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Vietnamese Postgraduate Students' Choices for Higher Education: Exploring How Marketing and Communication, Social, and Economic Factors Influence Their Decision-Making

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Abstract

Several factors have contributed to a downward trend in postgraduate education enrollment in Vietnamese higher education. Understanding postgraduate students' university choice criteria is crucial for developing effective marketing strategies in higher education settings. The purpose of this study was to investigate postgraduate students' perceptions of their university choices and to evaluate the correlations between their marketing and communication, social support, and economic factors and their university choices. A survey consisting of 401 questionnaires and 05 semi-structured interviews was conducted at some of the most prestigious multidisciplinary universities in Ho Chi Minh City, Vietnam. The findings reveal that postgraduate students generally show a high degree of agreement in their university choice decisions. Additionally, differences in demographic characteristics, such as family income and father's education, were found to influence their preferences. Furthermore, the study suggests that marketing and communication, social support, and economic factors have varying and significant impacts, both positive and negative, on their decisions. The results of this study hold theoretical and practical implications for Vietnamese higher education. Recommendations for university administrators and other stakeholders are also discussed.

Keywords: university choice decision, marketing and communication, social support, economic factor, Vietnamese postgraduate student.

1. Introduction

The Vietnamese higher education system was heavily influenced by the Soviet academic system in the 1990s, in which universities mainly engage in teaching activities while research

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activities are carried out by research institutes (Clark, 2014). Over the last two decades, the Vietnamese government has strongly promoted the development of the higher education system. It has seen a remarkable growth in the number of universities and students, including both public and private institutions. For instance, the nation had 178 higher education institutions (HEIs) in 2000, of which 30 were private, with 795,600 students and the rest were public, with 103,900 students, respectively. By 2020, the number of universities and students will have more than doubled. There are 237 universities, including 172 public HEIs with 1,359,400 students and 65 private HEIs with 313,500 students (GSOV, 2005; GSOV, 2020). In addition, the number of postgraduate students has also increased rapidly over the past 10 years, with master's degree enrollment increasing from 62,705 in 2010 to 94,920 in 2020 and doctorate degree enrollment rising from 4,683 in 2010 to 11,054 in 2020 (GSOV, 2015; GSOV, 2020). In Vietnam, research has considered both positives and negatives, such as significant rise in institution numbers, educational accreditation, university financial autonomy, graduate unemployment, and opportunities in higher education (Dao, 2015; Pham, Vu, 2019). Students tend to carefully consider investing in higher education programs, after carefully weighing a number of criteria.

Previous research indicated that choosing a higher education institution is a high-risk decision, and deciding which university to study at can have long-term effects on students' careers (Walsh et al., 2015). The competition between universities to attract excellent students, faculty members, researchers, and financial aid is no longer limited to a single country or region but is now global, with 'an increase in the number of postgraduate students' playing an important role in these competitions (especially among Vietnamese public universities). Choosing an appropriate higher education institution for further study and research is a crucial decision for any student as it not only affects their future careers or their ability to avoid unprofitable investments for higher education but also affects learning motivation, academic achievements, and other correlations (Do et al., 2015).

Higher education institutions must develop more extensive marketing strategies based on the awareness of what postgraduate students seek at a HEI (Maniu, Maniu, 2014). In a fiercely competitive higher education market, a better understanding of postgraduate students' university choice can help promote marketing activities, admissions strategies, and refine curricula to entice more students to enroll in these programs (Adefulu et al., 2020; Do et al., 2015). Most research on how postgraduate students choose a university has been conducted in Western countries and has focused on differences in social class (Reay et al., 2005; Shaw, 2013). Similar research is less frequent in Vietnamese HEIs, especially for postgraduate students.

In light of the aforementioned points, the purpose of this study is to investigate postgraduate students' perceptions of their university selection decisions and to assess the relationship between marketing and communication, social support, and economic factors and university choice. This study seeks to address the following issues: (1) How do postgraduate students evaluate their university choice decisions? (2) Do demographic characteristics of postgraduate students influence their decision-making? (3) How do marketing and communication, social support, and economic factors influence their decision-making?

