Academia A publication of the
Higher Education
Policy Network

Business Management Postgraduate Major Choice: Why the Campus Matters?

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Abstract

A study related to college major choice has been drawn from many perspectives, including the economic and sociological models, mixed models, and marketing models. However, a study employing the marketing model is still limited. This study aimed to understand the factors influencing student choice in a master's degree in management and business at a private university, specifically at executive class. This study proposed a model and empirically examined the social environment, college-major attributes, and student self-efficacy as an antecedent of college major choices. This study used an explanatory method, undertaken in Indonesia, covering private universities in five provinces in Kalimantan Island, with a sample size of 368 postgraduate students in business. The data analysis employed in this study was SEM-PLS, following an evaluation of the measurement model and structural model to test the hypotheses. The study results indicated that the social environment factor is the most influential factor in encouraging students to enroll in a postgraduate business program. However, the results of the indirect effect showed that college-major attributes are the determining factors in increasing the students' self-efficacy and are considered to have a more significant effect on major choice.

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Introduction

The proliferation of universities provides society with diverse options for higher education institutions. The growing number of higher education services creates competition among universities to attract potential students, including the postgraduate level. Additionally, higher education is one of the degrees in education that serves as an institution responsible for the nation's competitiveness. The nation's competitiveness can be effectively built the quality of universities also increases. Thus, appropriate university choices are critical and lay the groundwork for future success in life and career. Over the last half-century, changes in student demographics, institutional acceptability, and marketing strategies have significantly impacted the selection process (Palmer et al., 2004).

Some of the leading models in university selection research are economic models, sociological models, combined models, and marketing models (Aydin & Dube, 2018). To the best of our knowledge, most existing studies used an economic model by using respondent profiles such as economic background, income, environmental factors, family background, and friendships (Aydin & Dube, 2018). In another method, several studies reviewed the trend through an exploratory analysis to see factors related to study interest (Azzone & Soncin, 2020; Qasim et al., 2021; Saiti et al., 2017). Therefore, it will be necessary to determine the effect of certain variables on the choice to continue studies at universities, especially using a behavioural point of view (Kusumawati & Perera, 2010; Saiti et al., 2017). Specifically, the use of a marketing approach considering student as consumers is limited and needs further investigation (Obermeit, 2012; Tamtekin Aydın, 2015). Additionally, Hemsley-Brown and Oplatka (2015) found that their literature reviews on marketing higher education services indicated that higher education has not established marketing theories that explicitly apply to the education services sector.

Previous research has linked several factors that can influence student's campus selection, such as the institution's character, social character, and the character of the students themselves (Azzone & Soncin, 2020). Specifically, research in postgraduate programs, so universities need to apply different marketing communications to attract target markets (Donaldson & McNicholas, 2004). In addition, a study conducted by Del

Río-Rama et al. (2021) employed perceived quality dimension consisting of facilities, service staffs, teacher attitudes, teacher competencies, and career opportunity to measure student choice. By studying the interaction pattern between factors that can increase interest in postgraduate study, program managers can find out market conditions and then formulate ways to attract market attention effectively (Saiti et al., 2017).

A previous study in social environment exhibited that the role of the surrounding environment such as family, friendship, and prior school recommendation can influence the consideration in higher education selection. Even though social environment has shown a major role in selecting Higher Education Institution (HEI) (Adeyanju et al., 2020; Meraj et al., 2016), the role of social environment on student self-efficacy remains an important part of higher education selection (Alt, 2015).

As mentioned above, higher education quality reflects good practices in educational management and becomes a factor that is considered in study selection, including tuition fee, reachability, facilities, and accreditation (Qasim et al., 2021). Additionally, flexible learning programs will be considered when students choose to continue their studies (Aydin & Dube, 2018; Heathcote et al., 2020; Le et al., 2019; Migin et al., 2015).

The difference between a student's motivation in choosing a study will determine how the student will survive, adapt, and compete when taking postgraduate studies, that is better known as individual factors (Dinther et al., 2011). Pranakusuma et al. (2021) asserted the construct that self-efficacy is a representation of individual interest in choosing a study. Furthermore, the existence of self-efficacy as an indicator of student characteristics is still rarely looked at, so it requires further study (Nauta, 2010; Wang, 2013).

Finally, this research enriched the scientific repertoire, mainly referring to the marketing theoretical framework by proposing the research model mentioned earlier to investigate social factors, student self-efficacy, and university attributes on the choice to continue postgraduate studies. Furthermore, this research also provided regional evidence in developing countries in Indonesia, especially in five provinces in the largest island in Indonesia, namely Kalimantan.

Literature Review

Higher Education Marketing

Higher education marketing is not a new concept. Promotions, advertisements, and other marketing tools are utilized as marketing methods to attract students in order to communicate with them effectively. Higher education institutions should adopt a marketing framework to satisfy their consumers' needs by adding value to thrive and gain a sustainable competitive advantage (Kotler & Fox 1995; Hoyt & Brown 2003).

Many scholars have recognized the growing importance of marketing in student recruitment (Goff et al., 2004). It includes the image of universities (Ivy, 2001; Oplatka & Hemsley-Brown, 2021), relationship marketing (Kittle & Ciba, 2001; Markova et al., 2020), international marketing (Binsardi & Ekwulugo, 2003; María Cubillo et al., 2006), database marketing and data intelligence (Tapp et al., 2004; Troisi et al., 2018), strategic marketing (Binsardi & Ekwulugo, 2003; Casidy & Wymer, 2018), and service marketing (Del Río-Rama et al., 2021; Hemsley-Brown & Oplatka, 2015).

Higher education includes all of the characteristics of a service sector, such as being "people-driven" and emphasizing the significance of client connections (Mazzarol, 1998). Higher education marketing is sufficiently distinct from product marketing as a service (Kusumawati & Perera, 2010; Nicholls et al., 1995). Educational services are intangible, diversified, inseparable from the person offering them, and perishable, in which the consumer (student) participates in the process (Maringe & Gibbs, 2008). Specific higher education services marketing theories and studies are required due to the particular character of higher education services marketing and the expanding competitiveness in this industry (Cantwell, 2015; Chadee & Naidoo, 2009).

Major Choice

Researchers have conducted an extensive research toward students' decision-making processes regarding college major selection. Numerous studies in the current literature refer to a variety of criteria including those according to Webb (1993), namely academic reputation, accreditation, teaching method, location, cost, and future career options as significant considerations in an institution selection process (Chapman, 1993; Coccari & Javalgi, 1995; Kaynama & Smith, 1996; WEBB, 1993). Higher education embodies all of the qualities of a service sector. For examples, it is "people-centered"

and offers premium client connections (Mazzarol, 1998). Additionally, Shank et al. (1996), emphasized that educational services are intangible, diverse, inextricably linked to the person giving them, perishable, and include the consumer (student). Higher education marketing, as a service, is sufficiently distinguishable from product marketing (Nicholls et al., 1995).

