

Factors Affecting Career Choice For Higher Education In Mongolia

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Abstract. Undergraduate enrollment in universities across Mongolia has experienced troubling fluctuations in recent years. According to the National Statistics Office, university enrollment in Mongolia declined by 7.2 percent from 2022, resulting in a low of 26.3 thousand students. Higher Education Institutions (HEIs) have also seen a decrease in freshmen enrollment, leading many leaders to focus on ensuring the sustainability of these institutions. On the one hand, this is a characteristic of the behavior of adolescents. This paper proposes a two-fold study: (1) to identify the factors influencing Mongolian high school students' choices of HEIs and academic degree programs, and (2) to explore the factors affecting behavioral intentions. A web-based questionnaire was used to collect data from a sample of 707 senior high school students in Mongolia who participated in an online survey. The survey aimed to examine the influence of various factors, including university characteristics, the impact of significant individuals, student characteristics on students' decision to enroll in HEIs. The findings from structural equation modeling indicate that student characteristics significantly influence students' decision to enroll university. In conclusion, this study highlights the model's effectiveness in understanding the factors that influence students' decisions to enroll in university. The results also provide managerial implications to enhance institutional student recruitment strategies.

Keywords: High school graduates; HEIs; education; consumer behavior, interdisciplinary research

1. INTRODUCTION

Choosing the right career is a significant issue that can positively impact the development of individuals, families, organizations, sectors, and the nation. In our country, providing vocational guidance, assistance, and support to secondary school students in their career choices is just the beginning. It is important to note that non-governmental organizations have conducted research in this area, published guides detailing the benefits of selecting the right career and the drawbacks of making poor choices, and organized training programs over a designated period.

By the time students graduate from high school, they are expected to have decided on the job or career they want to pursue (Moses Awinson, 2015). In many European countries, such as France, the Netherlands, Scotland, England, Sweden, Finland, Norway, and Denmark, students begin making career choices starting in the 7th grade. In Japan, however, career selection begins as early as elementary school (N.Tsogzolmaa, 2014).

Choosing a career is a significant step for graduating students. In recent years, a comprehensive information platform has emerged in Mongolia, offering valuable insights regarding job opportunities, potential earnings, and educational pathways for students pursuing their desired professions. This development has greatly enhanced the support available to students in making informed career choices. In response to modern social changes and developments, the desire of people to study, work, and live abroad has significantly increased. Sociological research indicates that 48% of university students wish to work and live abroad (G.Purevsuren, 2022).

There is a lack of research on high school students in Mongolia regarding their choices of universities and the majors they wish to pursue. This study was conducted to determine whether factors such as students' characteristics and the reputation of the university influence their career choices utilize the stimulus-organism-response (S-O-R) model to explain the intention to enroll in universities.

This model has been widely applied to analyze user behavior in various fields (Rocky Nagoya, 2021). According to the S-O-R framework, perceived environmental cues (stimuli) can trigger an individual's internal judgment (organism), leading to either positive or negative behaviors (responses) (Mehrabian and Russell, 1974). In this research, the stimuli are the university related factors including image, quality, and facilities, which the institution actively shapes. The organism, in this context, refers to the attitudes formed by the stimuli, which include personal factors. The response reflects the outcomes of the organism's processes, specifically students to enroll decision to the university. While many studies have

employed the S-O-R model, none have done so within the context of this particular research. Therefore, this study is significant as it aims to enhance our understanding of the processes behind the decision to enroll in universities.

2. LITERATURE REVIEW AND HYPOTHESES

The stimulus-organism-response (S-O-R) model, initially developed in psychology, has been widely applied across various fields, including education. This model explains how environmental factors (stimuli) influence an individual's internal state (organism), ultimately leading to specific behavioral responses (Pan et al., 2024). According to Mehrabian and Russell (1974), individuals react to stimuli based on their internal cognitive and emotional states. The model illustrates how external environmental cues can shape and reinforce these internal processes. In the context of education, the S-O-R model provides a structured framework for understanding how environmental stimuli impact person's internal experiences, which subsequently drive their behavioral outcomes.

Stimuli from the environment influence an individual's cognitive or emotional experiences, resulting in behavioral responses after a series of internal psychological activities. In their research, Mehrabian and Russell (1974) focus specifically on emotional responses.

