

The Role of Motivation and Career Planning in Students' Decision-Making Process for Studying Abroad: A Mixed-Methods Study

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Abstract

The number of Vietnamese students studying abroad in other Asian countries has increased considerably, Taiwan has become one of the most popular destinations. This study investigated the motivation leading to the choice of Vietnamese students to study in Taiwan. Additionally, an appropriate model of students' decision-making process that explores the desire to study abroad was developed, clarifying, and emphasizing the impact of the motivation on students' career planning and decision-making process. This study was conducted using the mixed-methods methodology. A qualitative approach was used for in-depth interviews with 30 Vietnamese students studying in Taiwan. The data collected from the interviews were used to create questionnaires to survey more than 500 participants, and the responses were used for quantitative analysis. The results reveal the main factors of the motivation and career planning of Vietnamese students to study abroad in Taiwan and provide a model of how the students' decision-making process operates. The quantitative findings indicate that students' motivation and career planning have a significant correlation, whereas both of them directly affect decision-making.

Keywords: Motivation, Career planning, Mixed-methods, Decision-making, Taiwan, Vietnamese students.

Introduction

Since Taiwan declared the end of martial law in 1987, Taiwan's higher education (HE) has entered a new period of development, in which a series of university campuses have been established. This event has provided students with many opportunities for college entrance (Sun, 2009). This policy has allowed for access to education for the majority of the population (especially in tertiary education). However, due to the severe drop in the birth rate in recent decades, many institutions of HE has been faced with the problem of not having enough students to remain functional (Lin, 2013). Therefore, along with the trend of globalized education, from the 2000s onwards, the recruitment of elite international students to study in Taiwan has been a crucial policy of the Taiwanese government,

specifically the Ministry of Education (Ministry of Education, 2011). To market international education and attract foreign students, the Taiwanese government has provided numerous types of funding and scholarships such as the MOE Taiwan scholarship, the Ministry of Foreign Affairs Taiwan Scholarship, and the Ministry of Science and Technology Taiwan scholarship. Individual schools also provide their own scholarships and financial support. These strategies have proven successful as increasing numbers of international students are traveling to Taiwan for education (Nguyen & Chang, 2019).

Vietnam had also carried out educational reforms following the "Doi Moi" policy under the direction of Mr. Pham Minh Hac, the present Minister of Education (Hùng, 2019). From 1985 to 1990, Vietnam's education system attempted to catch up with the world's scientific and technical progress and focused on fostering the learning skills and attitudes of students.

The universalization of general education was implemented as the nation transitioned from the K-

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10-year system to the upper-secondary K-12-year system. As the population has grown, the demand for university education has increased correspondingly. Priorities were applied not only to public schools but also to private ones (Hùng, 2019). Although the quality of HE in the country has improved, economic growth and the need to develop knowledge and technology have spurred a wave of overseas study by Vietnamese students. In addition to countries with advanced education systems such as England, Australia, and the United States, Vietnam's neighboring countries in Asia such as Japan, Singapore, Korea, and Taiwan are among the most attractive study abroad destinations. The question is whether HE institutions in these countries are ready to host international students with high-quality service, especially in mental health by understanding what they need?

Learning about international students' educational paths, including the motivation for studying abroad, career planning and students' decision-making process, can help governments and HE institutions to develop suitable plans for international student service and enable host countries to re-evaluate their policies toward international education, which can further attract more excellent students, thereby increasing such countries' HE revenue. However, previous studies on this topic have mainly focused on Western countries and individual constructs (Le & LaCost, 2017; Nghia, 2019) without providing a more comprehensive analysis of the relationships between the factors of Vietnamese students' decision to study abroad.

This study intended to fill this gap in the theoretical framework through careful examination of the factors that influence Vietnamese students' motivation to study abroad as well as the model of the decision-making process when choosing Taiwan as a host country. More specifically, this study attempted to clarify the important role of motivation and the needs of students in their decision to provide a theoretical model for the decision-making process of international students.

Objectives

The study's general objectives were to provide a comprehensive overview of the current status of Vietnamese students in Taiwan, determine which factors can affect Vietnamese students' educational path and decision to study in Taiwan based on the theoretical background, and propose a conceptual

model that combines all the relevant factors and their effects on students' decisions and choices. The specific objectives of the study were as follows:

1. To study the factors that influence Vietnamese students' motivation for studying abroad when choosing to study abroad in Taiwan;
2. To learn about the impact of the motivation for studying abroad on the decision-making of Vietnamese overseas students in Taiwan;
3. To clarify the impact of career planning on the decision-making process of Vietnamese overseas students in Taiwan; and
4. To define the interaction between motivation for studying abroad and career planning of Vietnamese overseas students in Taiwan.

