graduation. Therefore, educators and policymakers need to provide supportive activities to develop the students' entrepreneurship at school and to prepare for their career development as entrepreneurs after graduation (Alkhalaf et al., 2022). Support from families, such as parents of the students, is important for Chinese undergraduate students to access professional education, improve entrepreneurship knowledge, and gain financial support to start their own businesses (Selcuk & Burak, 2019). Educators and policy-makers also need to identify features of Undergraduate Students who have entrepreneurial intentions before proposing and implementing supportive status to support their entrepreneurship (Chhabra et al., 2021).

1.2 Statement of Problem

The problem in identification is exploring how Knowledge, Family Culture, Marketing Innovations, and Attitudes are related to Undergraduate Students' Entrepreneurial Intentions in China. The attitudes of students act as mediators when exploring how Knowledge, Family Culture, and Marketing Innovations are related to Undergraduate Students' Entrepreneurial Intentions are also explored.

1.3 Research Question

Three research questions are identified based on the statement of the problem for this research:

- What is the level of entrepreneurial knowledge, family culture on entrepreneurship, marketing innovations, entrepreneurial attitudes and the entrepreneurial intention of Undergraduate Students in China?
- What variables influence the entrepreneurial intention of Undergraduate Students in China?

- What is the model for the entrepreneurial intention of Undergraduate Students in China?

1.4 Research objectives

The research includes three research objectives:

- To assess the level of entrepreneurial knowledge, family culture on entrepreneurship, marketing innovations, entrepreneurial attitudes and the entrepreneurial intention of Undergraduate Students in China.
- To analyse the variables that influence the entrepreneurial intention of Undergraduate Students in China.
- To create a model for the entrepreneurial intention of Undergraduate Students in China.

1.5 Hypotheses

Seven research hypotheses are developed to direct the empirical studies:

- There are significant associations between Undergraduate Students' positive attitudes toward Entrepreneurship and the Entrepreneurial Intention of Undergraduate Students in China.
- There are significant associations between Undergraduate Students' entrepreneurial knowledge and their positive attitudes toward Entrepreneurship in China.
- There are significant associations between family culture and Undergraduate Students' positive attitudes toward Entrepreneurship in China.
- There are significant associations between marketing innovation and Undergraduate Students' positive attitudes toward Entrepreneurship in China.
- There are significant associations between Undergraduate Students' entrepreneurial knowledge and Entrepreneurial Intention of Undergraduate Students in China.
- There are significant associations between family culture and the Entrepreneurial Intention of Undergraduate Students in China.
- There are significant associations between marketing innovation and the Entrepreneurial Intention of Undergraduate Students in China.

2. Literature review

2.1 Entrepreneurial Intention of Undergraduate Students in China

Undergraduate Students' entrepreneurial intention is their conscious desire to start businesses and become entrepreneurs (Younis et al., 2020). The intentions increase as they start new businesses and adopt new technologies and vehicles to improve business operations. Outside the classroom, entrepreneurial planning indicates their entrepreneurial intent (Duong, 2021). The Theory of Planned Behaviour (TPB) defines entrepreneurial intention by exploring how perceived feasibility, entrepreneurial intention, and perceived desirability are related (Praswati et al., 2022). Reizabal and Benito Gómez (2020) propose that entrepreneurial intention is the likelihood of students starting businesses after graduation under the policies and support of educators and the Chinese government. However, Undergraduate Students in China face complex market situations that affect their entrepreneurial intent. The Entrepreneurial Event Model and Theory of Planned Behaviour

used different assumptions and analytical frameworks to define and evaluate entrepreneurial intention. The Entrepreneurial Event Model predicts entrepreneurial behaviour based on individuals' subjective rules and the potential they can achieve by participating in social events and activities (Kruse et al., 2019).

The entrepreneurial intention of Undergraduate Students could be measured by the student's commitment to education, researching entrepreneurial knowledge beyond the classroom, and entrepreneurial planning (Duong, 2021).

2.2 Entrepreneurial Attitudes

An entrepreneur has great imagination, flexibility, creativity, and innovation, is receptive to conceptual thought, and views change as a business opportunity (Abun et al., 2018). Entrepreneurship is a skill that requires determination, resilience, and the desire to achieve one's objectives (www.thebrilliance.org/). According to Ajzen (2002), entrepreneurship is a person's view of the value, utility, and desirability of starting a new firm. Cherry (2023, p.1) proposes that attitude is the learned disposition to evaluate things in a specific manner. Attitudes refer to intrinsic factors of Undergraduate Students to influence their entrepreneurial intentions (Setiawan et al., 2022). An entrepreneurial attitude is more than just a matter of perception; it consists of an individual's emotions, thoughts, and attitudes toward entrepreneurship. It is considered a function of entrepreneurial value, belief, and favourability (Schultz & Oskamp, 1996).

The entrepreneurial attitude of Undergraduate Students in China is defined as positive attitudes regarding entrepreneurship, risk-taking, and innovation acceptance, which are three dimensions to construct the operational definition of the entrepreneurial attitude of Undergraduate Students in China (Boonsiritomachai & Sud-On, 2021).

2.3 Entrepreneurial Knowledge

The Knowledge of college students in entrepreneurship has dimensions such as the Undergraduate Students in China having clear knowledge, being skilled, and having experience running a new business (Rodríguez-López & Souto, 2020). Various studies confirmed the significance of clear knowledge of entrepreneurship to direct the entrepreneurial intentions of individuals. Components of knowledge of college students in entrepreneurship three dimensions: Undergraduate Students in China have clear knowledge, are skilled, and have experience running a new business, each is measured by certain pillars (Rodríguez-López & Souto, 2020).