Numerous scholars have sought to explain the paradigm of student choice. In the early 1980s, researchers have begun to develop models of student enrollment behaviour theory. According to Palmer et al. (2004), most research attempting to comprehend the university selection process falls into three categories: economic models, status-attainment models, or mixed models. Previously, research has been developed into behavioural study employing the marketing approach introduced in an earlier stage in several models, such as consumer behaviour and decision-making models (Heathcote et al., 2020; Kusumawati & Perera, 2010; Tamtekin Aydın, 2015; Zhu & Reeves, 2019).

University administrators must promote their institution and develop distinctive programs that emphasize college-major strengths, thus providing students with a reason to select their institution (Mellors-Bourne et al., 2014; Nguyen et al., 2021). As aforementioned, higher education institutions operate in a service environment, so they must grasp the specific characteristics of service marketing to attain the objective such as treating prospective students as customers. However, it has not been universally recognized, but it has acquired acceptability through time (Obermeit, 2012). This perspective is neither explicitly sociological nor economical (Adeyanju et al., 2020). Nonetheless, it is included in consumer choice models via both internal (cultural, social, personal, and psychological traits) and external (social, cultural, product, and pricing stimuli) impacts, reinforced by the provider's communication efforts (Obermeit, 2012).

College-Major Attributes

Strasser et al. (2002) classify university choice factors into three categories: academic interest, peer influence, and career options. The variables influencing university selection are into two categories: university-related and personal environment-related variables (Soutar & Turner, 2002). The university-related variables are as follows: the type of course, the institution's academic reputation, the campus, the teaching staff's quality, and the university's variety.

The most influential selection criteria are academic reputation, faculty and teaching quality, location, cost, scholarship and financial assistance options, and student job prospects (Hoyt & Brown, 2003). Additionally, other critical factors include the institution's size, proximity to the surrounding community, friendly service, the availability of graduate programs, the variety of courses offered, extracurricular programs, admission requirements, admission to the graduate school, affiliation, attractiveness of campus facilities, class size, and social life quality. A study conducted by Price et al. (2003) stresses the importance of educational quality and academic standing and the availability of topic majors, libraries, and information technology facilities as determining factors in selecting a university. Sidin et al., (2003) identified five significant variables in a different study: personal characteristics, academic quality, academic facilities, campus, socializing, and financial assistance.

Social Environment

Socio-Personal factors in the student's social environment may affect the selection of study programs, including distance from home, family preference, and friendship (Aydın & Bayır, 2016). Specifically, family-related factors include financial ability, sibling preferences, parental experience, and extended family opinion (Aydın & Bayır, 2016; Azzone & Soncin, 2020). Recommendations from lecturers and teaching staff in undergraduate programs are also trusted sources for consideration (Heathcote et al., 2020). Additionally, inputs from co-workers projecting the future career opportunities are worth considering (Le et al., 2019). However, family is the most significant source of Word-of-Mouth compared to friends and other elements (Le et al., 2019; Qasim et al., 2021).

Student Self Efficacy

The social cognitive theory explains behaviour by referring to the social systems and self-regulating variables that influence human behaviour (Bandura, 1977; Honicke & Broadbent, 2016; Schunk & Pajares, 2002). Self-efficacy assessments should be good predictors of behaviour choice and direction (Bandura & Wessels, 1994). Self-efficacy is the process through which a person regulates and directs his/her behaviours. An individual's confidence strongly influences it. Precisely, such confidence will determine

the students' thought, project the future desire, and motivate them to finish the study (Alsharari & Alshurideh, 2021).

Academic self-efficacy refers to students' perceptions of their ability to accomplish educational goals (Elias & MacDonald, 2007; Zysberg & Schwabsky, 2021). In previous research on higher education choice, various factors are associated with academic self-efficacy. A recent study established that self-efficacy is a predictor of academic performance and stress and positively correlates with life satisfaction (Kahraman & Demirdelen Alrawadieh, 2021; Zajacova et al., 2005). Academic self-efficacy is affected by academic self-concept, indicating that students with a high level of academic self-efficacy do better academically than students who have a low level of academic self-efficacy (Ferla et al., 2009; Galla et al., 2014). Academic self-efficacy is a moderating factor in connecting domestic and international students (Choi & Kim, 2013; Kahraman & Demirdelen Alrawadieh, 2021). However, modelling the academic self-efficacy of postgraduate students in conjunction with other career-related factors remains a glaring omission from the available research (Kahraman & Demirdelen Alrawadieh, 2021).

Hypotheses Development

Social Environment

This research aimed to understand the models of university selection procedures via a marketing lens. Education marketing is not widely acknowledged, as is the practice of treating prospective students as consumers. Thus, the college-major manager must understand the elements influencing student choice from a behavioural perspective. This research formulated the following hypotheses to understand the proposed model mentioned in the study.

Social environment is the closest environment before academic environment that students meet at all levels (Cheng, 2020). The social environment such as family, community, friends, leaders in the work environment, and others considered influential can effectively affect student self-confidence (Alt, 2015). One of the critical elements in the social environment is family, where the study's success generally brings pride to the family (Phan et al., 2020). Thus the first hypothesis is structured as follows.

H1a: Social environment positively affects Student Self efficacy.

Family has a more substantial influence than other social environments (Aydin & Dube, 2018). Another social environment that can influence students to choose further studies is friendship (Sudhana et al., 2021). Additionally, recommendations from lecturers or teaching staff in undergraduate studies will provide additional information that students will examine while selecting a program (Adeyanju et al., 2020). Meraj et al. (2016) also mention that the surrounding environment such as family, lecturer recommendations, and coworkers can increase a person's possibility to continue his/her studies in master's program in business administration. Thus, the second hypothesis is structured as follows.

H1b: Social environment positively affects student college choices.

College Major Attributes

Universities' learning programs and curricula could effectively increase student self-efficacy, primarily when designed carefully by inviting students to input the design process (Dinther et al., 2011; Sahban, 2016). This finding aligns with Kahraman & Demirdelen Alrawadieh (2021) that an adequate quality of education will increase students' confidence to complete their studies. Flexible learning programs can unchain student creativity, help students cope with stress, and boost student self-efficacy (Çayırdağ, 2012). In a small scope, adaptive education designed to guide the class flow and students' skills have been shown to increase students' ability to do a single task while also managing complicated situations (Alt, 2015). Additionally, ensuring the quality of all elements in academic activities and adequate service delivery at universities can boost student self-efficacy (Popoola et al., 2014). Thus, the third hypothesis is structured as follows.