Pan et al. (2024) expand on the S-O-R model by suggesting that students (the 'organism') experience various emotions such as motivation, engagement, frustration, or satisfaction, which can lead to positive or negative customer experiences through cognitive and affective processes. Previous studies indicate that attitude aspect play a role in the S-O-R framework. Psychologists define attitudes as learned tendencies to evaluate and judge things in a specific way. This evaluation can apply to people, issues, objects, or policies (Cherry, 2024). The term encompasses our opinions, emotions, perceptions, beliefs, expectations, values, and intentions (Bagozzi, 1994). In our study, we include students' characteristics as a key component of our research model. Specifically, we use the term "students' characteristics" to support the proposition that both university characteristics and influence of significant people enhance students' perceptions of their expectations regarding the university. Individuals who have a positive perception of their university characteristics and influence of significant people are likely to develop more favorable personal attitudes. According to the S-O-R paradigm, students' characteristics act as an organism influenced by these university characteristics and influence of significant people, which ultimately impact their decision to enroll the university.

There have been prior studies that utilize S-O-R model in the context of education. For example, Nagoya et al. (2021) applied S-O-R model to investigate how factors such as university quality and image (stimuli) influence cognitive attitude, affective attitude (organism), and ultimately intention to enrol at a university (response). Another study conducted by Pan et al. (2024) adopted the S-O-R model to examine the relationship online learning interactions and its outcomes with internal cognitive processess for perceived usefullness and perceived ease of use and students in influencing their learning outcome with a uniwersity setting. Nguyen et al (2022) stated that before enrolling in a university, students will begin to research information and lead to an intention to choose the university that they will attend. Universities are selected based on students' and parents' criteria about personal ability, ability to complete programs, and employment after graduation.

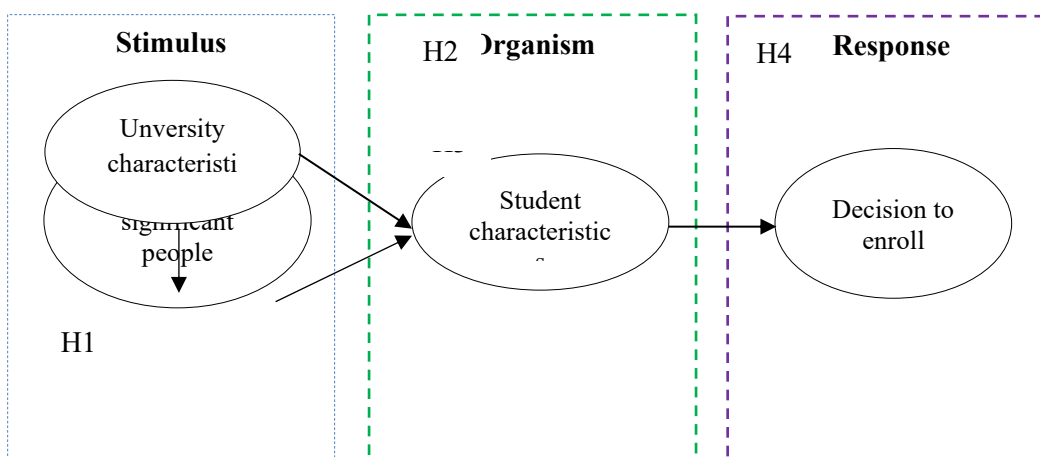


Figure 1. Conceptual model

In particular, it suggests that student's decision for enrollment for university is influenced by student characteristics and two external factors: fixed university characteristics and the influence of significant people with prospective students. In the present study, these factors are included by two predictor variables (i.e., university image, perceived program quality, and perceived career opportunities) as informed by the literature review while the endogenous variable is modified with the decision to enroll in university to suit the research aim. The subsequent section discusses the original and the three added predictor or endogenous variables as antecedents of the modified dependent or exogenous variable.

On the bases of these theoretical supports, this study hypothesizes that:

H1: University characteristics positively and significantly influence significant people

H2: University characteristics positively and significantly influence students' characteristics

H3: Significant people positively and significantly influence students' characteristics

H4: Student characteristics positively and significantly influence students' decision to enroll university

Mongolian higher education now and future

Over the past 30 years, the number and scope of higher education institutions have expanded, educational policies and management systems have matured, and efforts have been made to bring them into line with international standards (Gantogtokh, 2020). Mongolia's higher education sector developed under the influence of the international best practices with the support of countries such as the United States, Germany, and Japan, it implemented credit-based programs, accreditation systems and management structure changes.