2.4 Family culture on entrepreneurship

Family Culture refers to how the families of the Undergraduate Students in China encourage their Entrepreneurial Intention. Indicators to measure family culture include the family's entrepreneurship, trade for a long time, and career succession, which indicates how family can support Undergraduate Students in China starting and running their businesses (Duong, 2021). The overall, support from family promotes the Undergraduate

Students' entrepreneurial intentions in China. Concisely, family culture on entrepreneurship refers to how the families of Undergraduate Students in China encourage their Entrepreneurial Intention (Bazan et al., 2020; Duong, 2021; Nguyen, 2018; Salisu et al., 2021; Weerasekara & Bhanugopan, 2022). There is the family's entrepreneurship, trade for a long time, and career success as the measurement of family culture on entrepreneurship.

The family's entrepreneurship as a pillar of family culture is measured as how the family members encourage Entrepreneurship to promote the Undergraduate Students' Entrepreneurial intention (Duong, 2021). Entrepreneurship of a family suggests support for the family members to start new businesses via offering financial or non-financial support because the family members could participate in the Entrepreneurship of the family culture to develop this family culture (Bazan et al., 2020).

The more resources available in families and the longer periods that the family run their businesses contribute to the Undergraduate Students' higher Entrepreneurial intention because trading for a long time develops the resources in the Undergraduate Students' family to support their starting new businesses. Salisu et al. (2021) studied the influences of creativity and resource availability in families to support the significance of creativity and resource gained from the previous operations supporting the running of family-based businesses and the Undergraduate Students' starting new businesses. Jumaevich and Mengliboevna (2021) suggested that the technology available in families influences the decisions of the family members, including the students, to determine whether they should start their businesses. Arquisola and Muanar (2019) agreed that students from families with better economic conditions, such as the economic support from their parents, are more likely to start new businesses compared with students from low-income and middle-income families. The longer period that the families have their resources running their businesses contributes to the students' likelihood of starting their businesses (Valencia-Arias et al., 2021).

Some Undergraduate Students show entrepreneurial intention after graduation because they face the requirements of their parents' career succession. (Duong, 2021) suggested that career succession is one reason that students run their businesses after graduation, following what their parents do. Parents' decision-making style and whether there is the family-own business the Undergraduate Students are two key factors that determine their entrepreneurial intention (Weerasekara & Bhanugopan, 2022). Undergraduate Students born into families who have their businesses, especially family-own businesses, are more likely to encourage the students to take the roles of their parents after graduation (Ndofirepi, 2020).

2.5 Marketing Innovation

Online and technology marketing boosts Chinese Undergraduate Students' entrepreneurial attitudes and intentions (Weerasekara & Bhanugopan, 2022). Educators and policymakers are major stakeholders in marketing innovation to stimulate Undergraduate Students' entrepreneurship. Scholars have defined marketing innovation from several perspectives to

examine how firms use it to encourage entrepreneurship.

Marketing innovation (MI) is implementing a new marketing strategy incorporating substantial modifications to product design or packaging, product placement, promotion, or pricing (<https://ec.europa.eu>). Innovation in marketing incorporates new marketing methods and techniques that differ from those previously used and involve substantial modifications to product promotion, design, packaging, and placement. It assists in enhancing a product or service and expanding its scope (<https://sendpulse.com/>). Moreover, introducing a new marketing method differs considerably from the enterprise's prior marketing method (www.stat.fi/meta/kas/). In scholarly views, MI refers to service development, pricing strategy, advertising campaigns, distribution routes, and marketing information systems (Purchase & Volery, 2020). They include new methods and technologies to improve sales firms' market approach, communication channels, and product and service delivery to attract and retain customers (Purchase & Volery, 2020).

In conclusion, marketing innovation involves major changes in projects, product construction, packaging, distribution, promotion, or price strategy to meet consumers' needs, establish new markets, or reposition products to enhance sales ((<https://ec.europa.eu>; <https://sendpulse.com/>; www.stat.fi/meta/kas; Purchase & Volery, 2020).

Marketing innovation in entrepreneurship is defined as Marketing focus, Customer focus, and Unique proposition, which are three dimensions of the operational definition of marketing innovation (Peng et al., 2021; Zahara et al., 2022). Marketing focus includes improving products, promoting word-of-mouth marketing, developing distribution channels, using an integrated approach, partnering with other companies, and developing innovative practices. Customer focus includes customer groups and listening to the ideas of the customers. Unique propositions include introducing new products and processes, identifying new markets and new ways of entering the market, manage uncertainties in product and service innovation.

2.6 Research Gap

The research problem is identified from the research gap of this topic after reviewing the various previous studies. Previous studies have not identified the mediation effect of students' attitudes in explaining the mechanisms through which the Undergraduate Students' Knowledge, Family Culture, and Marketing Innovations could influence the Undergraduate Students' Entrepreneurial Intentions. Deficiencies in the arguments and evidence of previous imply the research gap: previous studies had not constructed such a conceptual framework explaining the Influencing Factors of Undergraduate Students' Entrepreneurial Intentions with attitudes of the Undergraduate Students as the mediator. The limitations suggest the potential that this research could contribute to future academic studies and management practices of policymakers encouraging the entrepreneurial intentions of the Undergraduate Students of China.

2.7 Conceptual Framework

In summary, the conceptual framework is constructed based on findings from the literature review section, as illustrated in the figure below (Figure 2.1)