H2a: College Major attributes positively affect student self-efficacy.

All tangible components that can be sensed physically are critical components in helping students organize their education (Qasim et al., 2021). Flexibility in the registration process is the first step in developing good services for students in the early stages (Massoud & Ayoubi, 2019). Later, when students decide to continue their studies, the combination of flexible learning programs will be explored (Aydin & Dube, 2018; Heathcote et al., 2020; Le et al., 2019; Migin et al., 2015). Campuses are also required to accommodate reasonable tuition rates with various payment options (Joseph & Joseph, 2000). Finally, the accreditation's quality assurance methods are a more

deciding element for students to continue their studies (Kusumawati & Perera, 2010; Qasim et al., 2021). Thus, the fourth hypothesis is structured as follows.

> *H2b:* Major attributes positively affect student college choices.

Student self efficacy

According to social cognitive theory, student self-efficacy is a critical component in predicting academic achievement (Bandura, 1982; Elias & MacDonald, 2007). Additionally, student self-efficacy will influence the decision to pursue master's studies (Verhegyi, M., 2010). Self-efficacy develops in these individuals due to a sequence of events during their undergraduate studies. Student self-efficacy is significantly impacted by social factors such as family, friendship, and professional work environment (Adeyanju et al., 2020; Alt, 2015). As a result, this process will undoubtedly influence the choice to continue the investigation. Along with the social environment, another factor contributing to self-efficacy formation is the quality of education, which implies that when students have a positive academic experience on campus, their chances of continuing their studies to a higher degree increase (Kahraman & Demirdelen Alrawadieh, 2021). Thus, the fifth, sixth, and seventh hypotheses are structured as follows.

> *H3a:* Student self-efficacy positively affects student college choices.
>
> *H3b:* Student self-efficacy mediates the relationship between social environment and study choices.
>
> *H3c:* Student self-efficacy mediates the relationship between university attribute and study choices.
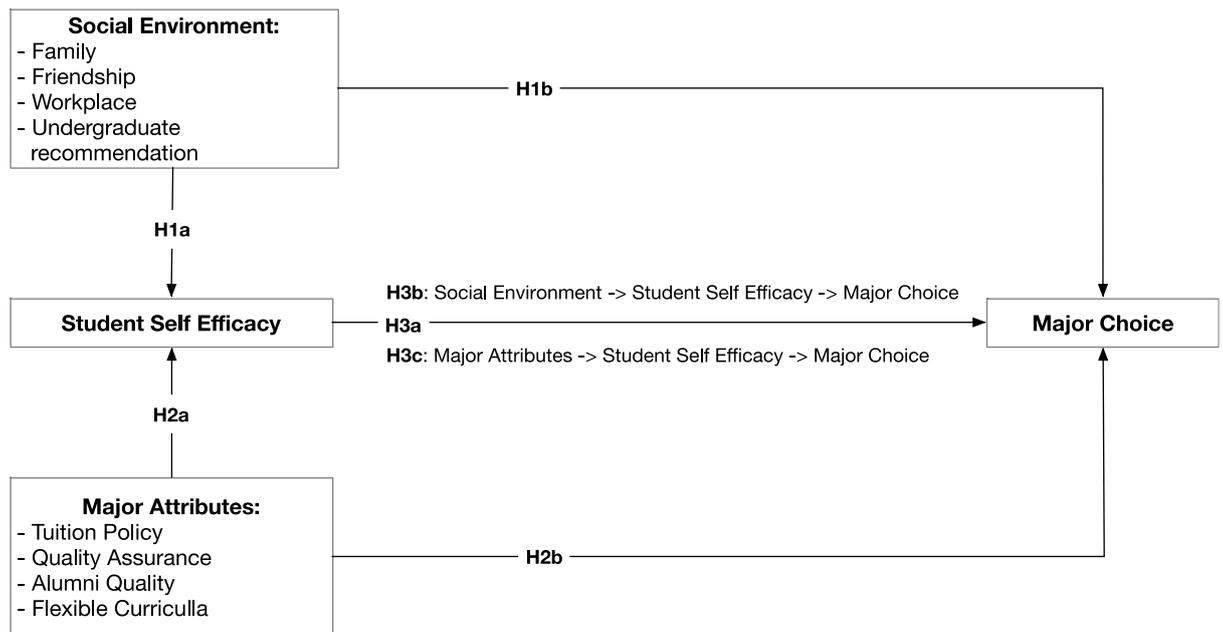
Figure 1. Conceptual Model

Method

Research Design

According to the nature of the research, this study was classified as explanatory research employing a quantitative technique. A descriptive study using a quantitative methodology elucidates the link between variables in a broader context (Creswell, 2013). Additionally, Creswell (2013) notes that some critical aspects of quantitative research include population and sample size, survey design and data collection, and associated analyses that may be used to explain occurrences.

Population and Sample

This research targeted postgraduate students pursuing master's degree in management and business. Specifically, the targeted students were those in private universities in Kalimantan, including South Kalimantan, East Kalimantan, North Kalimantan, Central Kalimantan, and West Kalimantan. There was a total of 368 data out of 550, resulting in 67% response rate. According to Baruch (1999), a sufficient rate ranges from 50% to 60%.

The respondent profile in this study covering age, gender, occupation, and undergraduate background presented in Table 1 indicates that, in terms of age, most of the respondents (79.08%) were between 20 – 30 years old when taking master's degree

in management and business programs. In terms of gender, most of the respondents were female (195 people or about 52.99%). Based on the occupational background, most respondents were private employees (177 people or around 48.1%). In the last section, in terms of undergraduate experience, most respondents graduated from non-business and management undergraduate study programs.

Table 1. Respondent Demographic Profile

Items	Total	Percentage
Age groups		
< 20	22	5.98%
20 – 30	221	79.08%
> 30	55	14.95%
Gender		
Male	173	47.01%
Female	195	52.99%
Occupation		
Civil servant	92	25.00%
Private employees	177	48.10%
Self-employed	44	11.96%
Entrepreneur	37	10.05%
No answer	18	4.89%
Undergraduate study program		
Non-Business/economics	239	64.95%
Business/economics	129	35.05%

Instrument Development and Data Collection

This study used a series of statements based on the theories mentioned in the literature review section. The questionnaire structure included questions about respondent characteristics including age, gender, occupation, and study background at the undergraduate level. The total questionnaire used to measure the choice of study program consisted of 18 questions adopted from previous studies, as shown in Table 2. This study used a five-point Likert scale, where 1 indicates "strongly disagree" and 5 means "strongly agree." The validity and reliability testing in the pilot study was used to ensure consistent research instrument, i.e., the respondents had the same interpretation of it. The pilot study involved 50 students taking masters' degree in management. However, the pilot test results showed no symptoms of a questionnaire problem. Thus it was used for the data collection in six months in a larger scale, from December 2020 - to June 2021.