The rapid change in the higher education system of Mongolia over the past decade reflects several unique aspects, especially in comparison with the systems in the newly independent states of the former Soviet Union. In part, this is due to its unique location and political history, which enable it to draw for assistance upon both the East (Japan, Korea, and the Asian Development Bank) and the West (the European Union and the United States) (Weidman & Yeager, 1999).

The transformative education concept has become increasingly important internationally, and as a result, policy and legal reforms have been made in the Mongolian higher education sector. The general education law and the law on higher education were revised in 2023, legalizing English as the main foreign language in the Mongolian education system.

In recent years, the interest of secondary school graduates in studying abroad has increased, and the flow of outbound students has been increasing rapidly. This is a problem facing domestic universities now in Mongolia. According to the UNESCO Institute for Statistics (UIS), about 13330 Mongolian students studied abroad in 2019, an increase from 9610 in 2014 (UNESCO Institute for Statistics, 2022). Total outbound internationally mobile tertiary students studying abroad, all countries, both sexes (number) in Mongolia was reported at 11892 persons in 2018, according to the World Bank collection of development indicators, compiled from officially recognized sources. Mongolia - Total outbound internationally mobile tertiary students studying abroad, all countries, both sexes - actual values, historical data, forecasts and projections were sourced from the World Bank on May of 2025 (World Bank, 2025). Consequently, examining the determinants that affect secondary school students' career choice is a significant concern in Mongolia's higher education system.

3. METHOD

Research Design

The scales are designed based on Cortes et al (2023)'s study and further literature review, three constructs were determined to influence decision to enroll in university. These constructs are (1) university characteristics, (2) influence of significant people, and (3) student characteristics. These constructs were operationalized through conducting a dedicated literature review to develop the items. University characteristics were measured by twelve items, and influence of significant people is measured by five items referenced from Cortes et al (2023). Student characteristics is measure by seven items referenced from Abubakar (2017). And the decision to enroll a university is measured by four items referenced from Abubakar (2017). The study uses a 5-point Likert scale with 1- strongly disagree; 5- strongly agree. Data were collected for 11th and 12th grade students from secondary schools of the Mongolia. Because this is an audience that has just need to choose through the university choice process, they will have the closest perception and assessment of the decision to enroll a university.

The questionnaire was collected from October 2024 to January 2025 through Google Form to administer a web-based survey. Then, the link of the survey form was sent via email and different social media or messaging platforms.

Data

The number of respondents was 707 high school students. With respect to the respondents' demographic information, female respondents account for 51.0 percent and male were 49.0 percent. More than 84.9 percent were enrolled in public school followed by private schools as many as 107 respondents (15.1 percent). The most student were lived in Ulaanbaatar city (77.1 percent). The majority of the respondents were 12th grade students (66.5 percent). The households' monthly income were between MNT 1.5 million to MNT 6.0 million (65.6 percent) These results can be seen in the following table 1:

Table 1. Participants' socio-demographic profiles (n = 707)

Indicators	Category	Frequency	Percent (%)
Gender	Male	361	51
	Female	346	49
Type of secondary school	Public school	600	84.9
	Private school	107	15.1
Area of residence	Ulaanbaatar city	545	77.1
	Rural area	162	22.9
Grade level	12th grade	470	66.5
	11th grade	237	33.5
Households' monthly income	Up to MNT 1,500,000	113	16.0
	MNT 1,500,001-3,000,000	160	22.6
	MNT 3,000,001-4,500,000	159	22.5
	MNT 4,500,001-6,000,000	145	20.5
	More than MNT 6,000,001	73	10.3

Data analysis

Following Anderson and Gerbing (1988) two-step approach, we performed Confirmatory Factor Analysis (CFA) on the conceptual model to assess the adequacy of all the constructs, and SEM was used to estimate the model fitness and to test for causal relationships. The fit of the conceptual models to the empirical data is assessed with the chi-squared (χ^2) statistics, the goodness-of-fit index (GFI), the normed fit index (NFI), the comparative fit index (CFI), and the root mean square of approximation (RMSEA). For each of these statistics, values of 0.9 or higher indicate acceptability, except for the RMSEA, for which values up to 0.08 indicate an acceptable fit to the data (Hair et al., 2006).