Literature Review

Vietnamese students in Taiwan

According to Taiwan (ROC) Ministry of Education (2020a) statistics, after mainland China, Vietnam has the second highest number of overseas students in Taiwan, with 17,421 students. The number of Vietnamese students has been increasing on an annual basis (as illustrated in Figure 1), especially following the introduction of Taiwan's New Southbound Policy, which focuses on attracting and training talent from Southeast and South Asian countries (Executive Yuan, 2018). Most are university students, numbering approximately 8,000, and another 7,000 students, study at Chinese language centers. According to The New Southbound Talent Development Program of the Ministry of Education (2020b), the three most frequently chosen majors by Vietnamese students are business and management, industry engineering, and literature and linguistics. This observation is consistent with the knowledge acquisition needs of Vietnamese students as well as with the scholastic training strengths of Taiwan's HE.

Motivation for studying abroad

The concept of motivation plays a critical role in psychology and sociology. Various schools of thought have varying opinions on motivation. According to Maslow (1966) hierarchy of needs, motivation is composed of multiple human needs, which are not the same for every person. The personality development of each individual is determined by various needs and their degree of satisfaction. Organizational behavior theory posits that motivation is a psychological process. Through stimulation and encouragement, people can

harness an inner driving force to enable them to continue to pursue their predetermined goals. During this process, motivation can be unstable, as it may sometimes grow or shrink. However, regardless of the degree of motivation, if individuals can maintain a given level of motivation, they can also continue their pursuit of and desire

for the goal until it is reached. Therefore, motivation is often regarded as the primary driving force of behavior. If an organization manager can grasp the motivation of a member in the organization, the mode and direction of that member's behavior are more easily predicted (Denhardt et al., 2002).

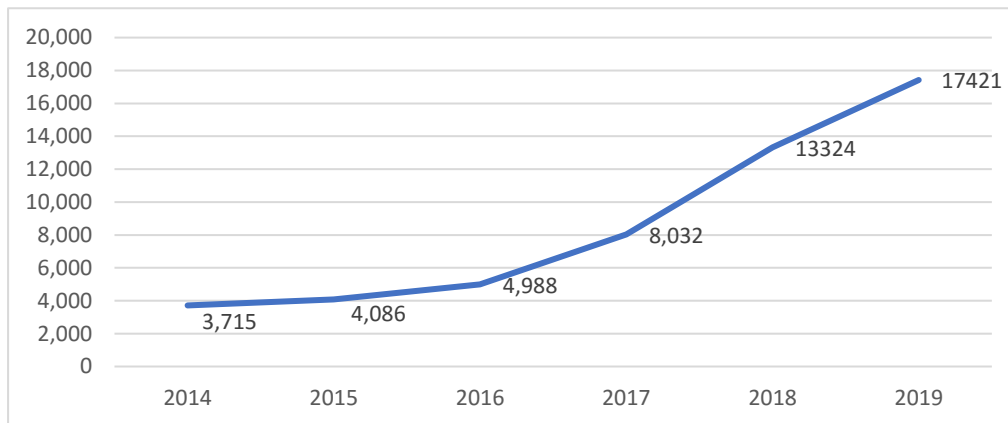


Figure 1 Number of Vietnamese students in Taiwan per year.

Regarding the motivation of students studying abroad, most scholars have used push-pull theory as their research framework (Zhang, 2011). The push-pull theory was originally applied to the study of population migration. This theory suggests that when a certain ethnic group is affected by some undesirable factors in the original place of residence and simultaneously attracted to positive factors in a different environment, these circumstances eventually lead to the phenomenon of individuals of that group moving to the new place of residence. For example, a poor living and working environment, high unemployment rate, and inconvenient transportation in one location may cause residents to want to live in other places, which is a driving force. Meanwhile, the places where these people yearn to live are also attractive enough to meet their food, clothing, housing, transportation, education, and entertainment needs, possessing characteristics such as a good quality of life, available jobs, and convenient transportation. These factors contribute to form the "pull" of the new residence. The flow of international students also can be viewed as a result of migration in the form of cultural exchange (Zhang, 2011). This theory was first used by McMahan (1992) and Mazzarol and Soutar (2002) in their studies to discover factors that affect students studying abroad. The present study employed this theory to preliminarily explore the

main factors of motivation and gather data from interview to support it.

Gonzalez et al. (2011) explored the two-way influence of international students studying abroad in European countries and observed that the population of the original country, the population of the host country, language, university ranking, the HE enrollment rate of the original country, and the availability of scholarships from European Union (EU) countries were all factors that could have a positive and significant impact on the number of international students studying abroad in European countries. Moreover, the distance between the two countries and the price indicators of the receiving country may have somewhat negative influences on the number of international students. In addition, the geographical locations of the two countries also affect the choices of international students. The research of Findlay et al. (2006), which was based on the influx of international students in Europe, investigated British students who went to other European countries to study and work and concluded that the biggest factors these students cared about were economy and language. Because these two factors reduce the motivation of British students to study abroad in the EU, most British students have a tendency to study abroad in either North America or Australia.