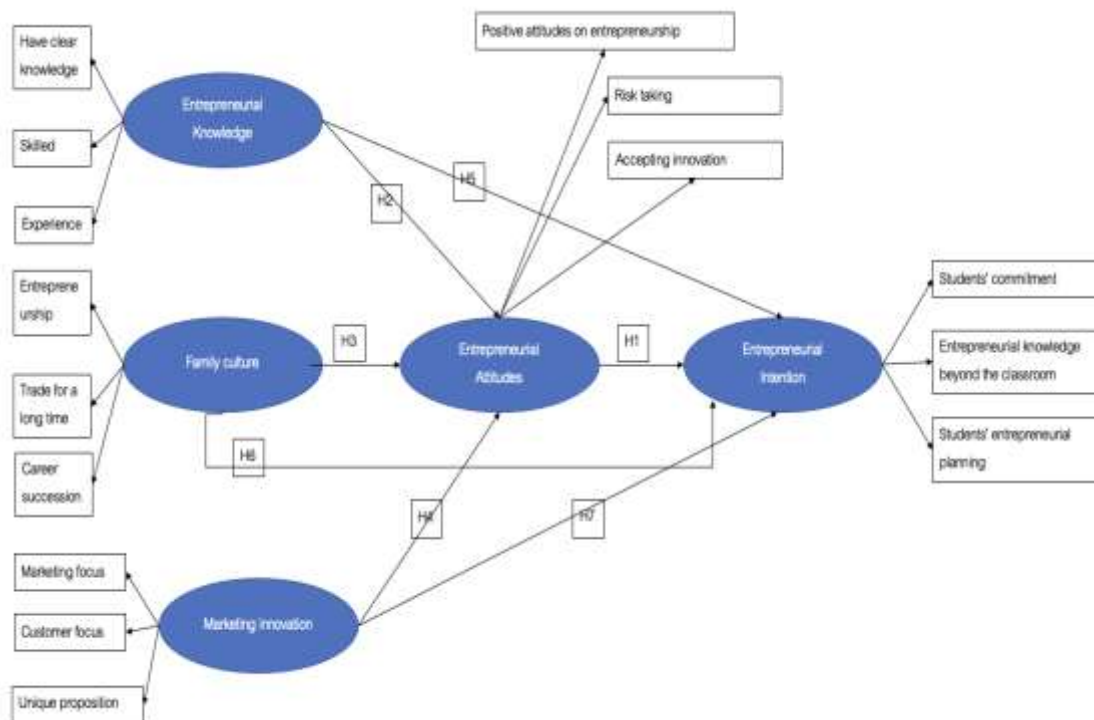


Figure 2.1 Conceptual framework

Source: author

Factors related to Undergraduate Students' Entrepreneurial Intention in China include Entrepreneurial Knowledge, Family Culture, and Marketing Innovations. Entrepreneurial Attitude is the mediator to explain the mechanisms that Entrepreneurial Knowledge, Family Culture, and Marketing Innovations are related to Undergraduate Students' Entrepreneurial Intention in China.

The entrepreneurial intention of Undergraduate Students could be measured by the student's commitment to education, researching entrepreneurial knowledge beyond the classroom, and entrepreneurial planning (Duong, 2021). The entrepreneurial Knowledge of college students has dimensions such as the Undergraduate Students in China having clear knowledge, being skilled, and having experience running a new business (Rodríguez-López & Souto, 2020). Family Culture refers to how the families of the Undergraduate Students in China encourage their Entrepreneurial Intention. Indicators to measure family culture include the family's entrepreneurship, trade for a long time, and career succession, which indicates how family can support Undergraduate Students in China starting and running their businesses (Duong, 2021). Marketing innovation involves major changes in projects, product construction, packaging, distribution, promotion, or price strategy to meet consumers' needs, establish new markets, or reposition products to enhance sales. Indicators to measure marketing innovation include Marketing focus, Customer focus, and Unique proposition (Peng et al., 2021; Zahara et al., 2022). Attitudes are measured as how

the Undergraduate Students in China have a positive attitude regarding entrepreneurship, risk-taking, and innovation acceptance (Boonsiritomachai & Sud-On, 2021).

3. Research Methodology

3.1 Research Design

The research uses the Mixed-Methods Sequential Explanatory Design to explore the research objectives. The dissertation firstly conducts the quantitative research strategy using Partial Least Squares Structural Equation Modeling (PLS-SEM) and then builds the qualitative research using thematic analysis for in-depth analysis based on findings from the quantitative research. The population of this research are Undergraduate Students in Guangxi province, China. All full-time Undergraduate Students in their last year of graduation are included. The population is 45,386 Undergraduate Students who are in their last year of graduation from 38 colleges and universities in Guangxi Province. The qualitative research selects 22 samples to conduct interviews with Undergraduate Students. The quantitative research strategy selects around 625 participants to answer a questionnaire developed based on Likert's five-point scale.

3.2 Quantitative Research Methodology

3.2.1 Samples

Stratified sampling is used to collect data from 625 samples from Undergraduate Students in Guangxi province, China, to prepare for the quantitative research section of the dissertation. The stratified sampling includes five phases in sampling and data collection: identifying the population, the five regional universities, the universities in the selection, the number of post-graduates, and the number of samples (Arnab et al., 2019).

3.2.2 Data Collection and Analysis

The data in the collection are primary, with one questionnaire as the tool. The questionnaire will be created and posted online, allowing the researcher to share the questionnaire link with the participants and allow the participants to directly fill out the questionnaire without reporting their private information. The questionnaire will be posted on WJX (www.wjx.com) after it is created and tested under the pilot test. The online questionnaire as one data collection tool includes questions about the Undergraduate Students' self-evaluations on their capabilities, social supports, attitudes and Entrepreneurial Intentions, measured by Likert's Five-Point Scale, which is one important tool to generate numeric data based on subjective evaluations and attitudes of the participants (Shin et al., 2018). The Partial Least Squares Structural Equation Modeling (PLS-SEM) is used to analyse the quantitative data collected.

3.2.3 Abbreviations of variables and dimensions

Table 3.1 Abbreviations of variables and dimensions

Abbreviations	Variables	Dimensions
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EI	Entrepreneurial Intentions	
SC		Students' commitment
EKC		Entrepreneurial knowledge beyond the classroom
SEP		Students' entrepreneurial planning
EA	Entrepreneurial attitude	
PAE		Positive attitudes toward entrepreneurship
RT		Risk-taking
AI		Accepting innovation
EK	Entrepreneurial Knowledge	
HCK		Have clear knowledge
SK		Skilled
EP		Experience
FC	Family Culture	
ES		Entrepreneurship
TL		Trade for a long time
CS		Career succession
MI	Marketing Innovation	
MF		Marketing focus
UP		Unique proposition
CF		Customer focus

3.2.4 Validity and Reliability

In this paper, 49 samples were selected for pre-experiment, and the reliability and validity of the pre-experiment data were tested in this chapter.