2. Literature Review

University choice decisions and higher education

Research on postgraduate program selection decision-making is widespread and has revealed many factors that postgraduate students must consider when making postgraduate program choices (Chen, 2007; Simões, Soares, 2010). It is generally assumed that earning a master's and doctorate degree is a good way to gain an advantage over others when building a good career or establishing a high position (Ha, 2016). However, the selection of postgraduate study, such as master and doctoral programs at HEIs is perhaps one of the most important decisions to make by postgraduate students and their families. It is a multi-stage decision-making process that requires the consideration of various important academic and non-academic factors, such as learner characteristics, information collection, and university and major characteristics as well as personal factors, including marriage, family and work (Kallio, 1993; Lei, Chuang, 2010).

According to Lei and Chuang (2010), graduates consider many factors when evaluating a school to receive postgraduate degrees, including institutional, curriculum, faculty, and personal factors. Various aspects have been used in studies to evaluate postgraduate students' university choice; for example, job opportunities inside and outside the school, the attractiveness of the school

(facilities and utility services) and the quality of learning (Lee et al., 2008), make new friends and gain hands-on experience in the field (Kim et al., 2007), academic reputation, program reputation or faculty professional reputation (Aydin, 2015, Briggs, Wilson, 2007; Keling, 2006; Raposo, Alves, 2007; Veloutsou et al., 2004), friendly service team and convenient service (Manoku, 2015), central location, campus, environment etc. (Raposo, Alves, 2007; Mubaira, Fatoki, 2012). The research results show that the assessment of students' choice decisions is determined by both academic factors (e.g., the caliber of academic staff, curricula, reputation of university or department, etc.) and non-academic ones (e.g., campus, facilities and student support services).

Factors influencing postgraduate students' university choice decisions

There are numerous factors that influence postgraduate students' university selection decisions, with demographic characteristics, marketing and communication, social support, and economic factors being the most significant. Other determinants include housing, geographic location, family accommodations (Lei, Chuang, 2010), living conditions (Van Hoof et al., 2014), academic pulling, administrative pulling, ease of visa grant or immigration, and environmental factors (Chen, 2007), obtaining career-specific information, personal development, improved postgraduate income career and (Sheppard, 2013), development opportunities (Keling, 2006; Moore et al., 2009; Briggs, Wilson, 2007; Ingram et al., 2000). Furthermore, demographic characteristics, such as gender, age, socioeconomic status, race and ethnic composition, have an effect on their selection procedure (Aydin, 2015; Liu, Morgan, 2020). Individual factors such as motivation, beliefs, and interests, among others (e.g., gender, religion, race, etc.) are also shown to play an important role.

As previous studies have shown that marketing and communication factors have different influences on postgraduate students' university selection decisions (Adefulu et al., 2020; Chen, 2007; Thetsane et al., 2019), for example, social media networks such as YouTube, Facebook, Twitter... (Hayes et al., 2009; Winn et al., 2014); visiting the university (Ming, 2010); face-to-face and paper communications, email (Robinson, Stubberud, 2012). The procedure was also shown to be influenced by the team support, partnerships, and relationships with organizations (Manoku, 2015), conversations with family or spouse, and expectations of friends (Ha, 2016; Soutar, Turner, 2002), social life, and surrounding community (Briggs, Wilson, 2007; Manoku, 2015; Mubaira, Fatoki, 2012). These elements imply that the assistance or counsel of subjects in the surrounding social environment, such as advice from teachers, family, relatives, friends, and the university consulting team, has a certain influence on student motivation. Economic factors, such as increased post-graduate income (Sheppard, 2013), employment, development opportunities, or career opportunities (Keling, 2006; Moore et al., 2009), tuition fees, scholarships, costs beyond financial aid, financial incentives, financial aid (Cokgezen, 2014; Keling, 2006; Mertz et al., 2012), and work-related concerns (Ha, 2016), can also be considered. There has been little research on the influence of marketing and communication, social support, and economic factors on postgraduate students' choice decisions in Vietnam's higher education. Hence, this study was conducted to demonstrate the interplay between these factors among Vietnamese postgraduate students.

3. Methodology Sample

A mixed-method approach was employed in the study, which included questionnaires and semi-structured interviews. A questionnaire survey was distributed to 450 full-time postgraduate students currently enrolled at Ho Chi Minh City's most prestigious multidisciplinary universities, among 172 public universities in Vietnam (MoET, 2021). This study was conducted with 401 students from a random sample of 450 postgraduate students, with an 89.11 % return rate by email, exceeding the 30 % response rate for analysis purposes (Dillman, 2000). This study also interviewed 05 postgraduate students who took part in the questionnaire survey.