Language proficiency is undeniably a key consideration of students choosing to study abroad

(Marginson, 2006; Schwieter, Jackson, & Ferreira, 2018; Ziguras & Law, 2006). Schwieter et al. (2018) investigated the performance of a group of Canadian students traveling to Spain for an exchange program and found that students with previous study abroad experience and more advanced language skills were unfamiliar with the local culture but adapted more easily to the surrounding environment. Marginson (2006) believed that the language ability of international students, especially English ability, could make their program more appealing. Factors such as the diversity of the school's curriculum and teachers, external learning resources, infrastructure and facilities, the school's guidance mechanism for students, and available scholarships were leading contributors to a high-quality academic environment. Comprehensive and friendly residency policies regarding welfare programs and employment rates after graduation were also prominent traits of host countries with a large body of international students (Ziguras & Law, 2006).

Furthermore, the economic background and social status of students may also affect the motivation of student to study abroad (Orr & Schnitzer, 2008; Presley, Damron-Martinez, & Zhang, 2010). Orr and Schnitzer (2008) used literature analysis and statistical surveys and determined that European students coming from families with low-level educational backgrounds were more likely to regard financial problems as a crisis than those whose parents had received a more advanced education. Therefore, the economic situation and the financial support of their home country are the greatest influencing factors for students to study abroad. Presley et al. (2010) also observed that in addition to language proficiency, international students considered the costs of living in the host country and the degree of support for tuition, fees, and living expenses from their school or the government before reaching their decision about whether to study abroad or not.

Students' career planning

Career planning is a dynamic process in which every decision has its own consequences. For example, depending on the type and connotation of specific professional behavior, a person may increase or modify his ability and intention. This process may enable him to obtain professional achievements in the future (Cramer & Niles, 2004; Donald E Super, 1957). Donald Edwin Super (1976) wrote that the life of a person is similar to a rainbow, and its overall development and structure are composed of three different levels:

(1) A person's life can be divided into five sequential courses: growth, exploration, establishment, maintenance, and decline.

(2) Breadth refers to all the roles that each person plays in life (e.g., those of young children, students, citizens, husbands, wives).

(3) Depth is the degree to which individuals invest in playing their roles (i.e., the degree of contribution of a social tie to the society).

Flynn (2011) conducted semistructured interviews with 19 undergraduate and postgraduate international students in Canadian universities. The research mainly focused on determining the proportion of participants willing to stay in Canada to work or immigrate, as the participants themselves were either in the process of earning or had already earned their degrees and had been actively seeking jobs. The study's findings revealed that the participants decided to stay in Canada mainly because the country had a higher standard of living and more available job opportunities than what their home countries could offer. The types of immigration barriers they had experienced in Canada were from job searching and employment security as well as cultural and language barriers. They wished that the school they attended had established a department of employment service to meet the needs for employment and permanent residency. Research on the employment service needs of international students in Australian universities also advocated for having a solid consultation and information program on campus that could provide employment services for international students (Gibson, 2005). Such services have since been developed in more Australian universities.

Lee (2018) conducted in-depth interviews with two Korean students in Japan to understand how international students studying in Japan change their career development plans and adapt to the standards of Japanese society. Lee (2018) proposed that due to the geographical proximity and similarities in cultures between the two countries, these students had not had much difficulty becoming acquainted with the environment in their Japanese universities. Moreover, they also reported strictly using the Japanese language to communicate with their classmates, and both parties got along well. These factors contributed to their process of career development planning during their studies in Japan. Hou, Osborn, and Sampson Jr (2018) investigated the relationship between the career development and cultural characteristics of 53 international students and 54 domestic students from a large

university in the southeastern United States and produced the same results. These studies have exemplified how if international students are able to more fully integrate into the local environment and culture, their odds of successfully developing their career are higher (Arthur & Nunes, 2014; Crockett & Hays, 2011).

Regarding the career planning and development of international students studying in Taiwan, Liu (2007) determined that foreign students are usually not entirely aware of all the services provided by their schools, such as psychological or career counseling. In this case, the findings suggested that schools should actively promote such services to foreign students through an official medium to avoid unnecessary confusion. Extracurricular activities are also a positive means for foreign students to understand their schools better (Pendse & Inman, 2017).