1. Indicator reliability

Indicator reliability measures how much of an item's variance is explained by the construct, called variance extracted. Based on indicator reliability, reflective measurement models estimate outer loadings. The item's absolute contribution to its build is determined.

2. Internal consistency

Internal consistency is a statistic often based on the correlations between different questions on the same test. It assesses if many items claiming to measure the same basic construct provide similar results.

3. Convergence validity

AVE can be used as a test of convergent validity and discriminant validity. In the reflective model, AVE must be at least greater than 0.5 or higher (Hair Jr et al., 2021).

Table 3.2 Reliability and validity analysis of reflection model in first-order pre-experiment

Dimensions	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)	outer loading
SC	0.948	0.950	0.957	0.735	
SC1					0.876
SC2					0.842
SC3					0.896
SC4					0.915
SC5					0.853
SC6					0.842
SC7					0.764
SC8					0.861
EKC	0.942	0.946	0.956	0.813	
EKC1					0.952
EKC2					0.912
EKC3					0.927
EKC4					0.908
EKC5					0.803
SEP	0.942	0.944	0.953	0.744	
SEP1					0.794
SEP2					0.842
SEP3					0.854
SEP4					0.890
SEP5					0.889
SEP6					0.910
SEP7					0.853
PAE	0.910	0.912	0.937	0.789	
PAE1					0.859
PAE2					0.911
PAE3					0.870
PAE4					0.911
RT	0.895	0.896	0.935	0.827	
RT1					0.904
RT2					0.909
RT3					0.915
AI	0.924	0.928	0.946	0.815	
AI1					0.893
AI2					0.873

AI3					0.924
AI4					0.920
HCK	0.916	0.918	0.947	0.857	
HCK1					0.933
HCK2					0.890
HCK3					0.953
SK	0.919	0.920	0.939	0.755	
SK1					0.921
SK2					0.850
SK3					0.828
SK4					0.885
SK5					0.860
EP	0.920	0.924	0.943	0.806	
EP1					0.886
EP2					0.921
EP3					0.879
EP4					0.905
ES	0.902	0.904	0.939	0.836	
ES1					0.926
ES2					0.897
ES3					0.920
TL	0.939	0.941	0.956	0.846	
TL1					0.910
TL2					0.940
TL3					0.926
TL4					0.902
CS	0.924	0.927	0.946	0.816	
CS1					0.937
CS2					0.869
CS3					0.920
CS4					0.884
MF	0.885	0.893	0.921	0.744	
MF1					0.897
MF2					0.880
MF3					0.879
MF4					0.791
UP	0.924	0.926	0.952	0.868	
UP1					0.960
UP2					0.914
UP3					0.919
CF	0.907	0.911	0.942	0.843	
CF1					0.889

CF2	0.942
CF3	0.923

Table 3.2 shows the reflection scale accuracy analysis of 16 dimensions in the pre-experiment. Cronbach's alpha values for all dimensions are greater than 0.7, indicating that the items within each dimension are well correlated and that the same underlying structure is evaluated. A composite reliability (CR) rating above 0.8 indicates internal consistency and trustworthiness across all dimensions. AVE values greater than 0.5 for all dimensions indicate that the dimensions are well-defined and can account for significant differences in the items. All components have an external load greater than 0.5, which indicates that they have a good relationship with their respective sizes.

The second-order reflection variables of the pre-experiment are given here, as shown in Table 3.3:

Table 3.3 Reliability and validity analysis of second-order pre-experimental reflection model

Dimensions	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)	outer loading
Entrepreneurial Intentions	0.973	0.974	0.975	0.663	
SC1					0.848
SC2					0.775
SC3					0.830
SC4					0.856
SC5					0.786
SC6					0.797
SC7					0.734
SC8					0.799
SEP1					0.721
SEP2					0.789
SEP3					0.796
SEP4					0.800
SEP5					0.879
SEP6					0.828
SEP7					0.822
EKC1					0.906
EKC2					0.847
EKC3					0.844
EKC4					0.857

EKC5					0.743
Entrepreneurial attitude	0.942	0.944	0.950	0.635	
AI1					0.865
AI2					0.726
AI3					0.796
AI4					0.760
PAE1					0.747
PAE2					0.804
PAE3					0.800
PAE4					0.809
RT1					0.833
RT2					0.792
RT3					0.826
Entrepreneurial Knowledge	0.950	0.951	0.956	0.647	
HCK1					0.745
HCK2					0.736
HCK3					0.779
EP1					0.856
EP2					0.836
EP3					0.715
EP4					0.796
SK1					0.862
SK2					0.877
SK3					0.806
SK4					0.852
SK5					0.771
Family Culture	0.958	0.959	0.963	0.704	
					0.882
CS2					0.797
CS3					0.856
CS4					0.817
ES1					0.867
ES2					0.807
ES3					0.854
TL1					0.778
TL2					0.874
TL3					0.847
TL4					0.847
Marketing Innovation	0.951	0.954	0.958	0.697	
MF1					0.878

MF2	0.838
MF3	0.811
MF4	0.691
CF1	0.779
CF2	0.856
CF3	0.878
UP1	0.903
UP2	0.824
UP3	0.871

As shown in Table 3.3, in the pre-experiment, Cronbach's alpha values of all second-order variables were greater than 0.7, indicating a strong correlation and measuring the same structure. Composite reliability (CR) greater than 0.8 indicates internal consistency and reliability. AVE values above 0.6 indicate a clear and palpable interpretation of variance. All items have external loads higher than 0.7, indicating a strong correlation with second-order variables.