Data Analysis

Based on the study results, PLS-SEM is suitable for use when there is little evidence that examines the relationships and effect between variables (Hair Jr. et al., 2014). A data analysis carried out using PLS-SEM includes two sets: evaluation of measurement model and assessment of structural model (Hair et al., 2019). Several criteria for measurement model assessment consist of a series of instrument tests, including internal consistency reliability, convergent validity, and discriminant validity (Hair Jr. et al., 2014). In this study, internal consistency was measured by Cronbach Alpha (CA>0.7) and composite reliability (CR>0.7). Convergent validity was evaluated from the loading factor (³ 0.708) and the Average Variance Extracted value (AVE ³ 0.50). In the last test of Discriminant Validity using the Fornel Larcker Criterion, this test was the most conservative approach, indicated by the diagonal value on Table 3 as the result of the square root of AVE (Hair Jr. et al., 2014).

The structural model assessment stage includes constructing testing and research hypothesis testing (Hair et al., 2019). The tests contained in this stage include:

- Predictive accuracy is evaluated by calculating the coefficient of determination (R^2 and f^2) and predictive relevance (Q^2).
- Evaluation of the path model.
- Hypothesis testing.

Results and Discussion

Results

1. Evaluation of Measurement Model

As explained in the previous section, the first analysis stage evaluated the measurement model as shown in Table 2. From Table 2, the internal consistency test indicated by the CA and CR values indicated satisfactory results. Next, the convergent validity analysis of Loading and AVE values showed promising results. Additionally, as shown in Table 3, the discriminant validity test using the Fornell-Larcker criteria suggested that the square root of the AVE (highlighted in bold in the diagonal pattern) was greater than the correlation with any other construct in the model.

Table 2. Evaluation of Measurement Model

Code	Item	Loading	AVE	Reliability
Social Environment (Adeyanju et al., 2020; Aydin & Dube, 2018; Mbawuni & Nimako, 2015; Sudhana et al., 2021)			0.657	CA = 0.864 CR = 0.904
SE1	I was recommended to continue my studies by my lecturers.	0.715		
SE2	I was recommended to continue my studies by people around my work environment.	0.610		
SE3	I followed my friends to pursue further studies.	0.886		
SE4	My family supports me to continue my studies.	0.895		
SE5	All colleagues support me to continue my studies.	0.881		
University Attributes (Adeyanju et al., 2020; Budur & Rashid, Chnar Abdullah, Poturak, 2018; Mbawuni & Nimako, 2015; Simões & Soares, 2010)			0.738	CA = 0.883 CR = 0.919
UA1	Tuition fees every year catch my attention.	0.879		
UA2	Private graduate programs have good accreditation quality.	0.837		
UA3	The quality of the graduates I know shows good performance.	0.803		
UA4	Private university graduate programs have a more flexible program.	0.899		
Student Self Efficacy (Kahraman & Demirdelen Alrawadieh, 2021; Popoola et al., 2014; Sudhana et al., 2020)			0.649	CA = 0.863 CR = 0.902
SSE1	I had a higher interest in continuing my studies.	0.710		
SSE2	I felt I can finish my master's degree.	0.809		
SSE3	I could get a good position after continuing my studies.	0.799		
SSE4	I could learn about management, planning, and evaluation.	0.860		
SSE5	I felt that I can handle any problems that might arise during my studies.	0.782		
Major Choices (Kusumawati & Perera, 2010; Sudhana et al., 2020)			0.621	CA= 0.798 CR = 0.867
SC1	I chose a private graduate program to increase my capacity.	0.756		
SC2	I chose a reputable private graduate program.	0.798		
SC3	I chose a private postgraduate program to enhance my knowledge.	0.847		
SC4	I am very serious about my desire for further studies.	0.768		

CA: Cronbach Alpha; CR: Composite Reliability

Table 3. Fornell – Larcker Discriminant Validity

	Social Environment	University Attributes	Student Self Efficacy	Major Choices
Social Environment	**0.746**			
University Attributes	0.488	**0.713**		
Student Self Efficacy	0.312	0.605	**0.806**	
Major Choices	0.413	0.42	0.395	**0.787**

2. Evaluation of Structural Model

The results in Figure 2 indicate that the structural model path coefficient test depicts the inner model results and examines the effect of each exogenous variable on the endogenous variables. The test results in Table 4 show the effect size and predictive accuracy by calculating the determination value. The results showed that student self-efficacy had an R2 value of 0.310, while the major choice had an R2 value of 0.266. These results indicated that the social environment and university attributes variables could explain the student self-efficacy variable by 31% and the major choice variable by 26.6%, while the remaining was explained by other variables not included in the study. The f2 in Table 4 depicts the change in R2 if a specific exogenous construct was omitted from the model, where 0.02, 0.15, and 0.35 are considered small, moderate, and high (Chin, 2010).

Regarding the effect size, Table 4 indicates that the role of social environment on student self-efficacy had a negligible effect size than that of significant attributes. Unfortunately, the social environment, student self-efficacy, and essential attributes variables had a moderate effect on major choice. Additionally, according to Chin (2010) and Hair Jr. et al. (2014), along with the size of the R2 values as a proxy for predictive accuracy, the researchers also evaluated Q2 Geisser's value to be non-zero as shown in Table 4.

All the hypotheses demonstrated in Figure 2 show a positive and statistically significant effect on endogenous college major choices. Figure 2 indicates that social environment had a higher effect (estimates = 0.286) than student self-efficacy (estimates = 0.230) and college major choice (estimates = 0.154). However, based on the findings, student self-efficacy had an effect worth considering. The indirect impact analysis in Table 5 reveals that college-major characteristics and student self-efficacy had a significant effect on decision-making to pursuing master's degrees in management and business. However, the indirect effect of college-major characteristics on college-major choice was more substantial when mediated by student self-efficacy. Thus, the following discussion session will extract the study phenomenon from the hypothesis testing.