A multipart questionnaire was used to collect respondents' personal information, data on their university choices, as well as marketing and communication, social support, and economic factors. This study's sample was divided by gender as follows: female students (50.6 %), male students (49.4 %). In terms of origins, 55.1 % are from cities, while the rest are from rural areas. For the educational level, 365 respondents (86.3 %) applied for a master's degree, and only 13.7 % for doctoral studies.

Variables

In this study, the dependent variable was postgraduate students' university selection decisions. Postgraduate students made their university choices based on six factors: (1) accreditation of the programs, (2) a discipline with scientific training, (3) academic staff with a high-quality teaching and expertise in research area, (4) a faculty with a high level of internationalization in both teaching and research, (5) curriculum's quality and faculty's reputation, and (6) academic freedom. For each item, respondents were asked to rate the level of university choice decisions of postgraduate students on a five-point Likert scale ranging from 1 = 'strongly disagree' to 5 = 'strongly agree'.

To assess the validity and reliability of this constructed measurement for the university choice decisions of postgraduate students in this study, factor loading, the Kaiser-Meyer-Olkin test of sampling adequacy (KMO) and internal consistency analysis (Cronbach's) were performed. Factor loading values for items designed to measure each factor ranged from 0.667 to 0.752, all of which exceeded the threshold level of 0.6 (Hair et al., 2009). This indicates that all six factors were suitable for constructing university choice decisions. The KMO value was 0.851, surpassing the acceptable level of 0.6, which meets the requirement for a constructed variable in educational research (Beavers et al., 2013). In this study, the Cronbach's coefficient was 0.801, exceeding both the thresholds of 0.6 (Hair et al., 2009) and 0.7 (Nunnally, Bernstein, 1994), indicating satisfactory reliability. Based on the validation of construct reliability, we conclude that the research construct of postgraduate students' university choice decisions in this study is reliable.

Table 1 shows that the correlation coefficient ranges from 0.320 to 0.495, indicating a relatively high positive correlation between aspects influencing postgraduate students' university choice decisions. Academic staff with a high-quality teaching and expertise in research area and accreditation of the programs had the strongest relationship (r = .495). The associations were found to be between curriculum's quality and faculty's reputation and academic staff with a high-quality teaching and expertise in research area (r = .320).

Table 1. The results of correlation between six dimensions of postgraduate students' university choice decisions

	1	2	3	4	5	6
1. Accreditation of the programs	1					
2. A discipline with scientific training	.425**	1				
3. Academic staff with a high-quality teaching and expertise in research area	•495**	.391**	1			
4. A faculty with high level of internationalization in both teaching and research	.436**	.406**	.429**	1		
5. Curriculum's quality and faculty's reputation	.438**	•445**	.320**	.363**	1	
6. Academic freedom	.365**	·434**	.372**	.356**	·343**	1

Notes: ** Correlation is significant at the 0.01 level (2-tailed)

This study's independent variables were divided into four categories: postgraduate student demographic characteristics, marketing and communication, social support, and economic factors (see Table 3). Firstly, demographic characteristics of postgraduate students included (1) gender, (2) family income, (3) father's occupation, (4) mother's occupation, (5) father's education and (6) mother's education. Secondly, marketing and communication factors included: (1) television and radio media, (2) social networking sites, (3) advertisements on printed newspapers, (4) advertisements on electronic newspapers, and (5) visiting the school. Thirdly, social support factors included (1) advice from parents or guardians, (2) advice from the spouse, (3) advice from siblings, (4) advice from friends and colleagues, and (5) advice from the program advisor. Finally, economic factors include (1) more job opportunities inside and outside the university, (2) tuition fees proportional to the quality of training, (3) tuition fees proportional to the level, (4) reasonable accommodation and transportation costs, (5) study expenses fit family's financial situations, and (6) numerous sources of financial support. Table 2 displays the operational definitions, means (M), and standard deviations (SD) of the independent variables in detail.

Table 2. Coding schemes and proportions of the independent variables in this study

Demographic characteristics

- 1. Gender: Female = o, Male = 1
- 2. Family income (unit: USD): measured on a 6-point scale, where 1 = under 1.300, 2 = 1.300-1.740, 3 = 1.741-2.180, 4 = 2.181-2.620, 5 = 2.621-3.060, and 6 = over 3.060, (M = 4.71, SD = 2.05).
- 3. Father's occupation: measured on a 3-point scale, where $1 = Blue\ collor$, and $2 = White\ collor$, and $3 = Professional/Executive\ (M = 1.69, SD = 0.73).$
- 4. Mother's occupation: measured on a 3-point scale, where $1 = Blue\ collor$, and $2 = White\ collor$, and $3 = Professional/Executive\ (M = 1.49, SD = 0.69).$
- 5. Father's education: measured on a 6-point scale, where 1 = primary education level to 6 = higher education level, (M = 3.27, SD = 1.45).
- 6. Mother's education: measured on a 6-point scale, where 1 = primary education level to 6 = higher education level, (M = 3.18, SD = 1.15).