4. RESULTS

The means, standard deviations, internal consistencies (Cronbach's α coefficients) and zero-order correlations among the study variables are in Table 2. The values for all the scales were greater than 0.70, indicating reasonable to good reliability (Hair et al., 2006).

Measurement model

We conducted CFA to check the convergent validity of the constructs in our measurement model and assessed model adequacy using fit indices (Hair et al., 2006). Following Hair et al.'s (2006) criteria, items with the factor loading lower than 0.50 should be deleted to fit the validity requirement. None items were thus removed from the scale. The final measurement model assessed university characteristics (twelve items), influence of significant people (five items), students' characteristics (seven items), and decision to enroll (four items).

The convergent validity of the CFA results has to be supported by item reliability, construct reliability (CR), and average variance extracted (AVE). Table 2 shows the results of CFA for the measurement model. The factor loadings of all the items met the minimum criterion of 0.5 and their cronbach alphas are above 0.91. The CR estimates range from 0.82 to 0.98, exceeding the critical value of 0.7, suggested by Hair et al. (2006). The AVE lies between 0.65 and 0.87, also well above the value of 0.5, suggested by Fornell and Larcker (1981).

According to the goodness-of-fit indices from the CFA results, the measurement model was deemed as parsimonious (Table 2). Specifically, though the chi-square statistic ($\chi^2 = 1500$, d.f. = 365) was significant, the ratio of the chi-square to the degrees of freedom ($\chi^2/\text{d.f.} = 4.1$). Other indices, such as CFI (0.91), NFI (0.92), and GFI (0.88), were greater than the recommended values. The RMSEA of 0.04 was within the acceptable range of the recommended values (Hair et al., 2006).

Table 2. CFA results of the measurement model

Variables	Indicators	Factor loading	KMO	Cronbah alpha	CR	AVE
University characteristics	q15.1	0.93	0.97	0.98	0.98	0.81
	q15.2	0.93				
	q15.3	0.93				
	q15.4	0.92				
	q15.5	0.92				
	q15.6	0.92				
	q15.7	0.91				
	q15.8	0.90				
	q15.9	0.89				
	q15.10	0.89				
	q15.11	0.88				
	q15.12	0.74				
Influence of significant people	q18.1	0.91	0.87	0.93	0.95	0.79
	q18.2	0.91				
	q18.3	0.89				
	q18.4	0.87				
	q18.5	0.85				
Students' characteristics	q7.1	0.84	0.92	0.91	0.82	0.65
	q7.2	0.84				
	q7.3	0.82				
	q7.4	0.82				
	q7.5	0.81				
	q7.6	0.79				
	q7.7	0.72				
Decision to enroll	q24.1	0.96	0.85	0.95	0.96	0.87
	q24.2	0.95				
	q24.3	0.93				
	q24.4	0.89				

We assessed discriminant validity by comparing the AVE of each individual construct with the shared variances between it and all other constructs. A higher AVE of the individual construct compared with the shared variances suggested discriminant validity. The square root of the AVE for each construct was greater than the correlation coefficients of the corresponding inter-constructs (see Table 3), indicating discriminant validity (Fornell and Larcker, 1981).

Table 3. Discriminant validity

	Constructs	1	2	3	4
1	University characteristics	0.81			
2	Influence of significant people	-0.10**	0.85		
3	Students' characteristics	-0.11**	0.52**	0.82	

4	Decision to enroll	0.06**	0.63**	0.62**	
Note: ** p < 0.010 *** p < 0.001					

Structural model and hypotheses testing

A maximum likelihood estimation of the structural model tested the predicted relationships among the constructs of the proposed conceptual model. Figure 2 presents the estimated model with the standardized path coefficients. The fit indices are summarized as follows: $\chi^2 = 1210.2$ ($p = 0.00$), $df = 306$, $\chi^2/df = 3.96$, CFI = 0.92, GFI = 0.92, IFI = 0.93, and RMSEA = 0.040. All indicators meet the thresholds recommended by the previous literature, suggesting that the hypothesized model is well fitted with the empirical data (Fornell and Larcker, 1981).