3.3 Qualitative Research Methodology

The dissertation uses the qualitative research strategy with data collected from an interview and empirical studies conducted using NVivo. Purposive sampling is used to collect data from 22 Informants to prepare for the qualitative analysis of the dissertation. Like the procedures conducting the quantitative research section, the deductive approach was used to conduct the qualitative studies of the research with five procedures: examining the conceptual framework, creating an interview, applying the thematic analysis, critical discussions, and conclusions. There are eight questions for the interview:

- [1] What is your vocational, major, and level of education?
- [2] Are you interested in entrepreneurial courses? Have you participated in entrepreneurial courses? If yes, how do you feel about participating in the course? If not, why?
- [3] Have you received any training or support from your vocational, the government, your family or other parties about starting a new business?
- [4] Do you want to start a new business? If yes, do you have started the new business? If not, why?
- [5] How do you evaluate your emotional intelligence, especially when facing uncertainties and changing situations?
- [6] How are you satisfied with your current status? And do you have clear goals and plans to realise the goals in the next five to ten years?
- [7] How can you motivate yourself to start a new business? For example, could you imagine future success to motivate yourself to start your new business?
- [8] Do you have any recommendations on your intention to start a new business in the future or the required skills and support?

The data in the collection are primary, with one interview as the tool. The interview will be created and posted online, allowing the researcher to share the interview link with the participants and allow the participants to answer questions of the interview in the WeChat directly supported one-by-one online meetings. Each interview lasts for about 30 minutes, with the interviewee answering the listed questions. The interviewees are also allowed to freely express their opinions on the interview questions and the research topic.

4. Results and Findings

This section summarises results and findings from both the qualitative and the quantitative research to lay a foundation conclude to and conduct discussions on findings and their applications.

4.1 Quantitative Findings

4.1.1 Descriptive statistics

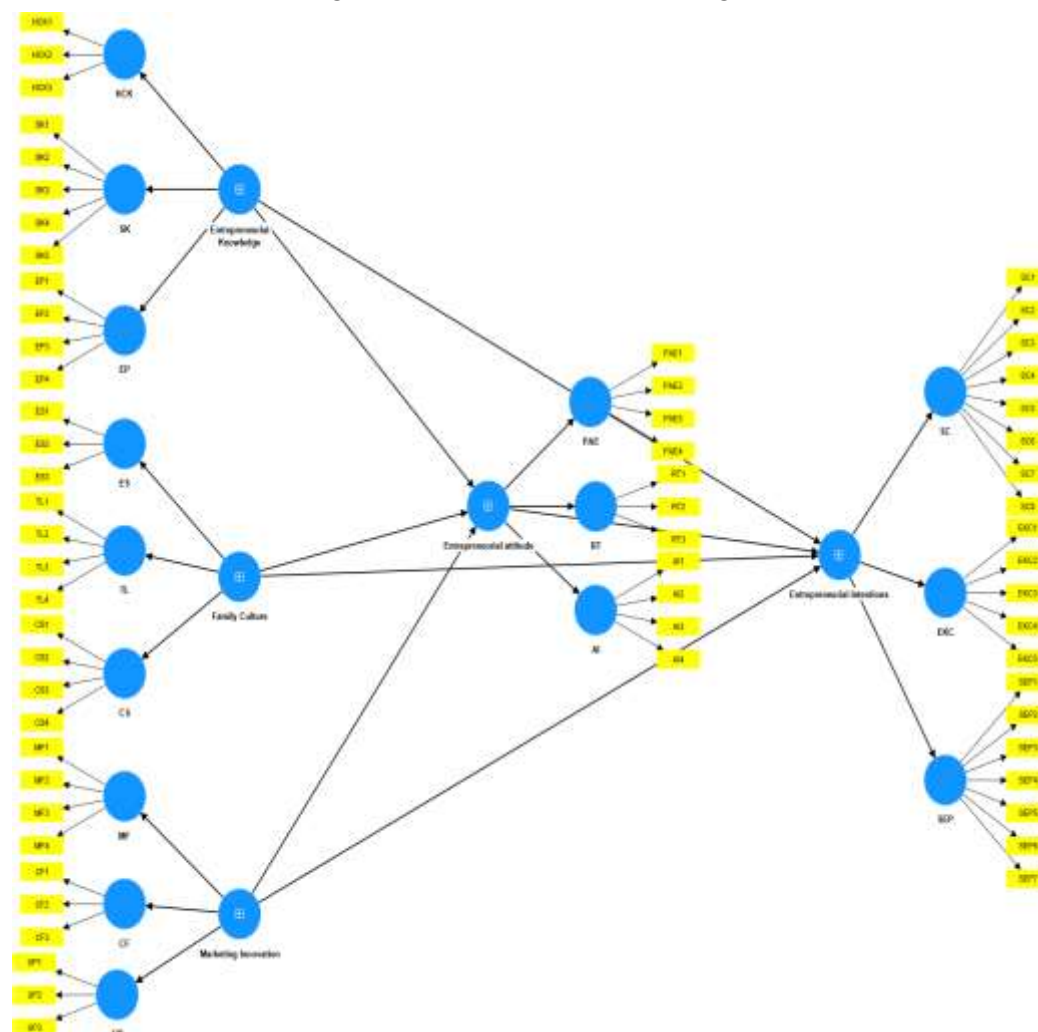
Table 4.1 Demographic statistics

Name	Options	Frequency	Percentage
major	social sciences	442	70.7%
	science and engineering	183	29.3%
Gender	Female	311	49.8%
	Male	314	50.2%
Age	18-20	178	28.5%
	21-23	375	60.0%
	24-26	18	2.9%
	27or more	54	8.6%

Table 4.1 depicts the major, gender, and age of 625 respondents. First, in terms of The distribution of majors, the majority of respondents (70.7%) are social sciences, with science and engineering accounting for only 29.3%. Secondly, in terms of gender distribution, the distribution of men and women was more balanced, with 311 female samples, accounting for 49.8%, and 314 male samples, accounting for 50.2%. Finally, in the age distribution, 21-23 years old accounted for the majority, accounting for 60%.