Marketing and communication

- 1. Television and radio media: measured on a 5-point scale, where $1 = strongly \ disagree$ and $5 = strongly \ agree \ (M = 1.98, SD = .77).$
- 2. Social networking sites: measured on the same scale as that for the first item (M = 3.91, SD = .64).
- 3. Advertisements on printed newspapers: measured on the same scale as that for the first item (M = 3.69, SD = .67).
- 4. Advertisements on electronic newspapers: measured on the same scale as that for the first item (M = 3.82, SD = .70).
- 5. Visiting the school: measured on the same scale as that for the first item (M = 3.68, SD = .70).

Social support factors

- 1. Advice from parents or guardians: measured on a 5-point scale, where 1 = strongly disagree and 5 = strongly agree (M = 3.83, SD = .81).
- 2. Advice from the spouse: measured on the same scale as that for the first item (M = 3.67, SD = .68).
- 3. Advice from siblings: measured on the same scale as that for the first item (M = 3.56, SD = .66).
- 4. Advice from friends and colleagues: measured on the same scale as that for the first item (M = 3.59, SD = .66).
- 5. Advice from the program advisor: measured on the same scale as that for the first item (M = 3.71, SD = .72).

Economic factors

- 1. More job opportunities inside and outside the university: measured on a 5-point scale, where 1 = $strongly\ disagree$ and 5 = $strongly\ agree$ (M = 4.16, SD = .88).
- 2. Tuition fees proportional to the quality of training: measured on the same scale as that for the first item (M = 3.85, SD = .77).
- 3. Tuition fees proportional to the level: measured on the same scale as that for the first item (M = 3.97, SD = .74).
- 4. Reasonable accommodation and transportation costs: measured on the same scale as that for the first item (M = 3.82, SD = .83).
- 5. Study expenses fit family's financial situations: measured on the same scale as that for the first item (M = 3.92, SD = .77).
- 6. Numerous sources of financial support: measured on the same scale as that for the first item (M = 3.70, SD = .87).

Notes: every variable is measured with one question item

Data analyses

To analyze the data, this study used descriptive statistics, independent t-tests, analysis of variance (ANOVA), and multiple regression analyses were used. To understand the general level of postgraduate students' university choice decisions, descriptive analyses of the mean and standard

deviations were computed. The independent t-test and ANOVA were used to determine whether there were any significant differences between demographic characteristics and postgraduate students' university choice decisions. A series of separate stepwise multiple regression analyses were carried out to investigate the effects of marketing and communication, social support, and economic factors on postgraduate students' university choice decisions. Furthermore, the study conducted semi-structured interviews with 02 master's students (PS01-female and PS02-male) and 03 PhD students (PS03-female, PS04-male, and PS05-male) for approximately 45 minutes each.

4. Results

The description of Vietnamese postgraduate students' university choice decisions

Table 3 presents the descriptive statistics for the dependent variable – postgraduate students' university choice decisions - based on the results of the six questionnaire items. The findings indicated that postgraduate students in Vietnamese higher education rated a fairly high degree of agreement on university choice decisions based on the overall M and SD for each value (M = 4.03, SD = 0.50).

Table 3. The results of M, SD, factor analysis and reliability of the dependent variable in this study

Factors	M(SD)	range of score	factor loading
1. Accreditation of the programs	4.00 (.71)		.752
2. A discipline with scientific training	4.01 (.68)		.734
3. Academic staff with a high-quality teaching and expertise in research area	4.16 (.69)		.710
4. A faculty with high level of internationalization in both teaching and research	3.98 (.73)	1 - 5	.704
5. Curriculum's quality and faculty's reputation	4.06 (.72)		.680
6. Academic freedom	3.99 (.69)		.667
KMO value		.851	
Cronbach's α		.801	
Total $M(SD)$		4.03 (.50)	