Students' decision-making process

Kolman, Gallagher, Hossler, and Catania (1987) posited that college students' decision of school can be divided into a three-phase theory comprising predispositions, search, and choice. In terms of talent recruitment management, researchers often conduct empirical analysis based on students' characteristics and background factors, discussing and analyzing which conditions affect the students' entire education at all stages and which factors may affect students' school decision-making. Further understanding the degree of influence of this process may help confirm which factors are integral to students' school choice (Govan, Patrick, & Yen, 2006; Shen & Herr, 2004). Research from the perspective of consumer behavior pays more attention to understanding the internal factors of the students themselves, analyzing and exploring the students' decision-making process to determine the students' tendencies and ideas in school choice decisions (Hossler, Schmit, & Vesper, 1999; Maniu & Maniu, 2014).

With reference to the third stage (choice) of Kolman et al. (1987) three-stage theory, Shen and Herr (2004) issued a questionnaire survey to 395 college students from a private university in Taipei who enrolled through the university's selection channel. Functional value, conditional value, social value, emotional value, and epistemic value were the five value factors described and analyzed through the collected data to determine the extent to which each value affected the students' decision to choose a school. These academic viewpoints all have advantages and disadvantages in discussing students' decision-making factors when choosing a

school. The current talent recruitment management viewpoint remains the predominant research orientation, especially in the big data era. Most statistical databases use this viewpoint as their theoretical basis, such as Statistics (2020), the statistics of college students' school selection factors in the educational database are derived from the research orientation of this viewpoint.

Chapman (1981) argued that economic considerations and financial support are among the most impactful factors that influence college student's decision of a particular school. However, education financial subsidy policies in the United States differ across states, and thus, the impact of this factor on students living in various locations varies. The US Higher Education Policy Amendment passed in 1976 changed this issue. The amendment reorganized the process of financial subsidies, with subsidies being provided directly to students rather than through school institutions. This policy has reduced the possibility that the applications of students will be concentrated in particular schools, thus demonstrating the value of financial support for American students in choosing schools. In addition, having complete information on the courses offered by a school is crucial. Students tend to choose schools they believe to be capable of providing opportunities for further studies, a high employment rate after graduation, or the resources needed for their current jobs. Therefore, more practical courses and learning outcomes can positively affect the popularity of a school among students. Chapman (1981) also determined that more than 50% of newly enrolled students go to college less than 50 miles from home and up to 92% go to colleges within 500 miles. According to the SCOPE analysis of California high school graduates, up to 50% of the participants reported that school location was the main factor in their choice of university. This variation is thought to stem from the availability of educational institutions in the vicinity of the students' homes that meet their standards. Therefore, in areas with a denser population of universities, the number of students choosing to study abroad is lower than in rural areas where universities are usually scarce. In addition, the geographical mobility of students is affected by academic ability and family financial strength. As a result, students without financial support from their schools may need to consider other alternatives, unlike those who are fortunate enough to be supported (Rudd, Djafarova, & Waring, 2012).

Dunnett, Moorhouse, Walsh, and Barry (2012) hypothesized that a school's tuition fees play the

dominant role in a student's choice of major. However, evidence collected from the literature analysis method, content analysis and focus group research, and relevant scholastic articles has demonstrated that finances are not the only factor swaying students' intentions. Their research focused on several criteria for universities such as their curriculum reputation, their core competence in guaranteed employment, their research or teaching key methods, their student bodies, their required admission qualifications, and their tuition level. The final results from the authors' research demonstrated that these factors may be as important as tuition fees when considering attending a university.

Research Hypotheses

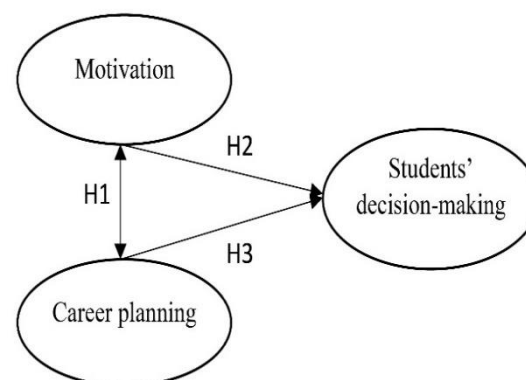
The aforementioned studies illustrated that scholars believe students' expectations of university life are also a meaningful participation variable (Kolman et al., 1987; Maniu & Maniu, 2014; Shen & Herr, 2004). Besides, motivation for studying abroad is a prerequisite for inquiring university information in host countries (Marginson, 2006; Schwieter et al., 2018; Ziguras & Law, 2006). Also, this factor is influenced by their career planning and vice versa, with a view to proceeding this long-term overseas study path, motivation for studying abroad partly affects the adaptation in their career planning (Crockett & Hays, 2011; Reynolds & Constantine, 2007). Therefore, researchers agreed that a student's decision is a continuous and intertwined process rather than an independent process per se (Cubillo, Sánchez, & Cerviño, 2006). Many studies show that most international students have always emphasized motivation and career planning have oriented themselves when choosing to leave their native countries for further education. Such factors partly affect the students' important decisions, such as which school and country to study in (Arthur & Nunes, 2014; Crockett & Hays, 2011; Pendse & Inman, 2017; Reynolds & Constantine, 2007).