4.1.2 Evaluation of the reflective measurement model

Figure 4.1 Measurement model diagram



Regarding evaluating the reflecting measurement model, the researcher refers to Hiar et al. (2022, pages 110-128) for guidance. Indicator reliability, internal consistency, convergent validity and discriminant validity, the reliability and validity of second-order variables, and HTMT are calculated and explored to suggest a reliable and valid status of the model. In the analysis, Cronbach's alpha values for all dimensions are more than 0.7, indicating that items within each dimension are well-correlated and assess the same underlying construct. Composite dependability (CR) ratings above 0.8 indicate that all dimensions are internally consistent and trustworthy. All dimensions have AVE values larger than 0.5, indicating that the dimensions are well-defined and explain significant variance in the items. All components have outside loadings greater than 0.5, indicating they are well-related to their respective dimensions. Findings show that the variables demonstrate adequate discriminant validity as the square root of AVE for each variable is greater than the correlations with other variables.

All second-order variables have Cronbach's alpha values above 0.7, indicating strong

correlation and measurement of the same construct. Composite reliability (CR) values above 0.8 indicate internal consistency and reliability. AVE values above 0.6 indicate a well-defined and considerable variance explanation. All first-order dimensions have outside loadings above 0.7, indicating a strong correlation with second-order variables.

To confirm discriminant validity, the researcher also performed the calculation of HTMT inference using the bootstrapping option (5000 subsamples in total)(Wong, 2019). The result also confirms the discriminant validity of the data in use.

4.1.3 Mediation testing Hypothesis

This section first examines the direct relationship between the variables and then examines the mediating effects. The direct effects between the variables studied in this paper are shown in the table below:

Table 4.2 Path coefficients - Mean, STDEV, T values, p values

hypothesis	path	Original sample (O)	Sample mean (M)	STD EV	T value	P values	conclusion
H1	Entrepreneurial attitude -> Entrepreneurial Intentions	0.425	0.425	0.044	9.635	0.000	support
H2	Entrepreneurial Knowledge -> Entrepreneurial attitude	0.492	0.492	0.036	13.705	0.000	support
H3	Family Culture -> Entrepreneurial attitude	0.159	0.160	0.032	4.904	0.000	support
H4	Marketing Innovation -> Entrepreneurial attitude	0.309	0.308	0.034	8.970	0.000	support
H5	Entrepreneurial Knowledge -> Entrepreneurial Intentions	0.145	0.146	0.042	3.427	0.001	support
H6	Family Culture -> Entrepreneurial Intentions	0.136	0.135	0.032	4.219	0.000	support
H7	Marketing Innovation -> Entrepreneurial Intentions	0.184	0.185	0.038	4.841	0.000	support

According to Table 4.2, Entrepreneurial attitude has a significant positive influence on entrepreneurial intentions ($\beta=0.425$, $t=9.635$, $p<0.001$). Hypothesis 1 is valid. Entrepreneurial Knowledge has a significant positive impact on entrepreneurial attitude ($\beta=0.492$, $t=13.705$, $p<0.001$). Hypothesis 2 is true. Family Culture has a significant positive impact on Entrepreneurial attitude ($\beta=0.159$, $t=4.904$, $p<0.001$). Hypothesis 3 is valid. Family Culture has a significant positive impact on Entrepreneurial attitude ($\beta=0.309$, $t=8.970$, $p<0.001$). Hypothesis 4 is valid. Entrepreneurial Knowledge has significant positive Entrepreneurial Intentions ($\beta=0.145$, $t=3.427$, $p<0.05$). Hypothesis 4 is valid. Family Culture has significant positive Entrepreneurial Intentions ($\beta=0.136$, $t=4.219$, $p<0.001$). Hypothesis 5 is valid. Marketing Innovation has significant positive Entrepreneurial Intentions ($\beta=0.184$, $t=4.841$, $p<0.001$). Hypothesis 6 is valid.

Table 4.3 Total indirect effects- Mean, STDEV, T values, p values

path	Original sample (O)	Sample mean (M)	STDEV	T value	P values	conclusion
Entrepreneurial Knowledge -> Entrepreneurial Intentions	0.209	0.209	0.024	8.634	0.000	support
Family Culture -> Entrepreneurial Intentions	0.068	0.068	0.016	4.209	0.000	support
Marketing Innovation -> Entrepreneurial Intentions	0.131	0.131	0.021	6.140	0.000	support

Table 4.3 reports the total indirect effect of Entrepreneurial Knowledge -> entrepreneurial Intentions with a mean value of 0.209, a standard deviation (STDEV) of 0.024, and a T statistic of 8.634. The p-value is less than 0.001, indicating statistical significance. This implies that the indirect relationship between Entrepreneurial Knowledge and entrepreneurial Intentions is present and significant in the original sample, providing evidence for the mediated influence of Entrepreneurial Knowledge on Entrepreneurial Intentions.

The total indirect effect of family culture -> entrepreneurial intentions with a mean value of 0.068, standard deviation (STDEV) of 0.016, and a T statistic of 4.209. The p-value is less than 0.001, indicating statistical significance. This implies that the indirect relationship between family culture and entrepreneurial Intentions is present and significant in the original sample, providing evidence for the mediated influence of family culture on Entrepreneurial Intentions.

The total indirect effect of family marketing innovation -> entrepreneurial intentions with a mean value of 0.131, standard deviation (STDEV) of 0.021, and a T statistic of 6.140. The p-value is less than 0.001, indicating statistical significance. This implies that the indirect relationship between marketing innovation and entrepreneurial Intentions is present and significant in the original sample, providing evidence for the mediated influence of marketing innovation on Entrepreneurial Intentions.