Notes: Data were analyzed with principal component analysis

For the six elements contributing to postgraduate students' institution selection, the findings in Table 3 also showed that they most agree with Academic staff with a high-quality teaching and expertise in research area (M = 4.16, SD = 0.69), followed by curriculum's quality and faculty's reputation (M = 4.06, SD = 0.72), the discipline with a scientific training process of M = 4.01, SD = 0.68, and the postgraduate curriculum with quality accreditation achievement of M = 4.00, SD = 0.71. They are least in agreement with a faculty with a high level of internationalization in both teaching and research (M = 3.98, SD = 0.73) and academic freedom (M = 3.99, SD = 0.69), respectively. The results of interviews with some postgraduate students showed that some factors to consider when choosing a university include: 1) program quality, 2) the reputation of the university, 3) the quality of the academic members and 4) the facilities of the university. A PhD student said:

... For me, the deciding factor in choosing this college to study is that I know it possesses prestige not only in academics but is also highly regarded by employers. Furthermore, I value the fact that the school has been evaluated for quality accreditation at the institutional level (PSo₅ – male)

Or a master student stated:

... I believe that there are numerous factors influencing the choices postgraduate students make when selecting a university, but I focused on two major ones: the quality of the programs and the quality of the academic staff who teach and supervise theses (PSO2 – male).

The findings of the survey and interviews in this study revealed that students evaluated their university choice decision based on the quality of the curriculum and the competence of the academic staff. This implies that student expectations regarding these two factors can serve as a foundation to help them achieve various goals in their university selection process. Furthermore, the Vietnamese government mandates that higher education institutions participate in educational accreditation at both the programmatic and institutional levels. The accreditation criteria

emphasize the caliber of the academic staff in maintaining and improving the curriculum. Consequently, universities must prioritize and create optimal conditions for enhancing these two factors to meet student expectations and satisfy educational accreditation requirements.

Comparison between demographic characteristics and the university choice decisions of Vietnamese postgraduate students

Table 4 provides insights into the demographic variations among postgraduate students when it comes to their selection of universities. The results of t-test (t = -1.384, p > 0.05) indicated there were no significantly differences between male (M = 3.99, SD = 0.49) and female postgraduate students (M = 4.06, SD = 0.50) in their choice of university. Similarly, the ANOVA findings demonstrate that there were no significant differences between parents' occupation (F = 2.441 for fathers and 1.053 for mothers, p > 0.05) and mother's education level (F = 0.548, p > 0.05) with their decision. By contrast, their family income (F = 2.845, p < 0.05) and their education (F = 2.292, p < 0.05), significantly influenced postgraduate students' university choice decisions.

The findings of this research reveal that postgraduate students with a family income of \$2,180 or less (ranging from M = 4.12 to 4.41) were more satisfied with their choices compared to students from high-income families with incomes of \$2,180 or more (M = 3.98). Additionally, students whose fathers had education levels of junior high school (M = 4.11, M = 0.45) or postgraduate education (M = 4.27, M = 0.50) were more likely to pursue postgraduate programs than those with primary education levels (M = 3.92, M = 0.41).

Table 4. Statistical analysis for postgraduate students' demographic characteristics and the university choice decisions

	Factors	M(SD)	t-test / F	post hoc	
Gender	Male	3.99 (.49)	-1.384		
	Female	4.06 (.50)	-1.304	-	
Family income (USD)	under 1.300 (A)	4.12 (.61)			
	1.300-1.740 (B)	4.22 (.34)	2.84 <u>5*</u>		
	1.741-2.180 (C)	4.41 (.69)		A, B, C > F	
	2.181-2.620 (D)	4.01 (.51)	2.045	$A, D, C > \Gamma$	
	2.621-3.060 (E)	4.20 (.53)			
	over 3.060 (F)	3.98 (.46)			
Father's occupation	Blue color	4.01 (.50)			
	White color	4.02 (.49)	2.441	-	
	Professional/Executive	4.16 (.49)			
Mother's occupation	Blue color	4.04 (.50)			
	White color	4.00 (.49)	1.053	-	
	Professional/Executive	4.13 (.52)			
	Primary education (A)	3.92 (.41)			
Father's Education level	Junior high school (B)	4.11 (.45)			
	Senior high school (C)	4.07 (.54)	2.292*	B, F > A	
	Vocational education (D)	3.96 (.47)	<u> 2.292</u>	$\mathbf{D}, \mathbf{\Gamma} \geq \mathbf{\Lambda}$	
	Higher education (E)	4.03 (.55)			
	Postgraduate education (F)	4.27 (.50)			
Mother's education level	Primary education	4.00 (.44)			
	Junior high school	4.08 (.50)			
	Senior high school	4.08 (.55)	- 0.548		
	Vocational education	3.98 (.45)	0.540	-	
	Higher education	4.03 (.51)			
	Postgraduate education	4.07 (.52)			