Figure 2 describes the model in which the relationship between the three main constructs in this study is shown along with the three hypotheses.

H1: Students' motivation for studying abroad and students' career planning have a significant correlation (Crockett & Hays, 2011; Reynolds & Constantine, 2007).

H2: Motivation for studying abroad has a positive influence on students' decision-making process (Arthur & Nunes, 2014; Crockett & Hays, 2011; Cubillo et al., 2006; Pendse & Inman, 2017; Reynolds & Constantine, 2007).

H3: Students' career planning has a positive influence on students' decision-making process (Arthur & Nunes, 2014; Crockett & Hays, 2011; Pendse & Inman, 2017; Reynolds & Constantine,



2007).

Figure 2. The proposed conceptual model.

Research Methodology

Research Design

This research took place in two main phases. First, a qualitative approach was employed, which entailed conducting semi-structured interviews with 30 Vietnamese students currently studying in Taiwan. In the second stage, the data collected from the pilot study (as shown in Table 2) were used to clarify the structure of research components from the literature review. Such structure was used to construct a questionnaire to accomplish the quantitative research, which helped collect data for the structural equation modeling (SEM) analysis.

Measurement Development and Data Collection

For the data collected from the qualitative approach to accurately describe the factors that influence the students' motivation to study abroad, the semi-structured interviews were conducted with 30 Vietnamese students, 20 of whom were freshman university students who were only studying in Taiwan for a maximum of 1 year. The other interviewees were six graduate students and four doctoral students. The semi-structured questionnaire used for qualitative approach adhered to the theory presented in the literature review, and the measurements conducted for the quantitative approach were based on the qualitative approach's results. The questionnaire included three main constructs, including 12 items concerning the motivation for their choices to study abroad (construct from interview), six items related to career planning adopted from Adekola (2011)

and seven items about decision-making process (Cubillo et al., 2006; Jan & Ammari, 2016). After conducting exploratory factor analysis (EFA), the finalized standardized items included in the SEM analysis were only five items reflecting Vietnamese students' pull motivation, three items related to push motivation for studying abroad in Taiwan and four items covering the career planning perspective that these students may have devised prior to their studies in Taiwan, excluding the variation of intentions that may have arisen during their time in Taiwan. Finally, six items related to the students' decision-making were included.

According to Cohen, Manion, and Morrison (2007), a self-administered questionnaire is often used to measure client trust, attitudes, and decisions. Therefore, the same method was used in this study to collect data from the respondents. A 5-point Likert scale was used in accordance with Brown (2011) recommendation, with responses ranging from strongly disagree (1) to strongly agree (5). The online questionnaire was sent to approximately 1,000 Vietnamese students studying at universities in Taiwan through student groups on Facebook and the international offices of 22 universities. The results were 528 completed responses, representing a 51.8% response rate. Ten responses were then removed as invalid, leaving 518 legitimate responses served for the statistics.

Analysis and Results

Subject Characteristics

Of the 518 qualified responses, 203 respondents were female, accounting for 39.2%, and 315 respondents were men, accounting for 60.8%. In terms of age, the majority of the respondents, accounting for 76.9%, were between the ages of 20 and 25 years. The majority of the respondents were undergraduate students (71.4%), followed by the master students, accounting for 18.3%, and the remaining 10.23% were doctoral students. This statistic reflects the proportion of Vietnamese students currently studying at various university levels in Taiwan. In addition, students studying in natural sciences and science, technology, education, and math (STEM) fields participated in answering the questionnaire slightly more than did the students majoring in social sciences, humanities, and management fields, accounting for 54.1%. Because the study's object was biased toward new students coming to Taiwan, the majority of valid samples also fell into the category of students living in Taiwan for less than 6 months, accounting for 58.9%. These students were also slightly more concentrated in public schools (50.8%) and mainly in the northern

part of Taiwan (51.2%). The results of the demographic analysis regarding the characteristics, occupations, and education levels of the respondents are considered reasonable because the data were collected from an international student population of one country (Vietnam; see Table 1).

Table 1. Personal characteristics of the research participants

Characteristics	Respondents	
	Frequency (n = 518)	Percentage %
Gender		
Male	315	60.8
Female	203	39.2
Age		
Under 20	150	29.0
From 20 to 25	248	47.9
From 25 to 30	90	17.4
From 30 to 40	22	4.2
Over 40	8	1.5
Study Program		
Bachelor's	370	71.4
Master's	95	18.3
Doctorate	53	10.2
Major		
Nature Science & STEM	280	54.1
Social science, humanities & Management	225	43.4
Others	13	2.5
Time living in Taiwan		
Less than 6 months	305	58.9
From 6 to 12 months	213	41.1
University		
Private	255	49.2
Public	263	50.8
Location		
North	265	51.2
Middle	145	28.0
South	108	20.8

The qualitative study results

The qualitative research interview with 30 Vietnamese students show that there are two main constructs with eight motivations for studying abroad (Table 2). This result is almost consistent with the literature review, but "the quality of medical service" has not been mentioned by previous studies among the factors in the

motivation for studying abroad. The result also proves the vital role of international student recruitment in higher education institutions. It will be a challenging mission to attract international students if universities or academic institutions solely pay attention to the brand marketing strategies rather than the needs for care of students.