Table 4.4 Specific indirect effects - Mean, STDEV, T values, p values

path	Original sample (O)	Sample mean (M)	STDEV	T value	P values	conclusion
Marketing Innovation -> Entrepreneurial attitude -> Entrepreneurial Intentions	0.131	0.131	0.021	6.140	0.000	support
Entrepreneurial Knowledge -> Entrepreneurial attitude -> Entrepreneurial Intentions	0.209	0.209	0.024	8.634	0.000	support

Family Culture -> Entrepreneurial Attitude -> Entrepreneurial Intentions	0.068	0.068	0.016	4.209	0.000	support
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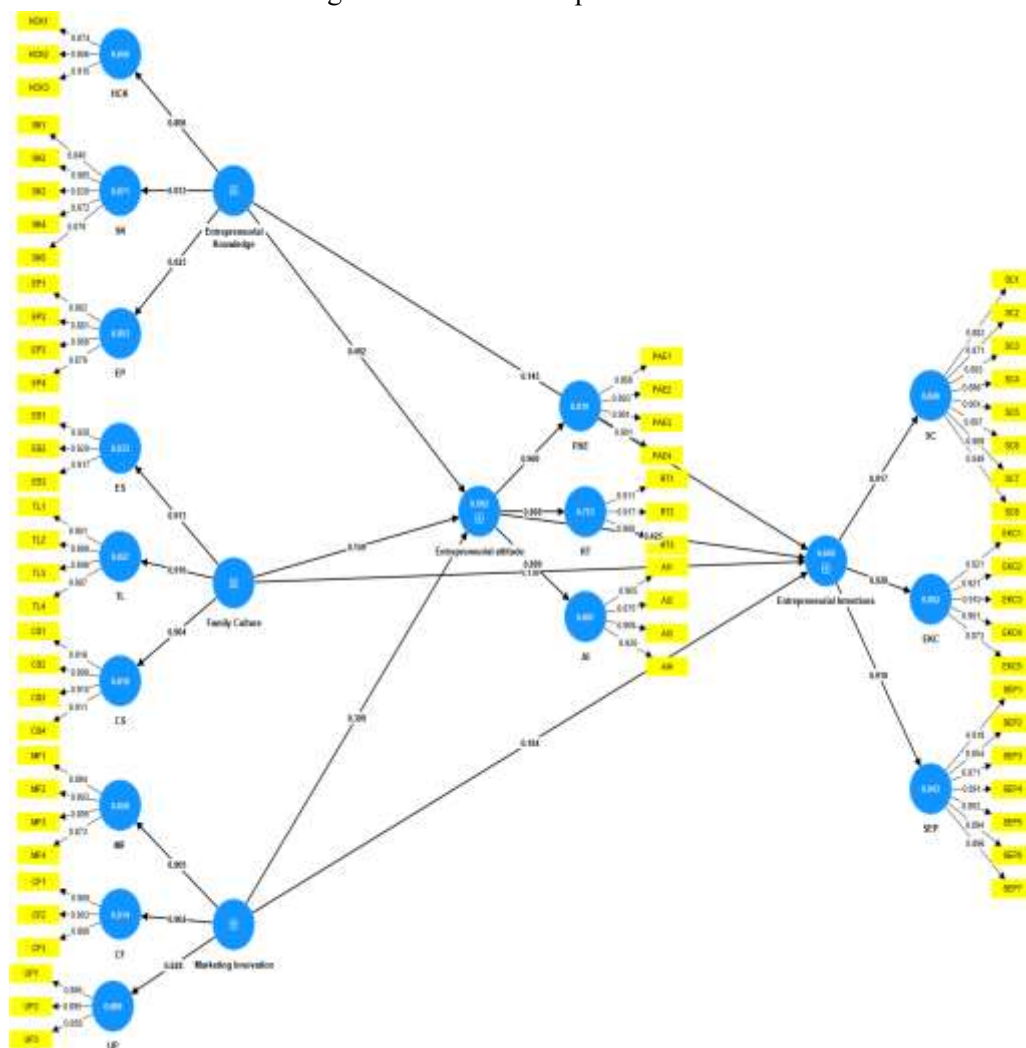
Table 4.4 presents specific indirect effects in the original sample, showcasing the impact of marketing innovation on entrepreneurial intentions through mediating variables. For marketing innovation -> entrepreneurial attitude -> entrepreneurial intentions, the mean effect is 0.131, with a low standard deviation of 0.021, yielding a high T statistic of 6.140 and a significant p-value less than 0.001. Similarly, for Entrepreneurial Knowledge -> entrepreneurial attitude -> entrepreneurial intentions, the mean effect is 0.209, with a T statistic of 8.634 and a significant p-value less than 0.001. For Family culture -> entrepreneurial attitude -> entrepreneurial intentions, the mean effect is 0.068, with a T statistic of 4.209 and a significant p-value less than 0.001.

Table 4.5 Total effects - Mean, STDEV, T values, p values

path	Original sample (O)	Sample mean (M)	STDEV	T value	P values	conclusion
Entrepreneurial attitude -> Entrepreneurial Intentions	0.425	0.425	0.044	9.635	0.000	support
Entrepreneurial Knowledge -> Entrepreneurial Intentions	0.355	0.355	0.040	8.893	0.000	support
Entrepreneurial Knowledge -> Entrepreneurial attitude	0.492	0.492	0.036	13.705	0.000	support
Family Culture -> Entrepreneurial Intentions	0.204	0.203	0.035	5.841	0.000	support
Family Culture -> Entrepreneurial attitude	0.159	0.160	0.032	4.904	0.000	support
Marketing Innovation -> Entrepreneurial Intentions	0.316	0.316	0.037	8.610	0.000	support
Marketing Innovation -> Entrepreneurial attitude	0.309	0.308	0.034	8.970	0.000	support

Table 4.5 displays the total effects in the original sample, representing the direct and indirect influences of entrepreneurial knowledge, entrepreneurial attitude, family culture, marketing innovation and entrepreneurial intentions. The mean total effect values for Entrepreneurial Knowledge -> Entrepreneurial attitude (0.492), Family Culture -> Entrepreneurial Intentions (0.204), Family Culture -> Entrepreneurial attitude (0.159), Marketing Innovation -> Entrepreneurial Intentions (0.316), and Marketing Innovation -> Entrepreneurial attitude (0.309) are associated with low standard deviations, resulting in high T statistics and significant p values (all $p < 0.001$). These findings affirm the statistical significance of the total effects, indicating robust relationships in the structural model.