Notes: *p < .05

In the interview, a PhD student answered that:

... Due to the influence of traditional Vietnamese culture, fathers traditionally play a role as the family's breadwinner and often have a significant say in their children's education choices. Therefore, the higher the education levels of parents, the more likely they are to want their children to follow in their footsteps (PSo₅ – male).

Or a master's student responded:

... In traditional Vietnamese society, fathers have a significant say in their children's careers and education. In my case, I believe my father's guidance is appropriate for pursuing further studies. Moreover, I see pursuing an advanced degree as a means to improve my family's quality of life (PS01 – female).

The study's findings, derived from survey research and interviews, highlighted similarities in postgraduate students' demographic characteristics and their university selection decisions. Universities should pay close attention to variables with statistical differences to provide timely and relevant support solutions when organizing enrollment activities. They should also develop strategies to enhance their image, reputation, and brand, as well as their curricula, to attract prospective postgraduate students.

Effects of marketing and communication, social support and economic factors on Vietnamese postgraduate students' university choice decisions

Table 5 presents stepwise regression analyses for Models 1-4 to clearly illustrate the effects of marketing and communication, social support, and economic factors on postgraduate students' university choice decisions and Model 4 presents the combined effects. Different regression models provided different explanations for university choice decisions across different factors. These models explained 22.4 % of the variance in individuals' economic and social support-related factors (Adj. $R^2 = .224$). The diagnosis of multicollinearity yielded no value of variance inflation factor (VIF) in the regression model greater than 10 (in this study, VIF = 1.038 to 1.941), indicating no risk of serious model multicollinearity (Hair et al., 2009; StataCorp, 1997). The results show coefficients of β values, with $\beta > 0$, denoting a positive impact on postgraduate students' university choice decisions and vice versa.

The findings of Model 1 showed that two out of five marketing and communication factors' items (social networking sites and advertisements on electronic newspapers) exerted a substantial influence on the respondents' university choice decisions. This model also explained 8% percent of the university choice decisions of marketing and communication factors (Adj. $R^2 = .080$). Both marketing and communication factors' items had a favorable effect on their university choice decisions ($\beta = .118$, p < 0.05, and $\beta = .199$, p < 0.001, respectively). During the interview, a PhD student stated:

... As living in the digital era, promoting, marketing, and communicating about admissions or introducing school information through social platforms such as Youtube, Facebook, Twitter, and Fanpage... are inevitable. In addition, I think the school should maintain traditional channels such as email, and online newspapers..... (PSo4 – male)

Or a masters' student added:

... I think that in the 4.0 technology era, it is indispensable to communicate information to learners, candidates... through digital platforms such as Tiktok, Facebook, Youtube... but face-to-face communication is also the channel learners expect because it provides an immediate interactive and lively visual dialogue for problems to be solved (PSO1 – female)

Only one item in Model 2, advice from the program advisor, was positively linked to university selection (β = .278, p < 0.001), and this model explained 6.3 % variance in university choice decisions of social support factors (Adj. R^2 = .063). During the interview, a PhD student agreed:

... I realize that advice from many people when deciding on a university can sway my decision, but the one I listen to might be from my friends who have studied this program... as well as the person in charge of the program because they are the ones who can give the most accurate advice about the field. I'm going to choose based on my abilities and aspirations (PSo₃ – female)

Similar to Model 1, the findings of Model 3 show that two out of six economic factors' items have a positive influence on university choice decisions in the VNU-HCM postgraduate students, including tuition fees proportional to the quality of training (β = .232, p < 0.001) and study expenses fit family's financial situations (β = .166, p < 0.01). This model also explained 19.7 % (Adj. R^2 = .197) of the variance of university choice decisions of economic factors. A master' student stated during the interview:

... economic factors are also very important in deciding on a university because it involves many costs associated with the learning process... such as tuition fees, printing fees, accommodation costs, transportation costs, and so on (PSo2 – male)

Or a PhD student stated:

... the current transition to financial autonomy at universities has increased the cost of education not only for undergraduates but also for graduates... I am the primary breadwinner in my family, so when choosing a university for graduate studies, I consider really carefully the costs for the three to six years of doctoral program, such as studying fees, charges, and financial aid (PSo4 – male)

In the combined Model 4, only one item of social support factor (*advice from the program advisor*) consistently had their significant favorable effects on respondents' selection across models (β = .139, p < 0.05). In addition, there are two new factors appearing in this model as the social support factor's item *advice from the spouse* (β = .243, p < 0.001) and the economic factor's item *numerous sources of financial support* (β = .180, p < 0.001). There are many marketing and communication, social support, and economic factors influencing university choice decisions as revealed by survey and interview results. HEIs need to pay attention to the elements that have a positive influence on their decisions in order to make future forecasts about policies to attract students with specific solutions, such as satisfying their needs, providing support services, offering advice to students in need, providing financial support, offering scholarships, and providing employment opportunities as teaching assistants.

Table 5. The results of regression analyses of marketing and communication, social support, and economic factors effects on postgraduate students' university choice decisions

	Model 1	Model 2	Model 3	Model 4	ME
			Beta (β)	-	- VIF
Marketing and communication	factors		•		
Television and radio media	.046			.032	1.038
Social networking sites	<u>.118*</u>			.021	1.216
Advertisements on printed newspapers	.071			.019	1.200
Advertisements on electronic newspapers	.199***			.098	1.370
Visiting the school	.024			023	1.164
Social support factors					
Advice from parents or guardians		021		071	1.353
Advice from the spouse		012		<u>.234**</u> *	1.894
Advice from siblings		.025		.043	1.941
Advice from friends and		012		.012	1.557
colleagues					
Advice from the program advisor		<u>.278***</u>		<u>.139*</u>	1.649
Economic factors					
More job opportunities inside and outside the university			051	.051	1.439
Tuition fees proportional to the quality of training			<u>.232***</u>	024	1.304
Tuition fee suitable for level			.079	.015	1.269
Reasonable accommodation and transportation costs			.039	015	1.182
Study expenses fit family's			<u>.166**</u>	000	1.010
financial situations			<u>.100</u>	003	1.310
Numerous sources of financial support			.075	<u>.180**</u> <u>*</u>	1.307
F	7.962 ***	6.405 ***	17.403 ***	8.204 ***	
Adj. R ²	.080	.063	.197	.224	

Notes: * p < .05, **p < .01, *** p < .0

5. Discussion

Regarding research question 1, the results of this study align with the findings of Lei and Chuang (2010) and Van Hoof et al. (2014). These studies indicate that numerous factors influence postgraduate students' decisions on which university to apply to for their postgraduate degrees. These factors encompass a wide range of considerations, including university rankings, campus amenities, library collections, class sizes, overall program sizes, faculty attributes, faculty research interests, faculty reputations, the availability of child-care, housing, geographic location, family accommodations, and the quality of the admission process.

However, our study particularly resonates with previous research in two areas: program factors (e.g., department ranking, overall program size) and faculty factors (e.g., faculty research interests, faculty publications, faculty reputation). Notably, Kallio's (1995) research suggests that personal factors (as mentioned by Van Hoof et al., 2014) and family-related factors (e.g., family accommodations, job opportunities for a spouse) significantly influence the university choice decisions of postgraduate students. Unfortunately, the majority of research on postgraduate students' university choice decisions has been conducted in developed countries (e.g., the United Kingdom, Australia, the United States) and some developing nations (e.g., Malaysia and Indonesia), as demonstrated by Adefulu, Farinloye, and Mogaji (2020). Therefore, additional research, especially in developing countries like Vietnam, is needed to provide a foundation for cross-country comparisons and to enhance the theoretical and practical understanding of this topic.

Moving to research question 2, the findings of this study are consistent with those of Aydin and Bayir (2016), Declercq and Verboven (2015), Obermeit (2012), and Steiner and Wrohlich (2012). These studies confirm that family income and parental education significantly impact the university choice decisions of postgraduate students. Prior research also underscores that the relationship between family income and university choice decisions has not received adequate attention (Kinsler, Pavan, 2011), and these two factors yield different outcomes. For instance, Sidin, Hussin, and Soon (2003) observed that family income influences postgraduate students' choices between public and private universities, with students from lower-income families being less likely to attend private institutions. Conversely, high-income families are less price-sensitive when selecting a university (Fuller et al., 1982) and tend to opt for high-quality institutions, in contrast to low-income families (Long, 2004). However, as noted by Sojkin, Bartkowiak, and Skuza (2012), their research found no significant differences between postgraduate students' family income and university choice decisions. The research by Declercq and Verboven (2015) revealed that students with disadvantaged family backgrounds, including lower family income and parental education, face limitations in accessing higher education compared to their counterparts with more favorable family backgrounds. Our study employed various methods and instruments to assess postgraduate students' preferences across diverse disciplines and majors, yielding varied results.