Table 4. Summary of Effect Size, Determination, and Predictive Relevance

Exogenous		Endogenous	F^2	Rating	R^2	Q^2
Social environment	→	Student Self Efficacy	0.062	Low	0.310	0.191
Major attributes	→		0.273	High		
Social environment	→	Major Choice	0.096	Low	0.266	0.158
Major attributes	→		0.023	Low		
Student self efficacy	→		0.050	Low		

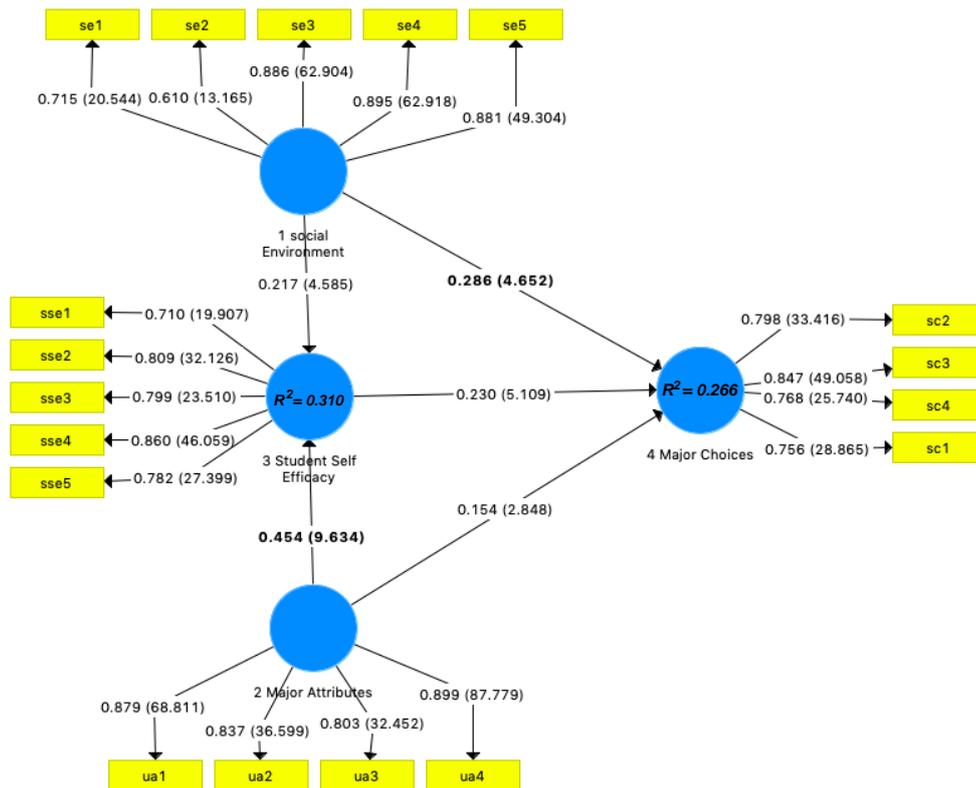**Figure 2**. Analysis Results of Structural Model Path Coefficient

Table 5. Indirect effect

Indirect path	Loading	t-test	Results
Social Environment > Student Self Efficacy > Major Choices	0.050	3.508	Significant
University Attributes > Student Self Efficacy > Major Choices	0.104	4.383	Significant

Discussion

1. Effect of social environment and university attribute on student self-efficacy

Our findings indicated that, in general, the social environment, university attributes, and student self-efficacy affected the willingness to continue studying in a graduate program

at a private university. Social environment represents how social environment can influence individual considerations while choosing a college major, as seen by recommendations for undergraduate studies from family, friends, colleagues, and academic lecturers. University attributes refer to the characteristics of private universities, such as the quality of graduates, the study programs, accreditation, and tuition fees. Student self-efficacy intuitively represents students' inner motivation for projecting themselves into the future while studying.

The social environment and university attributes variables were shown to affect student self-efficacy. Support from family, coworkers, and friends was shown to increase student self-efficacy (Muñoz, 2021). This study discovered that social environment had a less significant effect on student self-efficacy among students in executiv class. This might be because they did not have many family members or coworkers who obtained master's degrees, resulting in a less effective attachment (Olive, 2014). Being surrounded by peers who have completed postgraduate studies is beneficial especially when encountering issues with the study. Thus, the role of the institutions should be increased to assist students in resolving their study problems (Mbawuni & Nimako, 2015). In other words, university attributes, rather than social environment, had a more significant effect on student self-efficacy. This conclusion is consistent with Popoola et al. (2014), who claim that a successful education system entails detailed services such as giving enough and proper administration to students, which affects their confidence to complete studies on time. As a private university's primary priority is service quality, an adaptable study program and flexible timetable provide students with more options for continuing their education (Dinther et al., 2011; Sahban, 2016).

2. Effect of social environment, university attribute, and student self-efficacy on major choice

The major choice of private university postgraduate programs was influenced by social environment, university attributes, and student self-efficacy. Social environment was a factor that had a more significant direct effect than college-major attributes. The cultural background, especially stereotypes that exist in the nearby environment, may explain why social environment factors had a more significant effect than the other two factors (Adeyanju et al., 2020). Family environment, friendship, and work environment can

influence major choice. Family was shown to have a more significant role in the social environment, considering that family is the closest environment encountered every day (Meraj et al., 2016).

Although student self-efficacy did not show more significant effect than social environment, self-efficacy is a determining factor for the success of graduate students' studies. Self-confidence to complete studies is essential in continuing studies (Sudhana et al., 2020). Self-efficacy as a manifestation of completing studies on time is related to student experience and reflects their expectations in terms of future career options and save costs (Zhu & Reeves, 2019). Therefore, the effect of student self-efficacy was closely related to college-major choice. By choosing the right major, students hope to obtain positive impact on their future career and social environment (Kahraman & Demirdelen Alrawadieh, 2021).

The primary college attributes also show a significant influence on college-major choice. This finding aligns with Qasim et al. (2021) research, showing that campus reputation is a factor students highly consider. Furthermore, accreditation, quality of graduates, and costs are considered (Kusumawati & Perera, 2010; Qasim et al., 2021). According to the loading value of college-major attributes on college major choice, postgraduate programs at private universities are considered to have more flexible schedules with more affordable costs. More affordable costs are essential factors in recent years, given the increasing cost of education and minimal financial assistance (Joseph & Joseph, 2000). Students consider the flexibility of courses and schedule at the postgraduate level (Le et al., 2019). Additionally, flexible admission process shows that flexibility and techniques that can adapt to prospective students' needs can increase the number of admissions (Massoud & Ayoubi, 2019).

However, the indirect effect of mediation showed that increasing student self-efficacy, which was influenced by university attributes, was a process that determined student learning decisions in private graduate programs. As mentioned above, the existence of institutions had a higher impact on student self-efficacy. In the long term, in completing a master's education, students are more dependent on academic environment in solving educational problems through their classmates than on social environment outside the campus. This finding aligns with Mbawuni & Nimako (2015) that academic setting, including staff, lecturers, and student colleagues is adequate and essential for solving educational problems. Muñoz (2021) adds that a limited number of

members of the social environment circle who are enrolled in a master's program will affect student self-efficacy. Finally, with the support of the major and all of its components, students will view the major attributes as a firm foundation for completing their studies, which will influence their decision to pursue master's degree in business and management at a private university.