Figure 4.2 Structural equation model



4.1.4 Evaluation of the Structural Model

VIF, the model' s explanatory power (R^2), and the model of predictive power (Q^2) are identified and discussed to evaluate the Structural Model. First, VIF values below 5 are considered acceptable, suggesting low levels of collinearity (Hair Jr et al., 2021, p.117). In this case, the VIF values for the dimensions of Entrepreneurial attitude, Entrepreneurial Knowledge, Family Culture, and Marketing Innovation are all within the acceptable range, ranging from 1.277 to 2.453. This implies that the observed indicators within each dimension are not highly correlated, indicating that multicollinearity is not a significant concern in the measurement model.

Second, Entrepreneurial Intentions and Entrepreneurial attitude exhibit R^2 values of 0.545 and 0.592, indicating strong explanatory power of the dependent variables explaining the two dependent variables, respectively.

Third, the f^2 of Entrepreneurial attitude to Entrepreneurial Intentions is 0.162, which is less than 0.02. The effect of medium size. Entrepreneurial Knowledge on Entrepreneurial Intentions has an f^2 of 0.025, which is less than 0.15. The influence effect is Small to Medium effect. The f^2 of Family Culture on Entrepreneurial Intentions is 0.030, less than

0.15. Small to Medium effect. The f^2 of Marketing Innovation on Entrepreneurial Intentions is 0.046, which is less than 0.15. Small to Medium effect. Entrepreneurial Knowledge's f^2 for Entrepreneurial attitude is 0.461, which is greater than 0.30. The influence effect is big size. f^2 of Family Culture on Entrepreneurial attitude is 0.049, which is less than 0.15. The influence effect is Small to Medium effect. The f^2 of Marketing Innovation on Entrepreneurial attitude is 0.170, greater than 0.15, and the influence effect is Medium effect.

Fourth, all variables had Q^2 values above 0. The Q^2 value of Entrepreneurial Intentions is 0.358, and the Q^2 value of Entrepreneurial attitude is 0.378. The results show that Q^2 can predict the points of endogenous factors and their factors.

4.1.5 Summary: Test hypotheses

All seven hypotheses are accepted at the 5% level of significance based on the empirical analysis.

- [1] There are significant associations between Undergraduate Students' positive attitudes toward Entrepreneurship and the Entrepreneurial Intention of Undergraduate Students in China.
- [2] There are significant associations between Undergraduate Students' entrepreneurial knowledge and their positive attitudes toward Entrepreneurship in China.
- [3] There are significant associations between family culture and Undergraduate Students' positive attitudes toward Entrepreneurship in China.
- [4] There are significant associations between marketing innovation and Undergraduate Students' positive attitudes toward Entrepreneurship in China.
- [5] There are significant associations between Undergraduate Students' entrepreneurial knowledge and Entrepreneurial Intention of Undergraduate Students in China.
- [6] There are significant associations between family culture and the Entrepreneurial Intention of Undergraduate Students in China.
- [7] There are significant associations between marketing innovation and the Entrepreneurial Intention of Undergraduate Students in China.

4.2 Qualitative Findings

The section summarises findings from the interviews after reviewing the demographic conditions of the 22 samples involved in the interview. Findings from the eight interview questions are summarised with Word Cloud, based on transcripts of interviewing the 22 undergraduate students. Figure 4.3 summarises the keywords of the transcript with Word Cloud.

research uses the Mixed-Methods Sequential Explanatory Design to explore the research objectives. The dissertation firstly conducts the quantitative research strategy using Partial Least Squares Structural Equation Modeling (PLS-SEM) and then builds the qualitative research using thematic analysis for in-depth analysis based on findings from the quantitative research. The quantitative research raises evidence to support the seven proposed hypotheses, indicating that entrepreneurial knowledge, family culture, and marketing innovations are important factors affecting the entrepreneurial intention of undergraduate students in China, mediating by the entrepreneurial attitudes of the students. The qualitative research confirmed findings from the quantitative research with word cloud, which identifies keywords from interviewing 22 students. Among the various factors influencing the entrepreneurial intention of undergraduate students in China, the most mentioned factor in the interviews is "family".

5.2 Discussions

There are various previous studies on this research topic while previous studies had not constructed such a conceptual framework explaining the Influencing Factors of Undergraduate Students' Entrepreneurial Intentions with attitudes of the Undergraduate Students as the mediator. Empirical findings of this study are developed based on the identified research gap of previous studies to indicate important factors influencing the entrepreneurial intention of undergraduate students in China. Entrepreneurial attitude is identified as one mediating factor in the study of how entrepreneurial knowledge, family culture, and marketing innovations are important factors affecting the entrepreneurial intention of undergraduate students in China.

5.3 Research contribution and implications

The research has policy, academic, and practical contributions considering its various implications with the findings. First, the research suggests valuable policy benefits for the Chinese governments and the educators in China to design and implement various policies related to Undergraduate Students' Entrepreneurial Intentions and to improve Undergraduate Students' well-being after their graduation because performing Entrepreneurship helps the students find more opportunities to start their own businesses, to be innovative, and to gain improve income from the workplace. Second, it constructs one conceptual framework explaining the Influencing Factors of Undergraduate Students' Entrepreneurial Intentions with the attitudes of the Undergraduate Students as the mediator. Third, the research explores the entrepreneurial Intentions of Undergraduate Students in China to propose recommendations that educators could follow to improve the students' Entrepreneurial Intentions. For example, the schools could develop and update their marketing innovations to better communicate Entrepreneurship to the Undergraduate Students in China.

5.4 Recommendations

Schools are recommended to offer entrepreneurial knowledge and have various marketing

innovations promoting positive attitudes and the entrepreneurial intention of Undergraduate Students in China. Policymakers are recommended to have interactions with schools and families with various marketing innovations promoting positive attitudes and the entrepreneurial intention of Undergraduate Students in China.

5.5 Limitations and recommendations for future studies

The research includes limitations concerning the research methodology applied: Partial Least Squares Structural Equation Modeling (PLS-SEM) and thematic analysis. Future studies could refer to more analytical methods to explore differences in the students' entrepreneurial intention and various factors related to their differences. For example, future studies could use comparing means to identify detailed differences in students from different genders, majors, and age groups.

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