Regarding research question 3, our study demonstrated that marketing and communication, social support, and economic factors are closely linked to the university choice decisions of Vietnamese postgraduate students. In the realm of marketing and communication factors, our findings are consistent with those of Adefulu et al. (2020), Hayes et al. (2009), Chen (2007), Thetsane et al. (2019), and Winn et al. (2014). Research by Yamamoto (2006) and Steele (2002) underscored the importance of marketing and communication tools such as brochures, posters, meetings, sponsorships, billboards, web pages, TV and newspaper advertisements, as well as social networking sites (e.g., YouTube, Facebook, Twitter) in the decision-making process of postgraduate students.

As for social support factors, our study did not yield substantial empirical data showing a significant association between advice from program advisors and university choice decisions among postgraduate students. However, research by Hossler, Schmit, and Vesper (1999) and McDonough (1997) highlighted the strong influence of parental advice, particularly in terms of financial support. Peers and colleagues were also noted as important influencers in students' decisions to pursue higher education, serving as sources of crucial university information (Kim, Gasman, 2011). These findings indicate that intrinsic factors play a significant role in influencing postgraduate students' college choices, underscoring the importance for admissions officers to develop strategic marketing plans to meet students' needs, aspirations, and expectations, ultimately boosting enrollment in postgraduate programs at the university.

From an economic perspective, Fernandez (2010) discovered that the university choice of postgraduate students is influenced by the benefits they perceive relative to other institutions. Before making their decisions, students often estimate the overall costs they will incur during their studies,

including not only tuition but also expenses like rent, food, transportation, and more (Briggs, Wilson, 2007; Cokgezen, 2014). Postgraduate students also assess whether their investment in postgraduate education will align with their expectations in terms of job prospects, income potential, and career advancement (Paulsen, 2001; DesJardins, Toutkoushian, 2005). Tuition fees also factor into their decisions, particularly for low-income students who are more price-sensitive (Heller, 1997). Financial aid has a positive impact on students' choices as it mitigates their financial burden (Foskett et al., 2006). As such, economic factors play a significant role, and universities must offer support throughout the students' academic journey, not only in marketing but also in addressing their financial needs, particularly in the context of Vietnam's universities facing rising education costs.

6. Conclusion

The study explored Vietnamese postgraduate students' perceptions in terms of their university choice and the relationship between postgraduate student demographic characteristics, marketing and communication, social support, and economic factors to ones was examined. The findings revealed that postgraduate students rated a fairly high degree of agreement on university choice decisions. Furthermore, the findings suggest that postgraduate students' demographic characteristics, such family income and father's education, have different impacts on their decision-making. Finally, social support and economic factors (e.g., advice from the spouse, advice from the program advisor, and numerous sources of financial support) have a close relationship with their decisions. In the process of developing a comprehensive solution to increase the ability to recruit students, policymakers and university administrators should prioritize these factors over others. In addition, university administrators and experts still have much room to improve the approach to attracting students to postgraduate programs through modern curriculum design, support services, incentives, or student remuneration policies.

Although there have been many previous studies on university choice decisions, little is known about how these decisions correlate to marketing and communication, social support, and economic factors in developing nations, such as Vietnam. The findings of this study help to fill critical gaps in both theories and practices on this topic. It is hoped that the barriers to in the process of choosing a university discovered in this study are useful for university administrators and other stakeholders in developing and implementing a strategic marketing campaign in the increasingly competitive market for higher education institutions.

7. Limitations

While the study was carefully designed and conducted, it has some limitations. The primary limitation is that the samples were exclusively collected from postgraduate students at the Vietnam National University of Ho Chi Minh City, one of the most reputable multidisciplinary universities in Vietnam. Therefore, future research should aim to collect student samples from a broader range of higher education levels and disciplines, while also considering other influencing factors. This approach would help gather more comprehensive empirical data regarding the assessment of universities by Vietnamese postgraduate students.

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The author declared no potential conflict of interest with respect to the authorship and publication of this article.

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