Conclussion

This study proposed a theoretical model of college major choice in management and business focusing on postgraduate students in executive class. In summary, this research employed a marketing approach to understand the interaction of variables that influence the decision to pursue a master's degree in management and business at a private university.

This study made a contribution by empirically testing an integrative nexus between social environment (support from family, friends, and the work environment) and university attributes (quality of study programs, graduates, and program choices) on postgraduate students taking management and business program at private universities. Overall, the findings of this study corroborated the theoretical proposition that the decision to pursue a master's degree at a private university is significantly affected by the social environment, self-confidence, and university's attributes. However, the most crucial factor is the college major attributes, mediated by student self-efficacy in major choice. This finding confirms that the role of college major is essential as students expect better support from the circle. Thus, this research contributes to the understanding that social environment is necessary but is insufficient for supporting students in executive class. Concerning this finding, requirements for workplace promotion include master degree qualification. Thus, providing high-quality education and flexibility at the same time is interesting for the students in executive class. Program flexibility at private colleges provide students with flexible schedules and program to balance work, life, and study. In summary, student self-efficacy is built upon university attributes rather than social environment, as it consists of closely related people to share and solve academic issues during the study at the postgraduate level.

After all, this research is not without limitations. This study focuses on students who have worked, so the results will likely be different from research on regular

students. Future researchers can compare non-regular students with regular students in some forms of research design such as multi-group analysis or by treating such difference as a moderating variable. Future research can also reach populations from STEM (science, technology, engineering, and math) to social sciences and life sciences. Furthermore, it would be interesting to conduct further research in this pandemic situation, comparing professional class students at private and state universities, considering that the entire learning process uses online facilities.

References

Adeyanju, S., Mogaji, E., Olusola, J. A., & Oyinlola, M. A. (2020). Factors Influencing Students' Choice of a Federal University: A Case Study of a Nigerian Federal University. *Higher Education Marketing in Africa*, 135–163. https://doi.org/10.1007/978-3-030-39379-3_6

Alsharari, N. M., & Alshurideh, M. T. (2021). Student retention in higher education: the role of creativity, emotional intelligence and learner autonomy. *International Journal of Educational Management*, *35*(1), 233–247. https://doi.org/10.1108/IJEM-12-2019-0421

Alt, D. (2015). Assessing the contribution of a constructivist learning environment to academic self-efficacy in higher education. *Learning Environments Research*, *18*(1), 47–67. https://doi.org/10.1007/s10984-015-9174-5

Aydin, S., & Dube, M. (2018). Knowledge management, innovation, and competitive advantage: is the relationship in the eye of the beholder? *Knowledge Management Research and Practice*, *16*(3), 402–413. https://doi.org/10.1080/14778238.2018.1496564

Aydın, O. T., & Bayır, F. (2016). The Impact of Different Demographic Variables on Determinants of University Choice Decision: A Study on Business Administration Students of the Foundation Universities in Istanbul. *Educational Sciences: Theory & Practice*, *16*(4), 1147–1169. https://doi.org/10.12738/estp.2016.4.0195

Azzone, G., & Soncin, M. (2020). Factors driving university choice: a principal component analysis on Italian institutions. *Studies in Higher Education*, *45*(12), 2426–2438. https://doi.org/10.1080/03075079.2019.1612354

Bandura, A. (1977). *Social learning theory*. New York: Prentice Hall.

Bandura, A. (1982). *Self-Efficacy Mechanism in Human Agency*. https://pdfs.semanticscholar.org/8bee/c556fe7a650120544a99e9e063eb8fcd987b.pdf

Bandura, A., & Wessels, S. (1994). *Sel-Efficacy*.

Baruch, Y. (1999). Response rate in academic studies - A comparative analysis. *Human

Relations, *52*(4), 421–438. https://doi.org/10.1177/001872679905200401

Binsardi, A., & Ekwulugo, F. (2003). International marketing of British education: research on the students' perception and the UK market penetration. *Marketing Intelligence & Planning*, *21*(5), 318–327. https://doi.org/10.1108/02634500310490265

Budur, T., & Rashid, Chnar Abdullah, Poturak, M. (2018). Students Perceptions on University Selection, Decision Making Process: A Case Study in Kurdistan Region of Iraq. *International Journal of Social Sciences & Educational Studies*, *5*(1), 133–144. https://doi.org/10.23918/ijsses.v5i1p133

Casidy, R., & Wymer, W. (2018). A taxonomy of prestige-seeking university students: strategic insights for higher education. *Journal of Strategic Marketing*, *26*(2), 140–155. https://doi.org/10.1080/0965254X.2016.1182573

Çayırdağ, N. (2012). *Perceived social support, academic self-efficacy and demographic characteristics as predictors of perceived stress among Turkish graduate students in the USA* [Middle East Technical University]. http://etd.lib.metu.edu.tr/upload/12614690/index.pdf

Chapman, R. G. (1993). Non-Simultaneous Relative Importance-Performance Analysis: *Journal of Marketing for Higher Education*, *4*(1–2), 405–422. https://doi.org/10.1300/J050v04n01_27

Cheng, Y. yao. (2020). Academic self-efficacy and assessment. *Educational Psychology*, *40*(4), 389–391. https://doi.org/10.1080/01443410.2020.1755501

Chin, W. W. (2010). How to Write Up and Report PLS Analyses. In *Handbook of Partial Least Squares* (pp. 655–690). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-32827-8_29

Choi, K., & Kim, D.-Y. (2013). A cross cultural study of antecedents on career preparation behavior: Learning motivation, academic achievement, and career decision self-efficacy. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *13*, 19–32. https://doi.org/10.1016/j.jhlste.2013.04.001

Coccari, R. L., & Javalgi, R. G. (1995). Analysis of Students' Needs in Selecting a College or University in a Changing Environment. *Journal of Marketing for Higher Education*, *6*(2), 27–40. https://doi.org/10.1300/J050v06n02_03

Creswell, J. W. (2013). Qualitative, quantitative, and mixed methods approaches. In *Research design* (5th ed.). SAGE Publications Inc.