A comprehensive knowledge of motivation and needs of international students would facilitate universities worldwide, especially those in Asia countries, to create a compelling talent attraction strategy for the sustainable development of international higher education of their nations in the long run.

Table 2. **Motivations of Vietnamese students to study abroad in Taiwan**

Spindle coding		Core category	Concept formation
Motivation for studying abroad	Push motivation	1. Cultural experience	1-1 Explore the scenery of Taiwan
			1-2 Attracted by Taiwan's traditional festivals and folk customs
			1-3 Knowledge about Taiwan's multiculturalism
		2. Personal growth	2-2 Getting a degree
			2-3 Pursue academic and professional growth
		3. Language skills	3-1 Admission with low threshold of language skills
			3-2 Language acquisition
		Pull motivation	4. Location
	4-2 Climate adaptation		
	5. Economic incentives		6-1 Cheaper cost of studying abroad
			6-2 Easy access to scholarships
	6. Job opportunities		7-1 Local job opportunities
			7-2 Job opportunities when back home
			7-3 Job opportunities around the world
	7. Educational environment		8-1 Good educational environment in Taiwan
		8-2 Differences in the educational environment between the two countries	
8. Medical service quality	9-1 Good health care system		
	9-2 Taiwan medical advances		

Attributes of the Questionnaire

Cronbach's reliability coefficient is often calculated to ensure the stability and consistency of the research instrument, which, in this study, was the questionnaire compiled from the data collected from the qualitative approach. A Cronbach's alpha value closer to 1 indicates greater stability and consistency of a scale. Tavakol and Dennick (2011) suggested that Cronbach's alpha in social science research should have a cut-off value of 0.60. In this study, the Cronbach's alpha of the questionnaire had an overall value of 0.914, and that of the standardized items was 0.919, indicating the high consistency and stability of the instrument (Table 3).

Exploratory Factor Analysis

EFA was used to explore the variables underlying the data set. As Pallant (2010) indicated, the Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) test are first required with

appropriate thresholds to proceed with EFA. In this case, the KMO's test value was 0.953, and Bartlett's sphericity test result was significant ($p < .001$), implying the suitability of the data for EFA (Gronemus et al., 2010) (Kline, 2011; Pallant, 2010). The EFA results indicated five clean factors using an eigenvalue greater than 1 as the cut-off value. The initial eigenvalues, percentage of variance, and cumulative percentage indicators were identified accordingly. Factor loadings were all higher than 0.5. Table 3 demonstrates the results of EFA and the variables retained from the results of the qualitative analysis in the first state. The reliability of the questionnaires and separate constructs was measured using Cronbach's alpha test (Gronemus et al., 2010). The results of this analysis show that the Cronbach's alpha coefficients of the questionnaire and the constructs were suitable (.914 and above) for further analysis.

Table 3. Standardized items, EFA, and reliability statistics

Items	Code	Motivation (MV)	Career planning (CP)	Students' decision making (DM)
Push motivation (Cronbach α = .833)	MV1			
Cultural experience	MV1.1	.814		
Personal Growth	MV1.2	.882		
Language skills	MV1.3	.845		
Pull motivation (Cronbach α = .865)	MV2			
Location	MV2.1	.724		
Economic incentives	MV2.2	.817		
Job opportunities	MV2.3	.759		
Educational environment	MV2.4	.817		
Medical service quality	MV2.5	.846		
I have a plan for my career when I decide to study abroad	CP1		.758	
I know my career goals and objectives	CP2		.852	
I have a strategy for achieving my career goals	CP3		.847	
I have identified areas where I need to improve my skill and knowledge level	CP4		.803	
When it comes to deciding on a university, I try to select the very best	DM1			.859
Sometimes it's hard to decide which university to choose	DM2			.654
I decide to study abroad based on the country image	DM3			.645
I make my decision for the best choice based on institution image	DM4			.843
When searching for information about Taiwan higher education, career planning direct me	DM5			.816
When searching for information about Taiwan higher education, motivation for studying abroad direct me	DM6			.786
Cronbach α		.882	.817	.837
Initial eigenvalues		7.593	2.139	1.197
% of Variance		42.184	11.884	6.651
Cumulative %		42.184	54.068	60.719
Cronbach's alpha based on standardized items				.914
Cronbach's alpha of the questionnaire				.919

Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Confirmatory Factor Analysis

This study used quantitative analysis software, SPSS and AMOS respectively, to complete the necessary analysis. SPSS was used to analyze basic descriptors such as demography of sample characteristics, Cronbach's alpha, and EFA. AMOS was used in confirmatory factor analysis (CFA) and SEM hypothesis testing. The author employed two-stage SEM (Baumgartner & Homburg, 1996; Doll, Xia, & Torkzadeh, 1994) in which the factors explored during EFA were confirmed through CFA; this is also called the measurement model and was followed by fully fledged SEM and hypothesis

testing. For this purpose, AMOS software was used to perform CFA for each of the three constructs extracted from the EFA analysis using maximum likelihood estimation. These measurement models were assessed based on the fit indices recommended by scholars (Byrne, 2013; Gronemus et al., 2010). Table 4 summarizes the results of all CFA models. A review of the measurement models revealed that all the appropriate indices used were higher than the recommended threshold where the standard normed chi-square ($\chi^2/\text{degree of freedom [df]}$) value for all the models was below 5.0 and the goodness of fit index (GFI), comparative fit index (CFI), and normed fit index (NFI) were all above the

0.90 threshold, indicating a good fit of the measurement models.

Table 4. Result of CFA

Construct	Model	χ^2	df	χ^2/df	CFI	GFI	NFI	RMSEA
Motivation	Default	21.067	19	1.109	.999	.990	.989	.015
Career planning	Default	6.535	2	3.268	.995	.994	.992	.066
Students' decision-making	Default	43.437	9	4.826	.975	.972	.968	.086

SEM Analysis

The results of CFA presented in Table 5 clearly demonstrate the suitability of the structural components in the full structural model tested. At this stage, the indices requiring more attention were normed chi-square (χ^2/df), root mean square error of approximation (RMSEA), and CFI. Table 4 clearly indicates the good fit of the measurement model, and this along with acceptable reliability and validity allowed for the performance of fully fledged SEM for fitness and hypotheses testing.

The hypothesis testing results presented in Table 5 reveal that all three hypotheses are supported based on statistical significance ($p < .001$) as well as practical significance ($\beta > .20$),

indicating that this study obtained enough evidence to prove that hypotheses H1–H3 are supported by the data.

Figure 5 presents the final structural model of this study in detail, where the statistical indices are clear and reasonable, indicating the appropriateness of the model. In this case, a normed chi-square value (χ^2/df) of 1.388 ($\chi^2 = 180.453$, $df = 130$) was less than the recommended cut-off value of 5.0, which assures a good fit of the model. Similarly, the CFI was also above the cut-off value of 0.9 (CFI = 0.989), and the RMSEA had a value of 0.027, which is lower than the threshold value of 0.08.

Table 5. Estimates of the hypothesized model

Structural path	Hypothesized relationship	Std. reg. weight	S. E.	C. R.	P value
Motivation ↔ Career planning	H1 ^s	.668	.024	9.086	***
Motivation → Students' decision making	H2 ^s	.269	.067	3.992	***
Career planning → Students' decision making	H3 ^s	.546	.064	8.042	***
Statistic		Suggested		Obtained	
Chi-square significance				180.453	
Normed Chi-square (χ^2/df)		1→5		1.388	
CFI		≥0.90		.989	
NFI		≥0.90		.962	
RMSEA		≤0.08		.027	

s: supported; *** $p < .001$.

The standardized regression weights reveal the causal relationship between the constructs of the study—the statistical results indicate that the highest standardized regression weights were for the correlation between motivation for studying abroad and career planning, reaching .668, whereas the indices of how influences students' decision-making reached .269. In this case, among the three constructs of students' overseas educational path, studying abroad motivation and career planning simultaneously affect on students' decision-making process. It is noteworthy that the standardized regression weights between career planning and students' decision-making were also high (.546), indicating a connection between these two

constructs in the career development path of Vietnamese overseas students.

Conclusion, Implications, and Limitations

Many Western countries such as the United States, England, Australia, and Canada attract a large number of international students from around the world to study, work, and live. But in the case of many Asian developed countries, despite the development of HE environment, there is still lack the means to attract foreign talented students to their own universities. In addition to economic, political, and cultural reasons, strategies to