The results partially support the hypotheses. University characteristics were found to be positively and significantly related to influence of significant people ($\gamma = 0.69$, $t = 25.2$), but it was not positive and significant effect on students characteristics ($\gamma = 0.09$, $t = 1.88$). Thus, supported H1, but not supported H2. Influence of significant people was positively and significantly related to students characteristics ($\gamma = 0.29$, $t = 5.98$). Thus H3 are supported. Students characteristics is positively associated with decision to enroll university ($\gamma = 0.29$, $t = 8.24$) and thus H4 is supported.

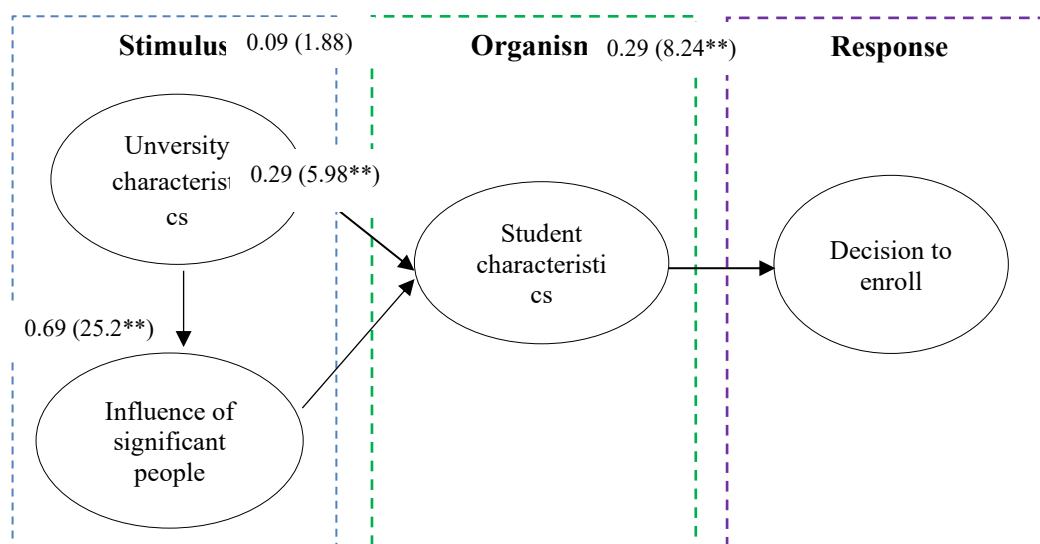


Figure 2. Results for the SEM model

5. CONCLUSION AND IMPLICATION

This study has answered the research objective set out. First, the study has systematized the theory of the S-O-R model to increase the decision to enroll in a university. Second, the study has built a research model and research hypotheses about the relationship between stimuli, organisms, and responses. The survey research on 707 secondary school students has once again confirmed the importance of university characteristics, the influence of significant people, student characteristics, and the decision to enroll in university. The study answered the following objectives: (1) university characteristics have a positive effect on the influence of significant people but not effect on student characteristics; (2) the influence of significant people has a positive effect on student characteristics; (3) student characteristics has a positive effect on the decision to enroll the university. At the same time, research has shown that the important participatory university selection comes from the information factors that the university provides. These signals will help students have a lot of information needed to choose a university. From the results of this study, the authors also give some implications to help improve the decision to enroll in the university.

The results of this study demonstrate how the decision to enroll in a university is influenced by external stimuli (such as university characteristics and the influence of significant people) and internal factors (including the students characteristics) in the Stimulus-Organism-Response (S-O-R) model. These findings can help increase enrollment decisions by suggesting the following strategies: First, improve the university's reputation, and overall image by establishing high educational standards and employing

qualified teaching staff. Additionally, improving university rankings can assist prospective students in their decision-making, as these rankings often indicate the quality of education offered. Second, enhance communication with stakeholders about the university's successes and initiatives using effective marketing strategies or information campaigns. Third, create programs that facilitate quick job placements for graduates, offer attractive career prospects, maintain reasonable tuition fees, and provide good value for money. Overall, implementing these strategies can significantly increase the likelihood of students choosing to enroll at a university.

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