Del Río-Rama, M. de la C., Álvarez-García, J., Mun, N. K., & Durán-Sánchez, A. (2021). Influence of the Quality Perceived of Service of a Higher Education Center on the Loyalty of Students. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.671407

Dinther, M. van, Dochy, F., & Segers, M. (2011). Factors affecting students' self-efficacy in higher education. *Educational Research Review*, *6*(2), 95–108. https://doi.org/10.1016/j.edurev.2010.10.003

Donaldson, B., & McNicholas, C. (2004). Understanding the postgraduate education market for UK-based students: a review and empirical study. *International Journal of Nonprofit and Voluntary Sector Marketing*, *9*(4), 346–360. https://doi.org/10.1002/nvsm.259

Elias, S. M., & MacDonald, S. (2007). Using Past Performance, Proxy Efficacy, and Academic Self-Efficacy to Predict College Performance. *Journal of Applied Social Psychology*, *37*(11), 2518–2531. https://doi.org/10.1111/j.1559-1816.2007.00268.x

Ferla, J., Valcke, M., & Cai, Y. (2009). Academic self-efficacy and academic self-concept: Reconsidering structural relationships. *Learning and Individual Differences*, *19*(4), 499–505. https://doi.org/10.1016/j.lindif.2009.05.004

Galla, B. M., Wood, J. J., Tsukayama, E., Har, K., Chiu, A. W., & Langer, D. A. (2014). A longitudinal multilevel model analysis of the within-person and between-person effect of effortful engagement and academic self-efficacy on academic performance. *Journal of School Psychology*, *52*(3), 295–308. https://doi.org/10.1016/j.jsp.2014.04.001

Goff, B., Patino, V., & Jackson, G. (2004). PREFERRED INFORMATION SOURCES OF HIGH SCHOOL STUDENTS FOR COMMUNITY COLLEGES AND UNIVERSITIES. *Community College Journal of Research and Practice*, *28*(10), 795–803. https://doi.org/10.1080/10668920390276957

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hair Jr., J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications Inc.

Heathcote, D., Savage, S., & Hosseinian-Far, A. (2020). Factors affecting university choice behaviour in the UK higher education. *Education Sciences*, *10*(8), 1–22. https://doi.org/10.3390/educsci10080199

Hemsley-Brown, J., & Oplatka, I. (2015). University choice: what do we know, what don't we know and what do we still need to find out? *International Journal of Educational Management*, *29*(3), 254–274. https://doi.org/10.1108/IJEM-10-2013-0150

Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review*, *17*, 63–84. https://doi.org/10.1016/j.edurev.2015.11.002

Hoyt, J. E., & Brown, A. B. (2003). Identifying College Choice Factors to Successfully Market Your Institution. *College and University*, *78*, 3–10.

Ivy, J. (2001). Higher education institution image: acorrespondence analysis approach. *International Journal of Educational Management*, *15*(6), 276–282. https://doi.org/10.1108/09513540110401484

Joseph, M., & Joseph, B. (2000). Indonesian students' perceptions of choice criteria in

the selection of a tertiary institution: strategic implications. *International Journal of Educational Management*, *14*(1), 40–44. https://doi.org/10.1108/09513540010310396

Kahraman, O. C., & Demirdelen Alrawadieh, D. (2021). The impact of perceived education quality on tourism and hospitality students' career choice: The mediating effects of academic self-efficacy. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *29*(March), 100333. https://doi.org/10.1016/j.jhlste.2021.100333

Kaynama, S. A., & Smith, L. W. (1996). Using Consumer Behavior and Decision Models to Aid Students in Choosing a Major. *Journal of Marketing for Higher Education*, *7*(2), 57–73. https://doi.org/10.1300/J050v07n02_05

Kittle, B., & Ciba, D. (2001). Using College Web Sites for Student Recruitment: A Relationship Marketing Study. *Journal of Marketing for Higher Education*, *11*(3), 17–37. https://doi.org/10.1300/J050v11n03_02

Kusumawati, A., & Perera, N. (2010). Exploring student choice criteria for selecting an Indonesian public university : A preliminary finding. *Program: Electronic Library and Information Systems*, *3*(January), 1–27.

Le, T. D., Dobele, A. R., & Robinson, L. J. (2019). Information sought by prospective students from social media electronic word-of-mouth during the university choice process. *Journal of Higher Education Policy and Management*, *41*(1), 18–34. https://doi.org/10.1080/1360080X.2018.1538595

María Cubillo, J., Sánchez, J., & Cerviño, J. (2006). International students' decision-making process. *International Journal of Educational Management*, *20*(2), 101–115. https://doi.org/10.1108/09513540610646091

Maringe, F., & Gibbs, P. (2008). *Marketing Higher Education: Theory and Practice*. McGraw-Hill Education (UK).

Markova, M., Modliński, A., & Moreira Pinto, L. (2020). Creative or analitical way for career development? relationship marketing in the field of international business education. *Creativity Studies*, *13*(1), 99–113. https://doi.org/10.3846/cs.2020.6625

Massoud, H. K., & Ayoubi, R. M. (2019). Do flexible admission systems affect student enrollment? Evidence from UK universities. *Journal of Marketing for Higher Education*, *29*(1), 84–101. https://doi.org/10.1080/08841241.2018.1562507

Mazzarol, T. (1998). Critical success factors for international education marketing. *International Journal of Educational Management*, *12*(4), 163–175. https://doi.org/10.1108/09513549810220623

Mbawuni, J., & Nimako, S. G. (2015). Critical Factors Underlying Students' Choice of Institution for Graduate Programmes: Empirical Evidence from Ghana. *International Journal of Higher Education*, *4*(1), 120–135. https://doi.org/10.5430/ijhe.v4n1p120

Mellors-Bourne, R., Hooley, T., & Marriott, J. (2014). *Understanding how people choose to pursue taught postgraduate study*.

https://derby.openrepository.com/bitstream/handle/10545/315917/Understanding ? sequence=1

Meraj, M. A., Fernandes, C. J., & Ross, K. J. (2016). Applying marketing mix constructs in higher education: the case of an MBA program in the UAE. *International Journal of Business and Globalisation*, *16*(2), 149–170. https://doi.org/10.1504/IJBG.2016.074488

Migin, M. W., Falahat, M., Yajid, M. S. A., & Khatibi, A. (2015). Impacts of Institutional Characteristics on International Students' Choice of Private Higher Education Institutions in Malaysia. *Higher Education Studies*, *5*(1), 31–42. https://doi.org/10.5539/hes.v5n1p31

Muñoz, L. R. (2021). Graduate student self-efficacy: Implications of a concept analysis. *Journal of Professional Nursing*, *37*(1), 112–121. https://doi.org/10.1016/j.profnurs.2020.07.001

Nauta, M. M. (2010). The development, evolution, and status of Holland's theory of vocational personalities: Reflections and future directions for counseling psychology. *Journal of Counseling Psychology*, *57*(1), 11–22. https://doi.org/10.1037/a0018213

Nguyen, L., Lu, V. N., Conduit, J., Tran, T. T. N., & Scholz, B. (2021). Driving enrolment intention through social media engagement: a study of Vietnamese prospective students. *Higher Education Research & Development*, *40*(5), 1040–1055. https://doi.org/10.1080/07294360.2020.1798886