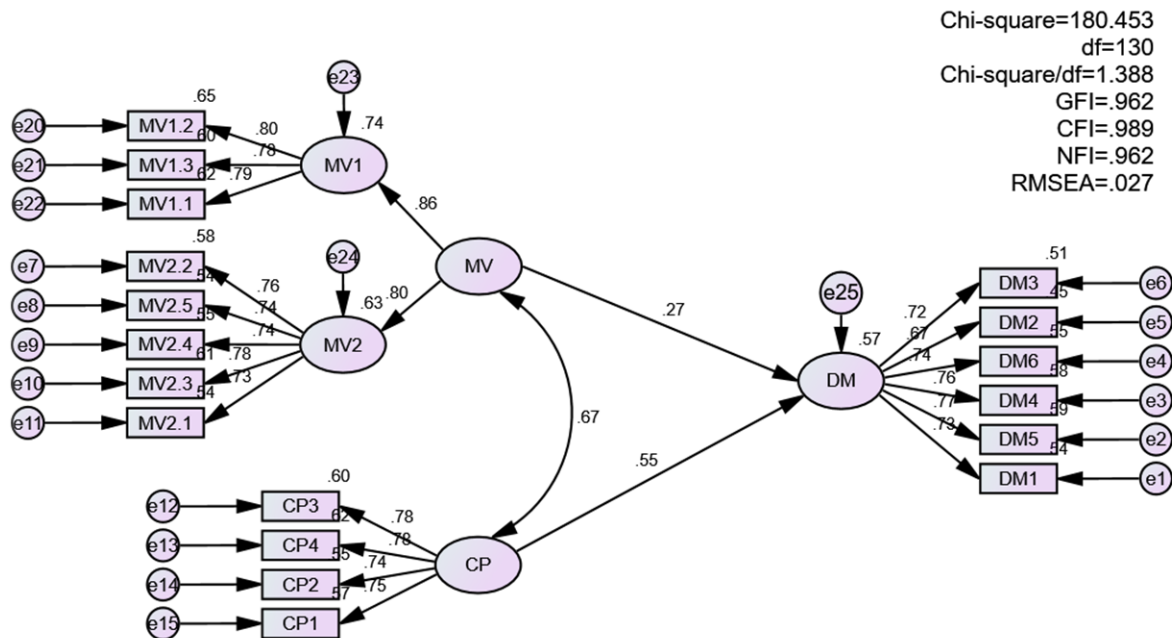


Figure 3. Final structural mode

promote HE programs and facilities in Asian countries have not been a focus of HE institutions. In addressing the gaps in knowledge about international students in Asian countries, this study contributes to the body of knowledge, methodology, and practice. First, this study adds to the body of knowledge by clarifying the factors that motivate international students (specifically Vietnamese students) to study abroad in another country (namely Taiwan). Specifically, this study identified a direct interaction between motivation to study abroad and career planning as well as the effect of them in the students' decision-making process. This variable may remain a mediator between students' motivation to study abroad, career planning and students' choice.

Second, this study contributes to the development of methodology. By combining qualitative, quantitative, and complex SEM analysis techniques to investigate the international students' school decision-making model, particularly that of Vietnamese students in Taiwan, a comprehensive model was developed, tested, and proven using statistical techniques with reasonable indices, all of which were demonstrated diagrammatically. Furthermore, the two-stage SEM

analysis confirmed the suitability of this proposed model. The findings also reveal that two aspects of

educational path (motivation and career planning) influence students' decision of a university for their HE. This study also contributes to the theoretical basis for future research on HE marketing strategies to attract international students and other studies related to customer decision-making.

Lastly, from a practical perspective, this study is expected to inspire businesspeople and managers of HE institutions to plan specific strategies for the cooperation and recruitment of international talent, especially between developed and developing countries in Asia. Through the understanding of psychology as well as international students' needs, service quality can be improved. Students' career planning and motivation to study abroad has a strong influence on students' decision-making process. Recognizing the importance of the aforementioned factors and being able to encourage the psychological characteristics and key factors that preserve such motivation can help improve universities' strategies to attract international students. In this case, findings from studying the students' educational path can be especially useful for non-English speaking countries to promote their strengths in HE

training to attract students. More specifically, international education organizations in general and universities in Asian countries in particular must invest more effort into understanding international students' motivation and career planning to meet student needs instead of solely focusing on marketing campaigns to promote school brands without conveying any specific ideas. Furthermore, the model developed in this study can also be considered as a foundation for studies in areas beyond the education world, such as immigration services and foreign investment.

As with all research, this study has its limitations. In particular, the scope of the research was limited to Vietnamese students in terms of population and Taiwan as the research setting. Such limitations may have yielded an incomplete reflection of the school decision-making model of international students traveling to Taiwan to study, and the findings may not be applicable in the case of other Asian countries. Future studies can fill this research gap by developing a more suitable model for each specific case. For the model in this study, both qualitative and quantitative methods were applied to obtain as comprehensive, specific, and accurate a view of the research problem as possible and to collect data for statistical analysis. Therefore, such data may be biased, especially those drawn from the qualitative interviews, despite the diligent efforts made to improve the methodology through careful selection of previous popular and coherent theoretical grounds for such qualitative research.

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