Nicholls, J., Harris, J., Morgan, E., Clarke, K., & Sims, D. (1995). Marketing higher education: the MBA experience. *International Journal of Educational Management*, *9*(2), 31–38. https://doi.org/10.1108/09513549510082369

Obermeit, K. (2012). Students' choice of universities in Germany: structure, factors and information sources used. *Journal of Marketing for Higher Education*, *22*(2), 206–230. https://doi.org/10.1080/08841241.2012.737870

Olive, T. (2014). Desire for Higher Education in First-Generation Hispanic College Students Enrolled in a Graduate Counseling Program. *Journal of Phenomenological Psychology*, *45*(1), 72–91. https://doi.org/10.1163/15691624-12341269

Oplatka, I., & Hemsley-Brown, J. (2021). *A Systematic and Updated Review of the Literature on Higher Education Marketing 2005–2019* (pp. 35–80). https://doi.org/10.1007/978-3-030-74051-1_2

Palmer, M., Hayek, J., Hossler, D. J., Jacob, S. A., Cummings, H., & Kinzie, J. L. (2004). Fifty years of college choice: Social, political, and institutional influences on the decision-making process. In *Lumina Foundation for Education: New Agenda Series* (Vol. 5, Issue 3). Lumina Foundation for Education.

Phan, H. P., Ngu, B. H., Shih, J. H., Lin, R. Y., Shi, S. Y., & Wang, H. W. (2020). Validating 'optimizing' concepts: the importance of personal resolve, effective functioning, and academic striving. *Educational Psychology*, *40*(4), 448–472.

https://doi.org/10.1080/01443410.2019.1693507

Popoola, B. A., Chinomona, R., & Chinomona, E. (2014). The Influence of Information Quality, System Quality and Service Quality on Student's Self-Efficacy at Institutions of Higher Learning in South Africa. *Mediterranean Journal of Social Sciences*. https://doi.org/10.5901/mjss.2014.v5n27p974

Price, I., Matzdorf, F., Smith, L., & Agahi, H. (2003). The impact of facilities on student choice of university. *Facilities*, *21*(10), 212–222. https://doi.org/10.1108/02632770310493580

Qasim, A. M., Al-Askari, P. S. M., Massoud, H. K., & Ayoubi, R. M. (2021). Student university choice in Kurdistan-Iraq: what factors matter? *Journal of Further and Higher Education*, *45*(1), 120–136. https://doi.org/10.1080/0309877X.2020.1742298

Sahban, M. A. (2016). *Determinants of entrepreneurial intention among business students in Indonesia*.

Saiti, A., Papa, R., & Brown, R. (2017). Postgraduate students' factors on program choice and expectation. *Journal of Applied Research in Higher Education*, *9*(3), 407–423. https://doi.org/10.1108/JARHE-06-2016-0040

Schunk, D. H., & Pajares, F. (2002). The Development of Academic Self-Efficacy. In *Development of Achievement Motivation* (pp. 15–31). Elsevier. https://doi.org/10.1016/B978-012750053-9/50003-6

Shank, M. D., Walker, M., & Hayes, T. (1996). Understanding professional service expectations: Do we know what our students expect in a quality education? *Journal of Professional Services Marketing*, *13*(1). https://doi.org/10.1300/J090v13n01_08

Sidin, S. M., Hussin, S. R., & Soon, T. H. (2003). An Exploratory Study of Factors Influencing the College Choice Decision of Undergraduate Students in Malaysia. *Asia Pacific Management Review*, *8*(3), 259–280.

Simões, C., & Soares, A. M. (2010). Applying to higher education: Information sources and choice factors. *Studies in Higher Education*, *35*(4), 371–389. https://doi.org/10.1080/03075070903096490

Soutar, G. N., & Turner, J. P. (2002). Students' preferences for university: a conjoint analysis. *International Journal of Educational Management*, *16*(1), 40–45. https://doi.org/10.1108/09513540210415523

Strasser, S. E., Ozgur, C., & Schroeder, D. L. (2002). Selecting a Business College Major: An Analysis of Criteria and Choice Using the Analytical Hierarchy Process. *American Journal of Business*, *17*(2), 47–56. https://doi.org/10.1108/19355181200200010

Sudhana, P., Ameen, A., & Isaac, O. (2020). A multi-theoretical framework to better understand the college major choice in arts and design. *Journal of Applied Research in Higher Education*, *12*(5), 1009–1023. https://doi.org/10.1108/JARHE-

11-2019-0277

Sudhana, P., Noermijati, N., Sabil Hussein, A., & Khusniyah Indrawati, N. (2021). The mediating role of self-congruity in transnational higher education choice: a proposed framework. *Journal of Applied Research in Higher Education*, *13*(3), 811–829. https://doi.org/10.1108/JARHE-05-2020-0141

Tamtekin Aydın, O. (2015). University Choice Process: A Literature Review on Models and Factors Affecting the Process. *Yuksekogretim Dergisi*, *5*(2), 103–111. https://doi.org/10.2399/yod.15.008

Tapp, A., Hicks, K., & Stone, M. (2004). Direct and database marketing and customer relationship management in recruiting students for higher education. *International Journal of Nonprofit and Voluntary Sector Marketing*, *9*(4), 335–345. https://doi.org/10.1002/nvsm.258

Troisi, O., Grimaldi, M., Loia, F., & Maione, G. (2018). Big data and sentiment analysis to highlight decision behaviours: a case study for student population. *Behaviour & Information Technology*, *37*(10–11), 1111–1128. https://doi.org/10.1080/0144929X.2018.1502355

Verhegyi, M., M. (2010). Career certainty and career decision-making self efficacy in postgraduate study intentions. *Anzem*, 1–19. https://researchers.mq.edu.au/en/publications/career-certainty-and-career-decision-making-self-efficacy-in-post-2

Wang, X. (2013). Modeling Entrance into STEM Fields of Study Among Students Beginning at Community Colleges and Four-Year Institutions. *Research in Higher Education*, *54*(6), 664–692. https://doi.org/10.1007/s11162-013-9291-x

WEBB, M. S. (1993). Variables Influencing Graduate Business Students College Selections. In *College and University* (Vol. 68, Issue 1).

Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-Efficacy, Stress, and Academic Success in College. *Research in Higher Education*, *46*(6), 677–706. https://doi.org/10.1007/s11162-004-4139-z

Zhu, L., & Reeves, P. (2019). Chinese students' decisions to undertake postgraduate study overseas. *International Journal of Educational Management*, *33*(5), 999–1011. https://doi.org/10.1108/IJEM-11-2017-0339

Zysberg, L., & Schwabsky, N. (2021). School climate, academic self-efficacy and student achievement. *Educational Psychology*, *41*(4), 467–482. https://doi.org/10.1080/01443410.2020.1813690.